Governance and Aid Allocation in the International Development Association (IDA)
Revisiting Assessing Aid in the Twenty-first Century

by

Claire Teresa McCarville Markgraf

BA in Politics, Art History/Visual Arts
Occidental College
Los Angeles, CA (2006)

Submitted to the Department of Urban Studies and Planning
in partial fulfillment of the requirements for the degree of

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Signature of Author: ____________________________

Department of Urban Studies and Planning
2 April 2014

Certified by: ____________________________

Professor Amy K. Gisremeier
Department of Urban Studies and Planning
Thesis Supervisor

Accepted by: ____________________________

Associate Professor P. Christopher Zegras
Chair, MCP Committee
Department of Urban Studies and Planning
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ABSTRACT

This paper examines the relationship between governance and the foreign aid allocation of a World Bank agency, the International Development Association. In particular, the study investigates whether this major multilateral program’s financial support for the development of the world’s poorest countries consistently prioritizes good governance. A new dataset from the first decade of the twenty-first century, 2003-12, is used in three econometric estimation models to determine whether the quality of governance in recipient countries has had implications for aid allocation decisions. As in much of the literature in this area, the results are mixed. This finding itself raises important questions both about the relevance of a country’s governance to aid allocation decisions and about the usefulness of good governance as a metric by which aid organizations are judged.

Thesis Supervisor: Amy K. Glasmeier
Title: Professor
ABBREVIATIONS

CDF – Comprehensive Development Framework
CGD – Center for Global Development
CPR – Country Portfolio Rating
CPIA – Country Policy and Institutional Assessment
DAC – Development Assistance Committee
GNIPC – Per Capita Gross National Income
IBRD – International Bank for Reconstruction and Development
ICSID – International Centre for Settlement of Investment Disputes
IDA – International Development Association
IFC – International Finance Corporation
IMF – International Monetary Fund
LDC – Least Developed Country
LMIC – Low Middle Income Countries
MIGA – Multilateral Investment Guarantee Agency
NIE – New Institutional Economics
ODA – Official Development Assistance
OECD – Organization for Economic Cooperation and Development
OLIC – Other Low Income Country
PBA – Performance Based Allocation
QWIDS – Query Wizard for International Development Statistics
WDI – World Development Indicators
WGI – Worldwide Governance Indicators
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1. INTRODUCTION

This paper sets out to investigate whether a major multilateral program for supporting the development of impoverished countries consistently prioritizes well and fairly run governments - 'good governance' in technical parlance - in its' aid allocation process. The organization in question is the International Development Association, one of the major lending wings of the World Bank. While a general reader will be familiar with the World Bank and its overall mission of alleviating global poverty, it is important here to specify that the Bank comprises two distinct entities, the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA). Though they share staff and executive leadership, IBRD and IDA enact different parts of the World Bank’s poverty alleviation mandate. IBRD fulfills a typical banking role, lending money to middle-income countries in order to enable development efforts. IDA performs a more traditional aid function, providing concessional loans and grants to the world’s poorest countries.

Various principles of development – some based on research, some more political – have driven the World Bank’s lending priorities since its’ founding in 1944. Among them, the concept of good governance as a prerequisite for development in low-income countries came to prominence in the 1990s. The concept of good governance is broadly understood to include respect for civil, political, and human rights, a lack of corruption, responsive institutions, respect for rule of law, and government transparency and accountability. Its popularity in development circles rests on the simple but powerful idea that poor governance is at the root of many failed development efforts. Since a prominent World Bank research publication, Assessing Aid: What

Works, What Doesn't, and Why, concluded that the success of aid efforts is contingent on the presence of good policy environments, the importance of good governance has become axiomatic in the international development donor community.

Following the publication of Assessing Aid, there has been an abundance of research further investigating the relationships between aid, governance, and development outcomes. A small subset of this body of research studies whether donor organizations’ lending decisions conform to their stated priorities, including their focus on governance. Of these studies, most focus on the behavior of bilateral donors. Some include multilaterals donors, such as the World Bank or United Nations, though many aggregate all multilateral development assistance rather than separating out the distinct lending entities. Thus, of the large body of research focused on governance and aid, few studies focus specifically on multilateral lending, and fewer still disaggregate IDA from other funding institutions. So why focus on IDA, aside from its position of being relatively under-studied?

IDA is in a unique position relative to the rest of the World Bank and much of the donor community. Its mission is to assist in developing the worlds’ poorest countries, those that have few other means of raising capital for development. This focus makes emphasizing good governance in aid particularly difficult, given that many of the poor countries IDA targets are, by extension, poorly governed. Given this focus, it might be expected that IDA would publically diverge from its peers and emphasize governance less prominently. However, IDA’s statements and publicly available aid allocation policies and have consistently asserted that governance plays an important role in its aid allocation decisions. IDA does not, however, publish comprehensive data supporting this claim. This paper seeks to establish whether IDA’s recent aid

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2 Much of this work concerns broad questions of whether aid stimulates economic growth or reduces poverty.
allocation history comports with its stated emphasis on governance. The above discussion hints as well at the secondary question – part normative and part analytic – of whether IDA should focus heavily on governance, given its recipient country mix. This broader question is beyond the purview of this paper, but will be re-engaged in the conclusion, as it is a logical next step in this research.

Though there is a long history of studying governance in aid, this paper corresponds with the recent work of two authors in particular – Eric Neumayer, an economist at the London School of Economics, and Matthew Winters, a professor of political science working with the University of Illinois’ Center for Global Studies. Neumayer (2003a) and Winters (2010) analyze lending by the World Bank, among other donors, during the periods 1991-2000 and 1996-2002, respectively. They study whether governance and a host of other factors correlate with aid and lending, both focusing on a period during which governance was emerging as a key criterion in aid allocation.

This paper updates and expands on their prior work in several ways: First, it exclusively studies IDA aid allocations. This is particularly significant as IDA is the World Bank’s only branch that focuses solely on aid, as opposed to lending – a distinction that is rarely made in the literature. Further, rather than understanding all World Bank development assistance as a single category, the dataset used in this paper reflects aspects of aid allocation decisions that are distinctive to IDA. Second, this paper uses data from 2003-2012 (with data covering 2002, as well), a decade largely unstudied with respect to aid and governance. During this period, important country rating data used in IDA allocation deliberations were released to the public for the first time, so a portion of this dataset reflects an updated understanding of IDA’s decision-making process. Third, this paper proposes a statistical model that reflects IDA’s explicit a priori
eligibility requirements. In contrast, the first step in most other studies of this type is to ascertain the probability of a country being selected as an aid recipient, as most donor organizations do not provide explicit eligibility requirements. This paper is able to use the actual list of IDA-selected countries instead of choosing from a probable list.

In the last decade, IDA allocations have accounted up to half of all aid from multilaterals that is directed toward low-income countries (see Appendices 1 & 2). IDA disbursed $16.3 billion to 72 countries in 2013, and in many cases was the single largest source of aid for basic social services. Understanding what country characteristics IDA actually prioritizes in funding allocation decisions is key for those who wish to better understand and critique this important institution.

a. Thesis Structure

This paper is structured as follows:

Chapter 2 discusses the history of governance as a factor in aid allocation decisions, both within the Bank and the greater development community. It also describes the Worldwide Governance Indicators (WGI), a measure of country governance tracked by the World Bank.

Chapter 3 gives a broad overview of IDA, and provides a detailed explanation of the publicly available aspects of IDA’s allocation decision-making model and identifies those areas that are not subject to public critique (sometimes called IDA’s “black box allocation system”). Further, it outlines the organization’s distinct mission, which differentiates it from bilateral donors and, largely, other multilateral donors.

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Chapter 4 is a literature review of the significant work done in the area of governance and aid allocation, with a specific focus on the limited work done on governance within IDA. It outlines the models used to assess governance, focusing on the conceptual framework that defines aid as a function of “donor interest” and “recipient need,” which has become the main lens through which researchers select and categorize explanatory variables.

Chapter 5 outlines the dataset used in this paper, including explanations of the data selection and data sources. In particular, those countries or years in which countries are excluded from the dataset based on exceptions made to IDA’s basic eligibility requirements are outlined, as these make up the majority of the omissions. This chapter also provides a methodological overview of the econometric analyses done in this paper.

Chapter 6 provides the results of three types of regressions that seek to establish the role of governance in IDA’s aid allocation decisions – a pooled OLS regression, a fixed effect model and a modified two-part model. This chapter includes basic descriptive statistics of the dataset on IDA aid allocation and the results of several different types of regression.

Chapter 7 is a discussion of both the results of the quantitative analysis and the larger questions of whether governance is a meaningful metric for IDA, given the organization’s focus on getting basic aid to the least developed and, by many measures, the worst governed countries. To the extent that conclusions can be drawn, they are discussed in this chapter.
2. **THE RISE OF THE GOVERNANCE AGENDA**

a. **The Rise of Good Governance as a Criterion for Aid Allocation**

The rise of good governance as a consideration in aid allocation came with a wave of economic thinking in the 1990s and 2000s that was largely inspired by theories of New Institutional Economics (NIE).\(^6\) Though the set of ideas that make up NIE was developing as early as the 1960s,\(^8\) they gained prominence in major donor institutions as a response to Washington Consensus-era policies, which emphasized privatization, deregulation, economic and trade liberalization, fiscal discipline, and tax reform.\(^6\) NIE complicated neoliberal models by pointing out that markets are not frictionless and government institutions often internalize transaction costs. A focus on governance and institutions emerged as the international development community began to rethink neoliberalism’s analytical construct that pits the state and market against one another.\(^7\)

In parallel, the effectiveness of aid conditionality, which refers to the stark policy changes required by lending institutions in exchange for support, was increasingly called into question, as was development assistance more generally. Both inside and outside the Bretton Woods institutions,\(^8\) it was clear that development aid was not having the intended impact in developing countries. Among the most intractable cases in the 1980s were in Sub-Saharan African countries, which seemed to illustrate the effects of chaotic or anemic governance.\(^9\) This lent intuitive credibility to the case for focusing on governance. Wil Hout (2007), of the Institute

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of Social Studies, writes that during this time growing skepticism about the usefulness of development aid in the preceding decades pushed an “aid effectiveness” agenda to the fore. Aid effectiveness refers to efforts to increase the poverty-reducing impact of aid by selecting for specific country characteristics. With this refocus, the favored modalities of aid distribution, especially conditionality,\(^\text{10}\) shifted toward aid selectivity, including selecting for good governance.

During the early 1990s, Hilde Selbervik (1997), an expert on development aid, describes a “wave of policy announcements by Western donors […] that human rights, democracy and good governance will occupy a central place on the aid agenda.”\(^\text{11}\) Political voices around the world that may have agreed on little else – including the George H.W. Bush administration, the socialist French government, and Great Britain’s Thatcher and Kohl governments\(^\text{12}\) – were all calling for greater emphasis on democracy and governance in development aid allocation. This call is clear in the OECD Development Assistance Committee’s (DAC) statement from its 1993 High Level Meeting, which states:

> It has become increasingly apparent that there is a vital connection between open, democratic and accountable systems of governance and respect for human rights, and the ability to achieve sustained economic and social development. […] This connection is so fundamental that participatory development and good governance must be central concerns in the allocation and design of development assistance.\(^\text{13}\)

b. Governance at the Bank: “Assessing Aid” and its impact

As the governance movement focused, a few key publications, announcements, and events can be traced as the markers of a significant shift in how multilateral development organizations – the Bank in particular – approach their work. An early example is a working paper by World Bank economists Craig Burnside and David Dollar (1997), which found that aid preferentially spurs development and growth in countries with sound macroeconomic policies. This paper was followed by the World Bank’s 1998 compilation Assessing Aid: What Works, What Doesn’t and Why, which is often cited as the empirical and intellectual basis on which the World Bank engaged the growing interest in governance. Assessing Aid analyzed indicators of good governance, including government policies and institutional effectiveness, in 56 developing countries between 1970 and 1993 to identify those factors that influence successful development efforts. Relying on decades of data, Assessing Aid makes the case that aid is used more effectively by countries that have strong institutions and implementing policies. The study spurred the wide adoption of the idea that good governance is necessary for effective use of aid dollars and successful development.

Two leaders at the World Bank during the late 1990s played a major role in integrating the governance and aid effectiveness agenda into Bank doctrine: Chief Economist Joseph Stiglitz and President James Wolfensohn. Before joining the Bank, Stiglitz’s (1989) work disputed the prevailing belief in privatization and deregulation, emphasizing the important role government or “non-market institutions” play in the economy. During his term at the Bank, he promoted the

16 Ibid.
view that the state and its institutions have "an important role to play in appropriate regulation, social protection, and welfare." In January 1999, President Wolfensohn introduced his Comprehensive Development Framework (CDF). The CDF was Wolfensohn’s vision for changing the Bank’s focus from macroeconomic stability and Washington Consensus-era policy conditionality to improving the social and institutional factors that would most directly benefit the poor. He set out a series of poverty reduction strategies based on partnering with country governments to strengthen them. Aid selectivity – or directing aid to those places thought to have the most favorable environments for its effective use – appeared to replace aid conditionality in this framework. In his work The Failure of Conditionality, Paul Collier (1997) states that the Bank’s expectation underpinning this change was that by “creating star performers, selectivity would induce many non-reforming governments to change their policies through the pressure of emulation.”

Two and a half years after Wolfensohn introduced the CDF, the Monterrey Consensus, which “advocated selectivity in the provision of foreign aid,” was signed by dozens of bilateral and multilateral donor organizations, including the World Bank, International Monetary Fund and World Trade Organization. The Consensus declared that “[s]ound policies and good governance at all levels are necessary to ensure [Official Development Assistance (ODA)] effectiveness.” With this declaration, governance was firmly embedded in the prevailing dogma around aid and has remained so since.

---

c. World Bank Measure of Governance: the Worldwide Governance Indicators

Despite two decades of research on governance-related indicators, defining and measuring the concept meaningfully remains a major challenge. In 1999, researchers at the World Bank and Brookings Institution jointly introduced the Worldwide Governance Indicators (WGI) project. The WGI attempts to systematically collect data on governance indicators in order to make cross-country and time series analysis of governance trends possible. WGI defines governance as: "the set of traditions and institutions by which authority in a country is exercised. This includes (1) the process by which governments are selected, monitored and replaced, (2) the capacity of the government to effectively formulate and implement sound policies, and (3) the respect of citizens and the state for the institutions that govern economic and social interactions among them."

WGI is the largest systematic data collection effort specifically aimed at capturing a measure of governance in 200 countries. The data are collected from non-standardized sources, including household and firm polls/surveys, NGO documentation, commercial or business records, and reports from regional development banks. WGI uses a statistical model to standardize the data from these sources into comparable units. From this, six aggregate indicators are produced (see Fig 1.1) with country scores scaled from -2.5 (worst) to 2.5 (best). WGI's six governance indicators and the data they comprise are found in Figure 1.1:

---


23 For more information, see WGI's excellent FAQs: <http://info.worldbank.org/governance/wgi/index.aspx#faq-1>.

24 From 1996-2002, WGI scores were released every two years, but from 2002 onward, they are available annually.

25 It is an unobserved components model.
Political Stability and Perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically motivated violence and terrorism.

Terrorism means. including nolificallv motivated violence and terrorism.

Regulatory Quality Perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.

Rule of Law Perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.

Control of Corruption Perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests.26


Measuring governance is fraught with methodological and conceptual challenges. Because it is ultimately a subjective concept, measurement requires a host of judgment calls regarding the use and weighting of the raw data. Both the creators of the WGI and outside critics have written extensively about the limitations of WGI scores (Kaufmann et al 1991, 2007, 2010; Van de Walle 2005; Arndt and Oman 2008). While acknowledging these limitations, WGI is the first and only comprehensive effort to quantify the concept of governance for analysis of in studies of aid distribution and utilization. A few other databases that are used in analyses of governance capture specific aspects of governance. These include the Freedom House annual ratings on political and civil rights and the International Country Risk Guide rating system, which looks at political, financial and economic risks. This paper utilizes the WGI ratings as the

proxy for good governance, as these represents the most comprehensive indicator available, as well as the measure by which IDA is most likely to gage its own performance. This is significant when considering whether IDA believes it is living up to the standard of governance set in its own institution – a question that is not settled.

Though there is now consensus in the development community around good governance as a criterion for aid, many questions remain: In the decade since the Monterrey Consensus and two decades since the OECD’s declaration, has governance been incorporated as a significant factor in aid delivery for the poorest countries? Does country governance influence aid allocation at the Bank and IDA more specifically? These questions are part of an ongoing debate, portions of which will be addressed in this paper. The discussion in this chapter is intended to highlight how the international development community adopted good governance in the 1990s and how the World Bank measures the concept to provide background for the following chapters. The next section describes IDA and its aid allocation process, which is the focus of this paper.

And likely further back, but see Ronald Coase’s "The Problem of Social Cost" (1960), several pages of which eventually gave rise to the Coase Theorem, which is today an important basis for analyzing regulation and efficiency in the face of transaction costs.

Interestingly, Burnside and Dollar’s paper also found that “any tendency for aid to reward good policies has been overwhelmed by donors’ pursuit of their own strategic interests.” There is a wealth of analyses that find bilateral aid to be more political than multilateral aid.

The authors later (2004) went back and re-did the analysis using the Worldwide Governance Indicators and found the same result.

These critiques include that the results are give more weight to certain national surveys than to household survey data, that the data sources are not the same in each country and therefore not comparable, and that there is a lack of a practical, overarching theory on what constitutes “good” versus “bad” governance in much of this work.
3. IDA AND GOVERNANCE AS A CRITERION FOR AID

a. Overview of the International Development Association (IDA)

IDA is the wing of the World Bank\textsuperscript{27} that offers aid specifically to the world's poorest countries.\textsuperscript{3} IDA is unique within the Bank because it exclusively provides grants or loans on a concessional basis\textsuperscript{4} — that is, loans that have interest rates below market rate and often below inflation. Most of IDA's assistance has a grant element, and usually only requires that 40 percent of loans are repaid.\textsuperscript{5} Countries are eligible for IDA assistance based on two main factors: (1) a per capita GNI that is below an annually-determined threshold (US$1,195 in FY13)\textsuperscript{6} and (2) a lack of creditworthiness, established by the inability to borrow from either the IBRD or on open financial markets.\textsuperscript{7,8}

Because IDA provides concessional loans and grants, its funds are continually drawn down and must be replenished every three years. Donor countries give the bulk of these replenishments (see Appendix 3),\textsuperscript{9} though IDA also receives funds from two wings of the World Bank Group, IBRD and the International Financial Corporation (IFC). Countries that have become ineligible for IDA because their GNIPC is too high (China, for example) also contribute to IDA's funds as they pay down significant loans on non-concessional terms. Currently, IDA is on its 16\textsuperscript{th} replenishment (called "IDA16") since creation in 1960.\textsuperscript{10}

\textsuperscript{27} The World Bank Group comprises five distinct entities: the International Bank for Reconstruction and Development (IBRD), the International Development Association (IDA), the International Finance Corporation (IFC), the Multilateral Investment Guarantee Agency (MIGA), and the International Centre for Settlement of Investment Disputes (ICSID). The name "World Bank," however, generally refers only to IBRD and IDA.
b. World Bank Lending Categories

The World Bank’s recipient member countries are sorted into three main lending categories, two of which have access to IDA funds. These lending categories are:

- **IBRD-only**: Countries that are deemed creditworthy enough to borrow from the Bank and have access to market-rate funds. These countries have no access to IDA resources, with a few exceptions.

- **Blend**: Countries eligible to borrow from both IDA and IBRD\(^{28}\) with specific restrictions on how the funds are used. IDA repayment terms are slightly different than purely IDA countries.

- **IDA-only**: Countries that have no access to IBRD or market-rate funds. They are eligible to borrow only from IDA.

Countries move in or out of IDA-eligibility based on the income and creditworthiness criteria mentioned in the previous section. “Graduates” of IDA – those who have surpassed the per capita GNI threshold for three consecutive years and/or are deemed creditworthy enough to borrow from IBRD – may be categorized as “Blend” countries for a specified period of time in order to transition the country out of IDA. Blend status allows countries to borrow from both IDA and IBRD with limitations on the nature of the spending.\(^{iv}\) Upon moving to Blend or IBRD status, countries are required to pay down IDA loans at an accelerated rate.\(^{v}\) For a complete list of countries eligible for IDA funding during the period studied, see Appendix 5.

---

c. Governance in the Performance Based Allocation (PBA) System

IDA uses a system called Performance-Based Allocation (PBA) to help determine the relative funding levels that are offered to IDA-eligible countries. The allocation formula is designed to apportion aid based on a country’s need and its recent history of development performance. The aid allocation formula is composed of three factors:

1. **Performance**. This is determined by a Country Performance Rating (CPR), which is made up of two, weighted sub-components: (1) the Country Policy and Institutional Assessment (CPIA), and (2) the country’s portfolio rating, which is an assessment of how well IDA loans and grants have been managed and allocated. Through this indicator, measures of country governance are formally incorporated into IDA’s decision-making process.

2. **Need**. The proxy for need is per capita gross national income (GNIPC).

3. **Population (total)**.

These three factors are combined to give each country an allocation score based on the following function:

\[
PBA \text{ Score} = f(\text{Country Performance Rating}^{5.0}, \text{GNIPC}^{-0.125}, \text{Population}^{1.0})
\]

The allocation score formula heavily weights country performance (exponent of 5.0), but applies a negative exponent to per capita GNI, which is designed to reduce IDA allocations for eligible countries with higher per capita incomes. This allocation score is then used in a ratio over the sum of all IDA country PBA scores to create a starting point estimate of the funding each country will receive from the total IDA pool. Every IDA-eligible country also receives a base allocation to pay for the general operation of IDA programs in countries.

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29 For a very good step-by-step explanation of the allocation formula, see Leo, Benjamin (June 2010).
30 Leo, Benjamin (June 2010).
The two components of the CPR – the country’s Country Policy and Institutional Assessment (CPIA) score and an assessment of the country’s portfolio performance – are used to predict how well a country might utilize aid dollars based on past performance.\textsuperscript{iii}

The CPIA is derived from a survey of 16 criteria grouped into 4 clusters (see Fig 3.2). Experts from the World Bank team in each IDA country fill out this survey\textsuperscript{31} and great care is taken to ensure scoring is comparable across countries. Scores in each criteria range from 1 (low) to 6 (high). Together, these ratings indicate a country’s performance potential, which is then fed into the larger PBA equations.\textsuperscript{32} Cluster D, Public Sector Management and Institutions, is the component thought to best reflect a country’s governance and it is heavily weighted in the scoring process.

The CPIA formulation has been revised multiple times in the last decade, each iteration producing slight adjustments in how measures of governance were incorporated.\textsuperscript{iii} In fiscal year 2009, Cluster D of the CPIA was weighted more heavily to give greater importance in the allocation to governance. With this change, the current CPR weights its inputs as follows:

\textbf{Fig 3.2 World Bank CPIA Categories}

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<thead>
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<th>A. Economic Management</th>
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<tr>
<td>1. Monetary and Exchange Rate Policies</td>
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<td>2. Fiscal Policy</td>
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<td>3. Debt Policy and Management</td>
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<th>B. Structural Policies</th>
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<td>4. Trade</td>
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<td>5. Financial Sector</td>
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<td>6. Business Regulatory Environment</td>
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<th>C. Policies for Social Inclusion/Equity</th>
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<td>7. Gender Equality</td>
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<tr>
<td>8. Equity of Public Resource Use</td>
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<tr>
<td>9. Building Human Resources</td>
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<tr>
<td>10. Social Protection and Labor</td>
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<tr>
<td>11. Policies &amp; Institutions for Environmental Sustainability</td>
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<th>D. Public Sector Management and Institutions</th>
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<tr>
<td>12. Property Rights, Rule-based Governance</td>
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<tr>
<td>13. Quality of Budgetary &amp; Financial Management</td>
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<td>14. Efficiency of Revenue Mobilization</td>
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<td>15. Quality of Public Administration</td>
</tr>
<tr>
<td>16. Transparency, Accountability, Corruption in the Public Sector</td>
</tr>
</tbody>
</table>


\textsuperscript{32} Note: CPR scores have only been publically available since 2006. See Kanbur, Ravi (2005). “Reforming the Formula: A Modest Proposal for Introducing Development Outcomes in IDA Allocation Procedures.”
d. Exceptions to the PBA Formula

At this point, the consistency of scoring and applying formulae thus described begins to break down, as many exceptions to the formula outputs are negotiated during each IDA replenishment period. For example, IDA annually caps the amount of money that Blend countries with large populations can receive. Without this large Blend-country exception during IDA15, India would have received almost 60 percent of the total available IDA funds (it was capped at 18 percent and actually received about 11 percent). Among the other exceptions, there are special allowances made for small island nations that have relatively high income but also a high cost of trade and limited creditworthiness, and countries that re-engage with IDA after periods of non-engagement. There are also special funds for fragile or post-conflict countries, which have a rating system that is separate from the CPIA. About twenty percent of IDA-eligible countries are or have been recipients of aid based on one or more of these exceptions.

Benjamin Leo (2011), of the Center for Global Development (CGD), finds that for a given country allocation, the exceptions temper the impact of an exceptionally high or low performance rating, per capita GNI, or population. However, the CPR is still thought to largely

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33 Leo, Benjamin (June 2010).
determine the allocation. This is an important point of consideration, as the method by which country performance ratings are determined is qualitative in nature and thus subject to politicking. Nonetheless, based on a comprehensive set of development indicators (including the UN Development Index, World Development Indicators for export volatility as measures of need and vulnerability, for example) Leo finds that on the whole, PBA exceptions manage to direct funds to the "neediest and most vulnerable countries in absolute terms."^{34}

Figure 3.4 outlines the general steps described above that are involved in the IDA’s allocation process:

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34 Ibid.
e. Transparency in IDA Decision-Making

As mentioned previously, the CPR ratings were made public beginning in June 2006, done at the urging of the NGO community. However, there is still no public information on the replenishment meetings attended by donors and board members, or the meetings between these groups and representatives of IDA countries. In these meetings, exceptions are negotiated, determinations are made about which countries may be up for IDA graduation, Blend-country repayment terms are drawn up, and decisions about which countries will be subject to hardened lending terms are made. Though these choices are hugely significant for the recipient countries, IDA has only invited a limited number of representatives from recipient nations to take part in the replenishment negotiations since IDA13 (nine borrower representatives from participated in the IDA16 negotiations\(^{35}\)). Nonetheless, these participants, like the donor participants, very rarely share any information about the discussions.

It is this issue – that the determinants of aid allocations at the Bank cannot be fully understood – that compels this study and the numerous others that exist on this topic. Though developing countries vying for IDA funds may be led to believe if they improve their governance they will be provided more aid, there is no data from IDA to back this claim up. The next chapter describes the research that has been done in the area of aid allocations and governance over the last two decades. Though much of the work done on aid allocations is concerned with whether bilateral aid is allocated on a strategic (as opposed to humanitarian) basis, there are a few select works that take IDA into account. The next chapter sets the basis on which to investigate whether IDA’s efforts to incorporate governance in its CPR formula have been successful.

IDA is one of the largest sources of funding for the world’s least developed countries. Since inception, the organization has provided US$271 billion in loans and grants with recent annual averages of about US$16 billion, approximately half of which is routed to Africa.

The IMF defines concessional lending: “These are loans that are extended on terms substantially more generous than market loans. The concessionality is achieved either through interest rates below those available on the market or by grace periods, or a combination of these. Concessional loans typically have long grace periods.”

A standard IDA loan has a 10-year grace period in which no interest is incurred and then a 40-year maturity period in which 60 percent of the loan is usually forgiven.

The cut-off was US$1,035 in FY2012 and is US$1,205 in FY2014.

A third criterion, good policy performance, described as “the implementation of economic and social policies that promote growth and poverty reduction,” is no longer one of the deciding factors in eligibility, but has been subsumed into a different part of IDA’s allocation formula. See endnote no. 3 of Hout, Wil (2004). “Good Governance and the Political Economy of Selectivity.” Asia Research Centre. Working Paper No. 100.

The top donors are the United States, Japan, Germany, and the United Kingdom. In FY13, the top IDA borrowers were Vietnam (at $1.98 billion), Bangladesh ($1.57 billion), Ethiopia ($1.12 billion), Nigeria ($1.02 billion) and India ($948 million).

The cut-off was US$1,035 in FY2012 and is US$1,205 in FY2014. IDA16 will end June 30, 2014. IDA17 will run from July 1, 2014 to June 30, 2017.

Specifically, IDA funds are intended for social sector purposes, while IBRD funds are supposed to be invested in harder assets, including infrastructure development.


This default allocation is generally about 1 percent of the total IDA funds split among the countries.

According IEG (2010), the ratings were “considered to be highly unsatisfactory if they were ‘2’ or below for the CPIA criteria and in the case of [the portfolio assessment] procurement criterion, if over 30 percent of projects had deficient procurement practices.”

CPIA is used both in IBRD and IDA to rate country performance, though the formula has changed several times over the years. Within the time period addressed in this paper (2002-12), the CPIA has had four incarnations. From 2001-08, the CPR formula was: CPR = (0.8*CPIA + 0.2*country portfolio rating) * governance factor
Here, the average of the seven governance factors (six from the CPIA and one from the country’s portfolio) was divided by 3.5 to produce a governance rating. These seven criteria had an effective weight of 68 percent on IDA’s CPR. This formulation raised the volatility of CPRs. Gelb et al (2004), of the Bank’s Africa Region, found that a very small change in country ratings could have very significant consequences for country aid allocations. In fact, a “one point drop in just one of the seven governance criteria results in a 7.5 percent drop in the overall IDA rating, and in turn a 15 percent drop in the country’s allocation.” In 2004, the CPIA criteria were restructured and one governance factor was eliminated, pushing the effect of governance on IDA CPR down to 66 percent. This also had volatile effects and a three-year moving average of the procurement rating was added.
4. LITERATURE REVIEW OF GOVERNANCE IN FOREIGN AID

The World Bank’s 1998 report, *Assessing Aid*, played an important role in shifting the development community’s focus toward governance. The report, which concluded that aid yields positive development outcomes in countries with good policies and economic institutions, provided an empirical confirmation of the intuitive case for good governance that had already been gaining steam among donors in the early 1990s. Since *Assessing Aid*, the body of research that investigates aid, governance, and development outcomes has grown considerably. Much of the research examines the relationship of good governance to economic growth or poverty reduction. A smaller subset of this work studies the determinants of aid allocation and whether donors’ aid allocations comport with their stated prioritization of good governance. The following section outlines the major studies that link governance and aid, with a specific attention to those that include multilateral aid organizations.

a. Aid and governance in the literature

Nearly all of the major studies of factors that influence the amount of aid that countries receive have included one or more metrics of recipient-country governance in their analyses (see Fig 4.1 at the end of this section for an overview of these studies). The relevant work in this field contains three main lines of inquiry: 1) Whether donor attention to governance has increased since the concept came into favor; 2) Whether the type of development aid provided by donors is in line with a larger focus on governance; and 3) Whether governance over a discrete time period (post-Cold War, for example) has a statistically significant relationship with aid. The bulk of the field focuses on bilateral donors, though the studies presented here largely include multilateral donors and IDA, when possible.
The first pertinent branch of research assesses whether there has been a change in donor attention to governance since the concept was incorporated into the common development vernacular. Studies of this type are primarily concerned with whether there is a causal relationship between better governance and increasing amounts of aid in the decades since the 1980s. Among the major studies that find donors have been more responsive to governance factors, Dollar and Levin (2004) present evidence that overall foreign aid has become more sensitive to two specific aspects of governance since the 1980s – democracy and rule of law. Their study spans the years 1984-2003 and considers the aid behavior of both bilateral and multilateral donors. Their conclusion that foreign aid has “overall become more selective” with respect to governance since the 1980s has inspired many subsequent studies, both confirming and refuting their findings. However, the often-overlooked finding in this paper is that there was no statistically significant relationship between governance and bilateral donors’ aid allocations – only between multilateral donors’ and governance. Concurring with this finding, Burnside and Dollar (2004) also found that better governance was associated with more total aid in the 1990s than in the 1980s and that the positive relationship between governance and aid is limited to multilateral aid.

In another study that partially corroborates Dollar and Levin’s findings, Goldin, Rogers, and Stern (2002) assessed aid selectivity at the World Bank using the Bank’s Country Policy and Institutional Analysis Assessment (CPIA) data as a measure of governance. Their study also found that donors were more selective in the 1990s than in prior decades. However, Bill Easterly, a former World Bank economist and current professor at New York University, disputes the generalization of their findings. Easterly (2006) cites an internal World Bank report that used the

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same CPIA scores and found that IDA was the only World Bank organization that was selective for governance, with the caveat that India and Indonesia were excluded from the data.\textsuperscript{xiii} Goldin et al are not explicit about why they omitted India and Indonesia, though their large populations and fast economic growth may have rendered them outliers in the sample. Nonetheless, Easterly's research finds that if these countries are included in the sample, the 'good policy' countries receive less per capita aid than the 'bad policy' countries during the time period assessed.\textsuperscript{xxvii, xxviii}

Further, Bill Easterly (2007) authored a longitudinal study that contradicts many of the positive associations found between governance and aid after the 1980s. In his critical look at whether aid agencies have selectively allocated aid based on governance from 1960-2004, Easterly analyzes the sensitivity of IDA and four bilateral donors to recipient country corruption levels and openness to interaction with the global community, two proxies for governance. He finds "little or no sign of increased selectivity with respect to policies and institutions" among the donors over the decades studied.\textsuperscript{xxix} Despite this overall finding, Easterly found significant negative correlations between aid and corruption after 1995, which he believes may support the claim that donors, including IDA, were considering corruption more actively in their aid decisions.

The second relevant topic emerging in the literature focuses on whether aid agencies give different types of aid to well-governed countries compared to poorly-governed ones. Sarah Bermeo (2008a), of Duke University, studies aid allocation in terms of the type of aid provided – specifically differentiating aid dollars that are to be actively controlled by the recipient government from those that are not. Bermeo's work suggests that, at least for aid provided by four major bilateral donors from 2000-2005, a recipient country’s poor governance correlates
with less aid for sectors where government involvement is significant. Though this study only covers 6 years, this finding suggests that donors have a more nuanced understanding of governance than prior studies have indicated. In a similar study on World Bank lending, Matthew Winters (2010) analyses the influence of governance on types of World Bank aid and loans. His work uses panel data from 1996-2002 and investigates the claim that ‘project lending’ (wherein funding goes to specifically defined projects and thus has less opportunity to be diverted by corrupt governments) will logically flow to countries with poorer governance and ‘programmatic lending’ (lending that is more controlled by recipients) will be emphasized in countries with better governance. Winters found a limited positive relationship between good governance and concordant IBRD lending. More notably, he found a "robust negative relationship" between good governance and IDA lending patterns from 1996-2002. Winters does not offer further analysis of the factors that may account for this finding in IDA.

The third branch of study examines whether governance has a statistically significant relationship with aid or other variables within a discrete time period, usually based around geopolitical events, such as the end of the Cold War. Much of this work is concerned with strategic motivations in bilateral aid allocation, though some studies include multilateral donors. Nunnenkamp et al (2004) studied bilateral and multilateral aid as it correlates with governance from 1999-2002, the years directly after Assessing Aid was published. Their work considered whether donors respond to governance-related reforms with more aid. They found little to support the claim that better governance was a factor in aid allocation, reporting that

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donors’ response “proved to be disappointingly weak, in the light of the widespread rhetoric that policy reforms and institutional development would be supported.”

In a similar vein, a study by Neumayer (2003a) on good governance as a factor in aid allocation from 1991-2000 found limited evidence that donors select for governance in their aid decisions. The extensive study of multilateral and bilateral donors included IDA. With few exceptions, the Neumayer found weak linkages between aid allocations and governance. For IDA, two of the three factors outlined in the aid allocation formula were found to have a significant relationship with aid – population and per capita GDP. Among the variables Neumayer used as proxies for governance – democracy, human rights, low corruption, rule of law, and low regulatory burden – he found that IDA’s allocations correlated positively with human rights. This may be an indication that CPIA is not strongly correlated with governance. Neumayer was unwilling to accuse donors of hypocrisy, however. Rather, he called for ongoing research to analyze aspects of governance that his variables may not have captured.

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<table>
<thead>
<tr>
<th>Author(s) (date)</th>
<th>Donor(s) Studied</th>
<th>Period studied</th>
<th>Dependent Variable</th>
<th>Governance variables</th>
<th>Donor Interest Variables</th>
<th>Recipient Need Variables</th>
<th>Type of Data, Estimation Technique</th>
<th>Main Findings on Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Svensson (2000)</td>
<td>Aggregate bilateral and multilateral donors</td>
<td>1980-1994</td>
<td>Aid as % of GDP</td>
<td>Corruption</td>
<td>Regional interest (dummy variables)</td>
<td>Per capita GDP</td>
<td>Panel data; Two-stage least squares</td>
<td>No relationship between corruption and aid</td>
</tr>
<tr>
<td>Alesina and Dollar (2000)</td>
<td>US, UK, France, Japan, Germany, Canada, Belgium, Australia, Austria, the Netherlands, Italy, Scandinavia</td>
<td>1970-1994</td>
<td>Per capita aid</td>
<td>Political and civil rights; Rule of law; Trade openness; Democracy</td>
<td>UN voting similarities between donor and recipient; Religious similarities; Years as colony</td>
<td>Per capita GDP</td>
<td>Panel data; OLS and Tobit</td>
<td>Donor interest was a major contributor to aid allocations, most donors also gave based on recipient need, political/civil rights, and trade openness</td>
</tr>
<tr>
<td>Alesina and Weder (2002)</td>
<td>US, Japan, France, UK, Switzerland, Canada, Portugal, Germany, Spain, the Netherlands, Italy, Scandinavia</td>
<td>1970-1995</td>
<td>Per capita aid</td>
<td>Corruption; Political rights</td>
<td>UN voting similarities between donor and recipient; Colonial relationship</td>
<td>Per capita GDP</td>
<td>Panel data; OLS and Tobit</td>
<td>Overall, no evidence of more aid to less corrupt governments. For Scandinavian countries, negative correlation between aid with corruption; US rewards democracy.</td>
</tr>
<tr>
<td>Hout (2002)</td>
<td>The Netherlands</td>
<td>2000</td>
<td>Aid eligibility</td>
<td>Political and civil rights; Lack of violence and political stability; Regulatory burden; Corruption; Rule of law; Government effectiveness</td>
<td>–</td>
<td>Per capita GDP</td>
<td>Cross sectional; Logit</td>
<td>Recipient need has a relationship with aid eligibility; Regulatory burden, one of the GG variables, also is partially responsible</td>
</tr>
<tr>
<td>Neumayer (2003a)</td>
<td>UN agencies, IDA, Japan, Germany, France, UK, Italy, Canada, Denmark, the Netherlands, Norway, Sweden, aggregate multilateral, Arab bi- and multi-laterals, Euro. Commission</td>
<td>1991-2000</td>
<td>Gross aid commitment</td>
<td>Political freedom or democracy; Human rights; Corruption; Rule of law; Regulatory burden</td>
<td>Colonial relationship; US military funds; Political similarity; Exports; Religious similarity</td>
<td>Per capita GDP; PQLI</td>
<td>Panel data; Two-part model</td>
<td>Governance variables, when taken as a whole, are statistically significant determinants of aid for some donors some of the time. UN not found to incorporate good governance, IDA does in limited instances.</td>
</tr>
<tr>
<td>Period studied</td>
<td>Donor(s) Studied</td>
<td>Author(s) (date)</td>
<td>Governance variables</td>
<td>Main Findings on Governance</td>
<td>Type of Data, Estimation Technique</td>
<td>Donor Interest Variables</td>
<td>Recipient Need Variables</td>
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<tr>
<td>1985-1997</td>
<td>21 OECD donors</td>
<td>Neumayer (2003b)</td>
<td>Political and civil rights; Personal integrity rights</td>
<td>No relationship between aid and governance proxies. No relationship between aid and governance proxies.</td>
<td>Panel data; Two-part model, Probit and OLS</td>
<td>Colonial relationship; Exports; US military funds; Geographic distance</td>
<td>Per capita GDP</td>
<td></td>
</tr>
<tr>
<td>1983-1997</td>
<td>Regional Dev. Banks, UN agencies, + Multilateral donors (aggregate)</td>
<td>Neumayer (2003c)</td>
<td>Political and civil rights; Personal integrity rights; Corruption</td>
<td>Some donor interest and recipient need variables have a relationship to aid allocation.</td>
<td>Panel data; OLS</td>
<td>Colonial relationship; Geographic distance; Security relationship</td>
<td>Per capita GDP, OPLI</td>
<td></td>
</tr>
<tr>
<td>1984-1995</td>
<td>Aggregate bilateral and aggregate multilateral donors (aggregate)</td>
<td>Neumayer (2003d)</td>
<td>Political and civil rights; Personal integrity rights</td>
<td>Stronger relationship between good policies in the 1990s than in the 1980s.</td>
<td>Panel data; Tobit; Random-effects Probit</td>
<td>Colonial relationship; US funds to Egypt</td>
<td>Per capita GDP; Population</td>
<td></td>
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<tr>
<td>1980-1999</td>
<td>41 bilateral donors and multilateral</td>
<td>Dollar and Levin (2004)</td>
<td>Aggregate growth rate; Foreign direct investment received; Gross primary school enrollment; infant mortality rate</td>
<td>Multilateral donors are more selective for good governance in the 1990s than in the 1980s.</td>
<td>Panel data; OLS</td>
<td>Colonial relationship; US funds to Egypt</td>
<td>Per capita GDP; Population</td>
<td></td>
</tr>
<tr>
<td></td>
<td>All OECD-tracked ODA</td>
<td>Burnside and Dollar (2004)</td>
<td>CPIA score</td>
<td>Aid in the 1990s spurs growth, conditional on the quality of institutions and policies.</td>
<td>Panel data; OLS</td>
<td>Colonial relationship; US funds to Egypt</td>
<td>Fraction English-speaking; Fraction Euro-language speaking; Former Soviet Union; Distance from donor</td>
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</tbody>
</table>

Main Findings on Governance:
- No relationship between aid and governance proxies.
- Some donor interest and recipient need variables have a relationship to aid allocation.
- Stronger relationship between good policies in the 1990s than in the 1980s.
- Multilateral donors are more selective for good governance in the 1990s than in the 1980s.
- Aid in the 1990s spurs growth, conditional on the quality of institutions and policies.
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<th>Recipient Need Variables</th>
<th>Type of Data, Estimation Technique</th>
<th>Main Findings on Governance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nunnenkamp, Canavire-Bacarreza, and Triveno (2004)</td>
<td>US, Japan, France, Germany, UK, the Netherlands, Sweden, Norway, Denmark, aggregate Multilateral donors</td>
<td>1999-2002</td>
<td>Total Aid</td>
<td>Worldwide Governance Indicators; Inflation</td>
<td>Openness to trade</td>
<td>Per capita Income</td>
<td>Panel data; OLS</td>
<td>Policy improvements do not have a relationship with increased aid, either for multilateral or bilateral donors</td>
</tr>
<tr>
<td>Easterly (2007)</td>
<td>All ODA, IDA, US, UK, France, Japan</td>
<td>1960-2004</td>
<td>Total Aid</td>
<td>Sachs-Warner and other openness variables; High inflation; Democracy; Democracy post-Cold War; Corruption</td>
<td></td>
<td>Per capita Income</td>
<td>Various, including simple regression</td>
<td>Very little links aid and governance; Some association between corruption and lower aid from mid-1990s onward.</td>
</tr>
<tr>
<td>Bermeo (2008b)</td>
<td>Bilateral and multilateral donors</td>
<td>1984-1988; 2000-2005</td>
<td>% of Aid Allocation Sent to Public Sector; Sectoral aid commitments</td>
<td>Worldwide Governance Indicators; Freedom House Democracy Index</td>
<td>US military assist; Colonial relationship; Trade with wealthy countries; Oil export; Immigration</td>
<td>Disaster aid; Immigration; Income</td>
<td>OLS with robust standard errors</td>
<td>Less aid for government-controlled sectors in countries with worse governance; some interest in emergency aid for 'bad gov' countries</td>
</tr>
<tr>
<td>Winters (2010)</td>
<td>World Bank</td>
<td>1996-2002</td>
<td>Aid by project type</td>
<td>Worldwide Governance Indicators</td>
<td>Military assistance; Similar UN voting; Trade with OECD; Rotating UNSC seat; and many others</td>
<td>GDP per capita</td>
<td>Panel; OLS random effects, 4-year time trend</td>
<td>Recent World Bank aid responds positively to good governance, while IDA aid has a negative association with good governance.</td>
</tr>
<tr>
<td>Clíst (2011)</td>
<td>US, the Netherlands, UK, Japan, Germany, France, Nordics, Aggregate multilateral</td>
<td>1982-2006</td>
<td>% of a donor’s total aid in given year</td>
<td>Freedom House Index; Political Terror; CPIA; Control of corruption</td>
<td>US Military grants; Religion; Arms; Exports; Language; Colonial relationship; Proximity</td>
<td>GDP per capita</td>
<td>Panel data; Two-part model</td>
<td>Donors broadly insensitive to policy post-1990s, some demonstrate slowly increasing sensitivity</td>
</tr>
<tr>
<td>Akramov (2012)</td>
<td>21 bilateral donors</td>
<td>1973-2002</td>
<td>Per capita aid commitments</td>
<td>Worldwide Governance Indicators; Political/civil liberties and democratic governance</td>
<td>Exports; Total investment in the country as percentage of GNI, etc.</td>
<td>GNI per capita; Average years schooling, etc.</td>
<td>Time series, generalized least square, Probit and random effects estimators</td>
<td>Provides no support for the idea that aid targeted based on governance factors improves development outcomes</td>
</tr>
</tbody>
</table>
b. Research Designs: Aid as a Function of Donor Interest, Recipient Need, and Merit

Though conclusions from the research outlined above are widely divergent, their econometric analyses often have similar general structures. In particular, there is overall agreement that a variety of geo-political, economic, and cultural connections between a donor and recipient often play a role in how much aid is provided. Donors’ motivations for aid delivery are generally neither entirely altruistic nor purely self-interested. That is, although a donor’s strategic interests may play into an aid allocation decision, a recipient’s need is also relevant. Models of these relationships from the literature typically describe aid as a function of three basic elements: donor interest, recipient need, and recipient merit (McKinlay and Little 1979, Maizels and Nissanke 1984, Feeny and McGillivray 2002, Neumayer 2003a, Berthélemy 2006, Nelson 2012).

Though it is rare to find two studies that include the same explanatory variables, those variables that help explain a donor’s interest generally include political, economic, military, or cultural ties to the recipient. Recipient need is almost always represented by an economic measure such as gross domestic product (GDP) or gross national income (GNI). A recipient country’s merit is not always included in the models, but when it is, factors that account for governance, such as the quality of national policies or institutions, are usually incorporated (Collier and Dollar 2001 & 2002, Neumayer 2003, Winters 2010). There is a general consensus that political motivations drive bilateral aid to a greater extent than they do multilateral aid. As a result, in studies of multi-donor organizations, such as the World Bank, donor interest variables often include composites of some of the multilateral organization’s top contributors’ interests.

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The following table lists variables typically used in regression analyses of the determinants of aid allocation. The variables are listed under their umbrella categories – donor interest, recipient need, and merit:

<table>
<thead>
<tr>
<th>Donor Interest</th>
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</thead>
<tbody>
<tr>
<td><strong>Political similarity</strong></td>
</tr>
<tr>
<td>Political or ideological beliefs of recipient countries are thought to be a factor in aid allocation decisions. To measure this factor, researchers have used data on political similarities, which can be found in the Affinity of Nations Index. Also, Signorino and Ritter (1999) created a metric of political similarity that measures how closely the political tenor in one country tracks with another. Gartzke et al (1999) have used voting similarities in the UN General Assembly to measure political similarities.</td>
</tr>
<tr>
<td><strong>Economic interests</strong></td>
</tr>
<tr>
<td>Neumayer finds that “practically all donors give more aid to those countries that import a higher share of the donor country’s exports.” OECD data on exports and the IMF’s Direction of Trade Statistics database are sometimes used to model for commercial interests (Schrader et al 1998, Neumayer 2003a). Openness to trade is sometimes demonstrated through a Sachs-Warner dummy variable (Rodriguez 2006), which takes into account tariffs, a state’s monopoly on exports, and other factors of trade.</td>
</tr>
<tr>
<td><strong>Military/security interests</strong></td>
</tr>
<tr>
<td>In terms of a donor’s military interest, the amount of military aid given by the U.S. has been considered (Clist 2011), as well as overall military expenditures. USAID (2002) tracks U.S. military aid to developing countries and the World Bank collects some data on overall military expenditures. Oil security is occasionally included in this category. British Petroleum (2013) tracks significant oil-exporting nations, including the number of barrels exported.</td>
</tr>
<tr>
<td><strong>Cultural or historical ties</strong></td>
</tr>
<tr>
<td>Though cultural/historical ties are mostly used to explain bilateral aid relationships, they may hold some relevance for multilateral aid. Some find that donors give more aid to recipient countries that are former colonies of donors (Alesina and Dollar 2000, Neumayer 2003c). Some studies look at shared religion, and include the share of Muslims, Christians, and Buddhists in a recipient country’s population (Parker 1997, La Porta et al 1999, Alesina and Dollar 2000). Another included shared language, defined by at least 9 percent of the recipient country’s population speaking the donor’s language (Clist 2005).</td>
</tr>
<tr>
<td><strong>Overall aid</strong></td>
</tr>
<tr>
<td>Overall aid allocation to a recipient country may have an impact on a specific donor’s willingness to</td>
</tr>
</tbody>
</table>

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send aid. Some studies have noted a ‘bandwagon’ effect, in which donors are comfortable giving more aid to countries deemed acceptable by certain organizations. In regressions, this variable is sourced from OECD overall Official Development Assistance (ODA) (Dudley and Montmarquette 1976, Tarp et al 1998, Alesina and Dollar 2000).

**Recipient Need**

**National Income**
The single most common variable to account for recipient need is income, for the basic reason that a poorer country is likely to need more assistance. GDP or GNI are usually used as proxies for need, with per capita amounts sometimes used to account for population/small-country bias (Berthélemy and Tichit 2004) or to approximate the actual decision-making model of the donors. Researchers have also accounted for economic need can by using indicators such as reserve capital, inflation rates, the current account balance and/or a recipient country’s inflation rate (Neumayer 2003b). Much of this data is found in the World Bank’s World Development Indicators (WDI) database (World Bank 2013).

**Health**
Health, education and other non-economic factors may also capture another aspect of ‘need’ (Morris 1980, Sen 1985, Moon 1991). Trumbull and Wall (1994) find that under certain conditions, higher infant mortality leads to greater aid allocation from both bilateral and multilateral donors. Aspects of human development are often accounted for through the inclusion of the UN’s Human Development Index (HDI) or the Physical Quality of Life Index (PQLI).

**Population bias**
When per capita GNI/GDP is not used, a population count (usually sourced from the World Bank Development Indicators) is almost always included to dampen the effects of flows to very populous or very small countries and account for the decreasing marginal benefits of aid. In terms of IDA, this effect may be dampened when accounting for IDA’s small island nations exception. IDA also caps allocations to very large countries with blend status, which is important with respect to India, in particular.

**Merit**

**Recipient governance**
Typical variables that are used as proxies for governance include: democracy or political rights, civil liberties, human rights, low corruption, rule of law, and low regulatory burden. Political rights include fair elections, freedom to organize political parties. Civil rights include freedom of expression, free press, freedom of assembly and religion. Personal integrity rights include "imprisonment, disappearances, torture, political murder, and other forms of politically motivated violence" Neumayer (2003b). To measure policy, some studies look at the Freedom House annual

---

41 Neumayer, Eric (2003a).
ratings on political and civil rights and/or the International Country Risk Guide (ICRG) rating system, which looks at political, financial and economic risks through 22 subcomponents of these factors (Dollar and Levin 2004). Also, the Worldwide Governance Indicators (WGI) and Polity IV database are a source for data on governance (Marshall, Jaggers, and Gurr 2010).

The literature on the subject of governance and aid remains divergent in many of its conclusions, particularly regarding the influence of the former on the latter. Partly, this may reflect the heterogeneity of the input variables used and years studied. One might also infer that lending policy was simply inconsistent in this regard over the past 30 years. As discussed in Chapter 2, however, governance took on an increasingly prominent role in multilateral aid policy discussions during the late 1990s and early 2000s. The most recent decade has not yet been significantly analyzed in print, providing an opportunity to assess whether the increase in official policy pronouncements translated into quantifiable lending patterns. Chapter 5 will outline this study’s methods, building upon the techniques developed by the authors describes in the preceding chapter.
This case was bolstered by an influential follow-up study from World Bank economists Craig Burnside and David Dollar (2000), which found that “aid has a positive impact on growth in developing countries with good fiscal, monetary, and trade policies but has little effect in the presence of poor policies.” Found here: Burnside, Craig, and David Dollar (2000). “Aid, Policies and Growth.” American Economic Review. Vol. 90 (4), p 847-68.

In a recent example, the researchers behind the Worldwide Governance Indicators (WGI) found positive correlations between each of their six indicators (accountability and participation, political stability, effectiveness, regulatory quality, rule of law, and corruption) and development outcomes. Dollar and Levin (2004) define good institutions and policies as follows: “By institutions, we mean rules, norms, and behaviors, or what Hall and Jones (1999) identify as “social infrastructure.” Property rights and the legal rules and behaviors that enforce them are examples of growth-enhancing institutions. A well-functioning civil service based on merit and transparency is another example. On the policy side, policies such as macroeconomic stability and a relatively open trade regime help create an environment conducive to investment and growth.”

Notably, Dollar and Levin (2004) found that IDA, Denmark, and the Netherlands are more poverty and policy selective than most other aid donors.

As measured by rule of law.

Berthélemy and Tichett (2004) concur with the finding that aid has become more sensitive to governance factors, but their study found that this is true for bilateral donors. Their panel review of bilateral donors from 1980-1999 and found evidence of increased policy selectivity.

Though complete CPIA data were not available outside the Bank before June 2006. Even after 2006, historical CPIA data was not released.

This is a key factor to note in the assessment of earlier studies. India and Indonesia are two countries with significant populations (particularly India) that are both verging on leaving IDA’s blend status, which makes them outliers in some respects, which is why they may have been omitted.

Easterly writes this in a footnote of his 2006 version. It can be found here: <dri.as.nyu.edu/docs/CP/2313/aid_progress_economic_policy.pdf>.


He does find IDA has increased sensitivity to poverty, however.

Clist et al (2011) found similar results. Their work was over 1997-2007 and found that multilaterals are more likely than multilaterals to give overall budgetary support to countries with better governance practices, especially in the most recent period, 2005-2007.

“Do Corrupt Governments Receive Less Aid?” Alesina and Weder (2002) looked into how bilateral institutions direct their foreign aid from 1970-1995. Directly taking the rhetoric of aid selectivity into account, they find: “There is no evidence that less corrupt governments receive more foreign aid. Our vast exploration of the data never uncovered any even weak evidence of a negative effect of corruption on received foreign aid.”

Neumayer (2003a) believes this is partly “due to the fact that DI is a vague concept that can be given differing interpretations and partly due to the desire of researchers to do things slightly differently from the existing literature.
Eighty-eight World Bank member-countries have been eligible for IDA assistance over the last decade. The dataset used in this paper describes the amount of aid designated to these countries and factors that may explain that designation each year from 2003 to 2012. The central hypothesis tested is whether IDA provided aid during this period based on recipient countries' capacity to use it effectively, which is approximated with a governance score. This paper attempts to single out the effect of governance on IDA's aid by controlling for factors that may impact aid flows, such as recipient country income or geo-political relationships. In order to avoid selection bias to the extent possible, the data sources were selected to maximize the number of complete sets of variables across all IDA countries while eliminating the fewest observations.

If IDA's stance on the importance of governance holds true in its allocation practices, there should be indications that more aid is channeled to countries with better governance scores. If poorer governance is associated with greater aid from IDA, this would raise important questions about how the organization presents its priorities, which has implications for both recipients vying for aid and the numerous regional aid agencies that emulate IDA's model. The following is a description of the data used and their sources, explanations of changes made to the original data, and descriptions of the estimation techniques used in this analysis.
a. Data and Sources

In keeping with prior research, the basic relationship modeled in this study is that the aid allocated \( (Y) \) to a given country \( (i) \) in a given time period \( (t) \) is equal to the explanatory variables and their relevant coefficients, the unobserved country effects \( (c_i) \), and error \( (\xi) \):

\[
\text{Aid}_i = \beta_0 + \beta_1(GNIPC_i) + \beta_2(\text{Population}_i) + \beta_3(\text{IDA Allocation Score}_i) + \ldots + c_i + \xi_i
\]

The dependent variable in this analysis is IDA's annual, per country aid allocation each year from 2003 to 2012. Data on allocation amounts are sourced from World Bank Group Finances\(^{43}\) and reflects the "original principal amount" approved by IDA's board (real 2005 USD).\(^{33,34}\) As in most studies of this type, the natural log of the dependent variable and several independent variables are used to approximate a normal distribution, as noted in the tables below. The explanatory variables used in this paper are as follows:

<table>
<thead>
<tr>
<th>Measures of Recipient Need</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gross National Income, per capita (log)</strong></td>
</tr>
<tr>
<td>Low per capita GNI is a prerequisite for receiving IDA funds and therefore serves as the basic measure of a country's economic need in this analysis. The data for this variable are sourced from the World Development Indicators (WDI). Measured in real 2005 USD.</td>
</tr>
<tr>
<td><strong>Physical Quality of Life Index (PQLI)</strong></td>
</tr>
<tr>
<td>Gross National Income is an imperfect indicator of recipient need, as it fails to capture aspects of human development that may better reflect &quot;need,&quot; including health and education levels (Morris 1980, Sen 1985, Moon 1991). Therefore, this study includes the Physical Quality of Life Index (PQLI)(^{44}) as an indicator of human development. The PQLI indexes weighted measures of literacy, infant mortality, and life expectancy to rank countries against each other.(^{33,35}) Data for this variable are sourced from the CIA Factbook,(^{45}) World Health Organization and WDI. Because annual studies of some of these factors are not collected, they are averaged over three years.(^{33,36})</td>
</tr>
</tbody>
</table>

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Population (log)

Total country population is an explicit factor in IDA decisions and is sourced from WDI.\textsuperscript{xxxvii}

Measures of Merit

Worldwide Governance Indicators (WGI)

An un-weighted, composite score of the Worldwide Governance Indicators (WGI) is used as the proxy for governance (Winters 2010, Bermeo 2011). The components of WGI are Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. WGI scores are scaled from -2.5 to 2.5 (higher score indicates better governance). The greatest advantage of this indicator over other measures of governance is its coverage over the time period studied – there is data on nearly all countries for all years. Other governance indicators commonly lack comprehensive data, especially on the poorest countries, which results in non-random elimination of data.

Freedom House Political Rights and Civil Liberties Index

Freedom House indicators on political rights and civil liberties are partial indicators of good governance. This source includes data for all countries studied from 2003-12. Freedom House’s political rights and civil liberties scores are averaged for a composite ‘democracy’ score, which is used as a robustness check with governance (Freedom House 2014). As in Bermeo (2008), the scores from 1 (best) to 7 (worst) are inverted for clarity.

Country Performance Rating (CPR) and Country Policy and Institutional Assessment (CPIA)

IDA’s CPR and CPIA data are used in limited contexts in this analysis, as they are only available from 2006 and 2005 onward, respectively.\textsuperscript{xxxviii} Notably missing are data on Albania, Indonesia, Iraq, Kosovo, Marshall Islands, Montenegro, Serbia, South Sudan, and Tuvalu. Both CRP and CPIA are available from World Bank Data & Statistics (2014).\textsuperscript{xxxix}

Measures of Donor Interest

Colonial Relationships

The existence of a colonial history between IDA’s top nine donors (USA, Japan, Germany, UK, France, Canada, Italy, the Netherlands, and Sweden) and each recipient country is included to control for donor interest. Data are sourced from Clist (2009) and the Encyclopedia Britannica (2013).

Total Overseas Development Assistance (ODA) (log)

Total ODA minus IDA aid is calculated based on OECD data for all ODA (OECD 2014) and World Bank Group Finances (2014) for IDA. This variable is typically considered a measure of the ‘bandwagon’ effect in aid (Akrımov 2014).

Proximity
Proximity, measured by the distance between the geographic center of IDA’s top nine donor and recipient (one unit equals 1000 km) are included as controls for historical relationships, rather than because they are of direct interest in this study. These are sourced from Clist (2009) and Google Maps (2014).

**Common Language**

Common language, defined by at least 9 percent of the donor and recipient populations sharing a language, is used as a control for donor interest for the top nine IDA donors. Data are sourced from Clist (2009) and the CEPII database (2012).

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**b. Data Cleaning, Exclusions, and Missing Observations**

The data in this paper have been selected to maximize observations, as well as to approximate the IDA allocation process to the extent possible. As in most statistical analyses of developing countries, some observations must be dropped due to a lack of available information. This study attempts to account for IDA’s distinctive aid allocation process by omitting those funds that were provided based on ‘exceptions’ to IDA’s typical requirements, such as emergency relief after natural disasters. Allocation decisions made under these circumstances almost certainly do not adhere to the same governance standards expected in typical aid allocation (Roodman 2003a, Dollar and Levin 2004). Of the original 88 countries eligible for IDA aid from 2003-12, the data from 35 have been omitted for some years or, in several cases, all years. The result is a dataset of 644 country/year pairings that represent non-exceptional cases over the last decade. The following describe the omitted observations and the reasons for exclusion (also see Appendix 6):

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• **Post-conflict and emergency relief exceptions.** Countries that have been provided funds based on exceptional circumstances have been excluded from this dataset. IDA provides post-disaster, post-conflict, and emergency relief aid based on ‘exceptions.’ Funding based on these circumstances is therefore excluded from some or all years of analysis. Countries that received these funds during some or all years of the analysis include Afghanistan, Cote d’Ivoire, Central African Republic, Democratic Republic of Congo, Iraq, Kosovo, Haiti, Liberia, and Togo.

• **Nominally IDA eligible.** Countries that were inactive (known as “nominal” IDA countries) because of a lack of an organized government prepared to accept funds or a significant period in which a country has been in arrears were also eliminated, as they are not actually eligible for funds during the time period studied. These include Myanmar (Burma), Somalia, Sudan, and Zimbabwe.

• **New or split states.** Several states became independent, split into two or more countries, or merged with a neighboring state over this time period. These include Serbia & Montenegro and South Sudan. Data for these countries are given only for the period of their existence as independent states. However, both because of the method of regression and because uncertainty over how their data was disentangled after a split, these countries were omitted from much of this analysis.

• **Small island exception.** IDA’s small island exception grants islands with “less than 1.5 million people, significant vulnerability due to size and geography, and very limited credit-
worthiness and financing options" the ability to maintain their IDA borrowing status despite not meeting the standard requirements, such as the limit on per capita GNI. For this reason, Tuvalu, Cape Verde, Micronesia, Kiribati, Marshall Islands, Papua New Guinea, Solomon Islands, Tonga, Vanuatu, Dominica, Grenada, Saint Lucia, Saint Vincent, Samoa, Maldives, and Sao Tome & Principe are excluded.

- **Graduating from IDA.** Countries are also excluded after they move from IDA or IDA-blend status into IBRD status. For example, Indonesia graduated to IBRD status in 2008 and it is therefore excluded from this analysis after 2008. Albania, Azerbaijan also fall into this category. In the literature, countries that move in and out of IDA eligibility are often erroneously counted as eligible or ineligible for the entire period of study. Though somewhat problematic now, this error will have a greater impact when India moves from IDA to IBRD status because of its substantial population and aid.

c. **Analytic Approach and Estimation Models**

In the first data analyses presented, basic statistical analysis methods are used to characterize the data and establish whether certain pairwise relationships are meaningful. In addition to these, three main regression techniques are used in this paper to examine the relationship of governance to IDA aid allocations: first, a simple pooled OLS regression to assess relationships over the entire time-period studied; second, a fixed-effect estimator that is compared with two other estimators; and third, a first difference estimator with three-year averages of lagged independent variables. In choosing estimation models, one of the most salient characteristics of the data is that it is panel data, meaning that observations of the same
entity (countries) are made over time. Another important characteristic is that the dependent variable, aid allocation, is strictly non-negative and has a cluster of data points at zero (i.e., those countries that received no funding in a given year). These factors weigh heavily in the estimation models selected.

The first regressions are conducted using a pooled OLS model. Pooled OLS is a method used extensively throughout the literature to analyze grouped time periods and can demonstrate some important relationships among variables in the overall dataset. However, there are several drawbacks to using this technique, namely that it does not take advantage of the time-series aspect of a panel dataset. Further, pooled OLS assumes a linear relationship between the dependent and independent variables, though variables such as population size and per capita income often have a non-linear impact on aid. The dependent variable, aid allocation, is right-skewed due to a probability mass at zero (indicating no aid allocated during a given year). As in many models, the dependent variable is normalized through a log transformation after adding 0.01 to the total allocation amount.

Understanding the limitations of the pooled OLS model, a fixed effects model with explanatory variables lagged by one year is also used to demonstrate the relationship between IDA aid allocations and the variables. The dependent variable is, again, normalized using a log transformation. In order to select between a fixed effects or random effects estimator, a Hausman test is used to identify which would offer the most consistent results. Based on the results reported in Chapter 6, a fixed effect estimator is selected. The advantage of a fixed effects estimator is that it allows the individual country effects to be correlated with explanatory variables. A disadvantage, however, is that this model cannot estimate the

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47 Neumayer (2003c).  
48 Ibid.
coefficient of time invariant variables (or variables that vary only a little), and therefore omits these. Because there is no universally agreed upon method for this type of analysis, the findings of the fixed effects regression are contrasted with the findings of two other models – random effects and Feasible Generalized Least Square (FLGS) cross-sectional time-series regression – to determine if the fixed-effect regression results hold true across different statistical specifications.

The final estimation technique is a modified two-part model using a first difference estimator and three year averages of lagged independent variables. The first statistical analysis of any two-part model determines eligibility for a given dependent variable – in this case, the likelihood that any country is eligible to receive aid, as determined by some undeclared standards of donors. This is applicable when trying to narrow the focus from all countries in the world to only countries that are likely considered eligible for aid. However, IDA is unique among both bilateral and multilateral donors in its explicitly defined eligibility criteria and recipient pool. Therefore, the first part of the estimation is built-in to the existing data and all allocations of zero dollars represent ‘true’ zeros (these make up 7 percent of observations in this dataset).

The second part of the two-part model seeks to understand the factors that play into whether a country receives more or less aid. For this part of the analysis, this study uses a first difference estimator with three-year lagged independent variables. By lagging the independent variables for several years, the model presented in this paper assumes a realistic scenario – that country characteristics over the prior years are either formally or informally taken into account when aid allocation decisions are made. Using lagged averages also helps smooth the short-

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49 Thus, all allocation amounts that are marked as “zero” in the remaining dataset are true zeros and indicate a country was both eligible and did not receive funding in a specific year.
term fluctuation in the data (Durlauf et al 2004, Baldacci et al 2004).\textsuperscript{xvii, xviii} The first difference estimator corrects unobserved or time-invariant characteristics, however, this method has the tendency to remove large amounts of data from the sample, as is the case in this model. In particular, those countries that receive zero aid in any one of three-year period are eliminated from the dataset, which ultimate results in an analysis of 52 countries rather than 62, as in the previous regressions.

The multivariate regressions and other calculations in this paper are computed using Stata12 and Stata13 Data and Analysis Software (StataCorp, Texas, USA), Excel 2010 v14 (Microsoft, Washington, USA), and StatPlus 2009 (Analystsoft, Inc., Virginia, USA). Typical panel data diagnostics were used to check for the normality of residuals, skewness/kurtosis, colinearity, homo/heteroskedasticity and serial correlation, as suggested by StataCorp.\textsuperscript{xvix}

Endnotes

**Note** A note on the timing of the allocation data: Though Bank approval may be achieved during a particular fiscal year, that does not always mean the agreement between the Bank and the recipient country is signed in that fiscal year. Wherever there is a discrepancy between funding numbers for the years of Board Approval and the years of the formal agreement signing between the country and the Bank, this paper uses the figures that spread over the greatest number of years, so long as their funding totals were equivalent for the overall number of years.

Some studies use disbursed amount as opposed to the commitment. For the purposes of this paper, the board approval amounts more closely reflect the aid allocation decision-making process. White and McGillivray (1995) also use commitments, rather than the disbursement, as "the decision variable of the donor" over which they exert full control, whereas disbursements partly depend on whether the prospective recipient country actually requests the commitment, which for a number of reasons sometimes is not the case."

PQLI was developed to capture aspects of human development that national GDP or GNI cannot. It is conceptually similar to the UN’s Human Development Index (HDI), though unlike HDI, PQLI does not include any measure of income in its calculation. As a result, PQLI can be used as a human development complement to GNI in this study’s regressions.

The methods for indexing and calculating PQLI can be found here: [http://www.preservearticles.com/2011/07/11/036/brief-notes-on-physical-quality-of-life-index-pqli.html](http://www.preservearticles.com/2011/07/11/036/brief-notes-on-physical-quality-of-life-index-pqli.html). Note: Data on literacy rates is spotty and so data from several sources has been aggregated and averages have been taken of proximal years when no annual data is available.

Clist (2009) uses population to ensure that “a donor’s decision regarding China and India do not dominate the identification of poverty coefficients.”


Notable exceptions to this include Roodman (2003a), who understand emergency aid as exceptional, and Bermeo (2008) who cleaned her data year-by-year to exclude countries after they become no longer eligible for IDA or before they become eligible. Careful culling is surprisingly infrequently practiced.

Note on country splits, sourced from Freedom House (2014): In February 2003, the Yugoslav parliament adopted a constitutional charter establishing the state of Serbia and Montenegro. Thus, beginning in 2003, Yugoslavia is listed as "Serbia and Montenegro." The State Union of Serbia and Montenegro dissolved when Montenegro withdrew in June 2006, making Serbia an independent state. Thus, the ratings for Serbia and Montenegro are listed separately beginning in 2006. Kosovo was first listed as a territory beginning in 1992. Since 2009, it is listed as an independent country. South Sudan was first listed as an independent country in 2011 after officially separating from Sudan in July 2011.

For example, see the replication data on Albania, Indonesia, etc. from Matthew Winters’ “Choosing to Target: What Types of Countries Get Different Types of World Bank Projects.”

The World Bank’s DataBank does not give historical classifications of IDA eligibility – that is, for example, because Indonesia is now classified as IBRD, there is no indication from the DataBank that in prior years, it was an IDA country. Re-categorization must be done piecemeal based on an understanding of IDA graduation or re-entry. Because there are not a huge number of countries that have moved out of IDA, the distinction probably does not have an enormous effect on research, but with a colossus like India making a jump to IBRD status, failing to catch this issue will result in some grossly inaccurate work.

Note: Much of the data goes back to 2002 in order to be able to lag variables. The descriptive data generally includes this year.
"True" zeroes represent 7% of observations.

Using the first difference estimator allows accounts for the unobserved individual country effects on aid in a given country (i) in a given time period (t). The following equation illustrates aid allocation as a result of the explanatory variables in the prior time period (t-1, t-2) plus the country effects (or unobserved effects) plus the error (\( \xi_t \)):

\[
A_{\text{id}} = \log \text{GNI}_1 + \text{Governance}_1 + \ldots + \text{Country Effects}_i + \xi_t
\]  

(1)

Taking the first difference generates:

\[
A_{\text{id}} = \log \text{GNI}_2 + \text{Governance}_2 + \ldots + \text{Country Effects}_i + \xi_{t-1}
\]  

(2)

Subtracting equation 2 from 1 eliminates the country effect and results in the following:

\[
\Delta A_{\text{id}} = \Delta \log \text{GNI}_1 + \Delta \text{Governance}_1 + \ldots + \Delta \xi_{t-1}
\]  

(3)

A two-part model was selected above a Heckman model, as a two-part model treats estimations of both aid eligibility and aid allocation separately. Heckman does not do this. Two-part assumes no correlation between error terms.

Neither a Tobit Type 1 or a Heckman model are used in this study. Small discussion on this point: Dollar and Levin (2006) and Winters (2010) use a Tobit 1 model in their research. As is the case in most studies of this type, their dependent variables, \( y \), are logged aid disbursements. However, there is some disagreement about whether Tobit is the correct method for this kind of data. The reason to use censored regression is that this is not possible to take a natural log when \( y = 0 \) and so 0 must be “censored” or replaced with a very small number, \( a \). Nichols (2010) argues that “the only time replacing zero with a small positive number \( a \), taking logs, and running a Tobit makes sense is when zero represents the result of a known lower detection limit, or rounding, and \( y \) is known to actually be positive in these cases.” This is almost always not the case for aid allocation data. Winters deals with this problem by changing those aid allocations of zero dollars to 0.1 before taking the natural log of aid.

Neumayer (2003a) dismisses Tobit 1 censored regression, as he is dissatisfied with how the model manages the issue of whether a country received no aid in a given year because it was ineligible or simply because donors opted not to give it any aid. Tobit 1 “excludes the possibility that higher values of an independent variable makes it more likely that a country is deemed eligible for aid receipt, but also leads to lower amounts [of aid] actually received once a country has been deemed eligible.” A Heckman model also is deemed inappropriate because it requires a restricting variable that would influence only aid eligibility but not the allocation amount. As Neumayer notes, this is a difficult ask, as a variable that impacts eligibility but does not impact (or least does not correlate very strongly with) a variable that accounts for aid allocation would be a very hard if not impossible thing to find.

A few variables in the study that are likely highly correlated and therefore may pose problems with multicollinearity. For example, some studies show that PQLI, GNIPC, and governance are correlated. However, as suggested by Neumayer (2003a), after dropping some explanatory variables and considering variance inflation factor, I could not find evidence that multicollinearity is a problem. Though this is not conclusive evidence, it suggests that multicollinearity is not a major factor. It should be noted that high correlations do not necessarily indicate multicollinearity, but rather give a suggestion for further investigation.
6. RESULTS

a. Descriptive Statistics

Of the 88 countries technically eligible for IDA funds since 2003, 62 are included during some or all years analyzed. Figure 6.1 provides descriptive characteristics of the included and excluded countries. As described previously, the excluded countries are a heterogeneous group. One can infer from this table, however, that the bulk of them have small populations and are not significant recipients of aid from IDA. A one-way ANOVA suggests that WGI scores in the included and excluded groups are significantly different (F(1,958)=42.29, p<.00). This finding is somewhat expected given the large contingent of ‘small island nations’ in the excluded category. As a group, these countries are wealthier and considered better governed than other IDA recipients.

<table>
<thead>
<tr>
<th>Fig 6.1 Descriptive Statistics of Countries Included &amp; Excluded from Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Countries</strong></td>
</tr>
<tr>
<td>Mean IDA Allocation (mil)</td>
</tr>
<tr>
<td>Median IDA Allocation (mil)</td>
</tr>
<tr>
<td>Mean Per Capita IDA Allocation</td>
</tr>
<tr>
<td>Median Per Capita IDA Allocation</td>
</tr>
<tr>
<td>Mean GNI per capita</td>
</tr>
<tr>
<td>Median GNI per capita</td>
</tr>
<tr>
<td>Mean WGI Score</td>
</tr>
<tr>
<td>Mean Population (mil) [Without India]</td>
</tr>
<tr>
<td>Median Population (mil) [Without India]</td>
</tr>
</tbody>
</table>

Figures 6.2a and 6.2b provide descriptive information that contrasts the recipients that receive the most total funds annually with those countries’ per capita IDA funding (Uganda,

---

51 Note: Countries included and excluded do not sum to 88 because a country may be ‘included’ and ‘excluded’ in different years. For example, Albania has the years before 2009 in the included category and years after in the excluded category, but is in the country count for each category.
Mozambique and Zambia’s per capita aid rounds to zero. Excepting Tanzania, the wide variability in total IDA aid appears smoothed once population is accounted for.

To briefly consider the selection of the WGI score as a proxy for governance in this paper, the WGI score is compared to the Freedom House Index scores, another widely used indicator that measures countries’ political rights and civil liberties. The Freedom House indicator applies a more narrow definition of governance than does WGI, and corresponds conceptually to one of the six...
components of the WGI score: Voice and Accountability. Similarly, the CPIA score sub-component on Public Sector Management and Institutions ("Cluster D") is the variable used to include governance in IDA’s aid allocation formula. Figure 6.3 offers correlation coefficients between the WGI overall governance score, the WGI Voice and Accountability sub-score, the Freedom House ranking and the CPIA Cluster D scores. WGI is correlated with both the Freedom House Index and the CPIA Cluster D, supporting the metric’s selection for this analysis. As anticipated, the WGI subcomponent, Voice and Accountability, is more closely correlated with the Freedom House score than the broader WGI score. WGI is also highly correlated with CPR, as could be expected, given that the largest component of CPR is CPIA Cluster D.

<table>
<thead>
<tr>
<th>Fig 6.3 Correlation Coefficients Between Governance and Related Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>WGI Governance n=644</td>
</tr>
<tr>
<td>WGI Governance</td>
</tr>
<tr>
<td>WGI Voice &amp; Accountability</td>
</tr>
<tr>
<td>Freedom House</td>
</tr>
<tr>
<td>CPIA Cluster D</td>
</tr>
<tr>
<td>CPR</td>
</tr>
</tbody>
</table>

* indicates significance at p< .01;
CPIA scores only available from 2005; CPR scores only available from 2006

Governance is broadly correlated with the economic wealth of a country. In Figure 6.4, the mean and inter-quartile ranges (mid-50th percent) of WGI governance scores are presented for IDA and Blend countries during three representative years. As expected, the overall wealthier Blend countries perform better than the relatively poorer IDA-only countries. This general relationship holds true in all years studied, though it is only displayed below in 2003, 2008, and 2012.
Figures 6.5a, 6.5b, and 6.5c provide a bivariate consideration of the relationship between the three major components of IDA’s aid allocation algorithm (CPR, population, and GNIPC) and IDA allocations. As described in Chapter 3, IDA does not release the specifics of how these three scoring components are combined into a composite score or rank to reproduce the process, nor do they disclose the details of the negotiations that augment the quantitative rank process. As such, the relationship of allocated aid to each component is considered independently. Figure 6.5a considers the role of CPR, which includes the CPIA Cluster D rankings that comprise IDA’s governance input. The plot stratifies CPR scores into to groups (top and bottom 50 percent CPR scores) and breaks the slope of the best-fit line. Whereas the bottom half of CPR performers show little relationship between CPR and aid dollars, the top half demonstrate a visible but non-robust positive relationship. These data suggest that perhaps beyond a certain aid per capita “floor” for poor performers, performance is rewarded with additional funding.
In addition to plotting CPR scores against per capita IDA allocations, the total IDA allocation and the log of IDA allocations were also plotted against high/low CPR scores and showed similar or non-specific results (see Appendix 8). Further, for each of the three y-axes (per capita IDA aid, total IDA aid, and log IDA aid), a one-way ANOVA was conducted to assess the difference between aid allocations to groups of higher and lower CPR scores. These demonstrated a statistically significant difference in the aid allocated to the high and low CPR groups in each case (per capita aid \( F(1,415)=46.41 \ p<.00; \) total aid allocation \( F(1,415)=10.41 \ p<.00; \) and the log of aid \( F(1,387)=27.94 \ p<.00 \)).

Figure 6.5b quantifies the relationship between total population and per capita IDA funding evidence in Figure 6.2. There is fairly limited overall variation in per capita aid giving, but there is a non-significant inverse relationship evident between population and marginal per capita aid. Large countries get more aid, but less per person. India, with all 11 years of data on the far right, is the clearest example of this trend. India’s total IDA funds have been capped for years well below what the country would otherwise qualify for on the basis of its other indicators. When the analysis was
conducted using total aid and the log of aid on the y-axis (see Appendix 9), the relationships were also not significant, but weakly positive.

Figure 6.5b Recipient Country Population and IDA Allocation Per Capita, 2002-2012

Figure 6.5c considers the effect of GNI per capita on IDA allocation. Here again, there is no indication that a GNIPC plays a strong role in country allocation. One might have expected that the poorest countries would receive a larger share per capita of aid, but this drive might be counterbalanced by other factors that limit such poor countries’ aid eligibility (see Appendix 10 for total aid and log aid plots).

Figure 6.5c Recipient Country GNI Per Capita and IDA Allocation Per Capita, 2002-2012
Moving to an initial consideration of the relationship that is the focus of this paper, Figure 6.6 displays recipient country WGI scores plotted against IDA per capita aid. The best-fit line ($R^2 = 0.1$) on this bivariate analysis weakly suggests a positive relationship between governance and IDA funding. Figure 6.6 considers all countries in all years, looking for a truly independent relationship between governance and funding. Given the weight of the other indicators that contribute to the allocation formula, notably need, it is not surprising that the bivariate relationship is weak. A closer approximation of the way that governance actually affects decision-making might be to consider individual countries whose governance scores changed significantly during the study period and to assess whether IDA allocation tracked with them.

![Fig 6.6 Recipient Country WGI Score and IDA Allocation Per Capita, 2002-2012](image)
Figure 6.7 presents a sub-analysis of six countries with trends in governance. In order to identify trends in countries with increasingly good or increasingly poor governance, annual governance scores for all countries were plotted by year. Those with fit lines (R-squared) of their WGI scores that exceed 0.85 are considered to have robust upward or downward trends. Rwanda, Angola, Moldova, Georgia, and Indonesia showed increasingly positive governance while Eritrea showed poorer governance over time. These were plotted with the countries’ annual IDA aid allocation. Only for Indonesia and Eritrea is there a visible similarities between trends in aid and governance, though IDA data for Indonesia are only exist until 2008. Georgia and Rwanda show a weak correspondence between aid and governance and the relationship is unclear for Angola and Moldova. When plotted against the log of IDA aid allocations rather than per capita allocation, the results are not considerably different (Appendix 11).

52 Though not all displayed in Fig 6.7, the three countries that graduated from IDA during the time period studied all showed starkly different results when contrasting their aid allocation trends with their governance trends. Albania’s governance score steadily increased over the time (R-sq=0.75) and its IDA allocation amount precipitously fell as the country moved from IDA status to Blend status (2006) and then from Blend to IBRD in 2009. Azerbaijan, which moved from Blend status to IBRD in 2011, had a fairly flat but slightly increasing governance score, though its aid allocations from IDA varied widely from year to year. Indonesia’s governance and allocation both increased over time, as displayed in Fig 6.7.
Figure 6.7 Recipient Countries with robust governance score trends during the study period plotted against IDA per capita aid

- **Rwanda**: $R^2 = 0.93621$, $R^2 = 0.15863$
- **Angola**: $R^2 = 0.00281$, $R^2 = 0.94028$
- **Moldova**: $R^2 = 0.03533$
- **Georgia**: $R^2 = 0.03533$, $R^2 = 0.92432$
- **Indonesia**: $R^2 = 0.73032$, $R^2 = 0.90249$
- **Eritrea**: $R^2 = 0.84193$, $R^2 = 0.7097$
Figure 6.8 proceeds to a multivariate pairwise correlation between six major independent variables described in Chapter 5 and the log of total IDA allocation. When considering IDA-only and Blend countries together for the entire study period (6.8a), only governance did not demonstrate a statistically significant relationship with allocation. Population and CPR demonstrate the expected direct relationship with allocation, while GNIPC and PQLI demonstrate the expected inverse relationship.

**Fig 6.8 Pearson Pairwise Correlation Coefficients for Likely Contributors to IDA Aid Allocation (2002-12)**

**6.8a IDA-only and Blend Recipient Countries (n=68)**

<table>
<thead>
<tr>
<th></th>
<th>Allocation</th>
<th>Population</th>
<th>GNIPC</th>
<th>PQLI</th>
<th>Governance</th>
<th>CPR</th>
<th>ODA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocation</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>0.7945*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>GNIPC</td>
<td>-0.1792*</td>
<td>-0.1828*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQLI</td>
<td>-0.0938*</td>
<td>-0.1218*</td>
<td>0.4536*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td>0.0034</td>
<td>-0.1572*</td>
<td>0.3406*</td>
<td>0.1144*</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>CPR</td>
<td>0.2733*</td>
<td>0.1281*</td>
<td>0.3630*</td>
<td>0.2626*</td>
<td>0.8374*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ODA</td>
<td>0.6185*</td>
<td>0.6912*</td>
<td>-0.0838</td>
<td>-0.043</td>
<td>-0.001</td>
<td>0.1805*</td>
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</tr>
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</table>

* indicates significance at p< .05

**6.8b IDA-only Recipient Countries (n=56)**

<table>
<thead>
<tr>
<th></th>
<th>Allocation</th>
<th>Population</th>
<th>GNIPC</th>
<th>PQLI</th>
<th>Governance</th>
<th>CPR</th>
<th>ODA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocation</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>GNIPC</td>
<td>-0.2289*</td>
<td>-0.2750*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQLI</td>
<td>-0.0973*</td>
<td>-0.1742*</td>
<td>0.3182*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td>-0.0112</td>
<td>-0.1941*</td>
<td>0.3206*</td>
<td>0.0883*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPR</td>
<td>0.2715*</td>
<td>0.1238*</td>
<td>0.2527*</td>
<td>0.1588*</td>
<td>0.8403*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ODA</td>
<td>0.5787*</td>
<td>0.6331*</td>
<td>-0.1464*</td>
<td>-0.0538</td>
<td>-0.0499</td>
<td>0.1542</td>
<td>1</td>
</tr>
</tbody>
</table>

* indicates significance at p< .05

**6.8c Blend Recipient Countries (n=12)**

<table>
<thead>
<tr>
<th></th>
<th>Allocation</th>
<th>Population</th>
<th>GNIPC</th>
<th>PQLI</th>
<th>Governance</th>
<th>CPR</th>
<th>ODA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocation</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>0.8050*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GNIPC</td>
<td>-0.4839*</td>
<td>-0.6600*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PQLI</td>
<td>-0.7024*</td>
<td>-0.7335*</td>
<td>0.5428*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governance</td>
<td>-0.0043</td>
<td>-0.167</td>
<td>0.5836*</td>
<td>0.1289</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CPR</td>
<td>0.0548</td>
<td>-0.1724</td>
<td>0.5298*</td>
<td>0.1687</td>
<td>0.8506*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ODA</td>
<td>0.7398*</td>
<td>0.7790*</td>
<td>-0.3572*</td>
<td>-0.5769</td>
<td>0.1113</td>
<td>0.1205</td>
<td>1</td>
</tr>
</tbody>
</table>

* indicates significance at p< .05
The direct relationship between increasing levels of non-IDA ODA and IDA funding is something of an outlier. It is unclear to what extent it is a true direct relationship versus being confounded by the other factors – poverty, good governance, portfolio performance – that lead to repeated aid infusions. These relationships are largely unchanged when IDA-only and Blend countries are broken out (Figures 6.8b and 6.8c) with the exception of the CPR no longer being significant for Blend countries.

b. Results of Regression Analyses

The first regression model is a pooled OLS regression (described in Chapter 5) that, in a multivariate fashion, considers the relative influence of presumed key factors in aid allocation over the entire time period studied. The output of the initial pooled OLS regressions, which progressively adds or omits variables, are displayed in Fig 6.9. The model’s goodness of fit measures are all within a narrow range (R-sq =0.684, 0.688, 0.613, 0.631). Population and overall ODA are significant (p<0.05) in all scenarios. Per capita GNI is not significant when CPR is excluded from the model. When CPR is excluded from the model, governance is significant (p<0.001), which is expected given their high correlation (Fig 6.3). PQLI is not a significant independent influence in any of the scenarios.

53 Though it would be ideal to use CPR scores in the regression, this variable is not available until 2006 and it is highly correlated with governance (see table 6.3). Therefore, because of a lack of data and to avoid problems of multicollinearity, CPR scores are not included.
The pooled OLS regression results in Figure 6.10 display all of the variables included in the model, including the donor interest dummy variables for common language, colonial relationship, and geographic distance between the nine top IDA donors and recipient countries (n=449, R-sq=0.677). Again, population, governance, and overall ODA are statistically significant (p<0.05).

Surprisingly, English-speaking is found to have a negative relationship with aid allocation, though being a former colony of the UK has a positive relationship to aid allocation. Variables omitted due to collinearity include Japanese, Italian, and Swedish languages, and colonial relationships with Japan, Italy, USA, and the Netherlands.
Understanding the limitations of the pooled OLS estimator, the next regression uses panel data and lagged explanatory variables to more closely mimic IDA’s decision-making model. A Hausman test, which is used to help determine whether a fixed effect or random effects estimator is most appropriate for the dataset, showed significant results (chi²=15.1, p<.001). This is interpreted as a signal to use a fixed effects estimator for consistent results. A fixed-effects estimator, however, cannot accommodate with time-invariant variables (such as the donor interest dummy

---

**Fig 6.10 Pooled OLS Regression Output IDA Aid Allocation and Key Explanatory Variables including Donor Interest Dummy Variables, 2003-2012**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Aid Allocation</th>
<th>Aid Allocation cont'd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>0.589***</td>
<td>Colony Germany 0.478</td>
</tr>
<tr>
<td></td>
<td>(0.05220)</td>
<td>Colony Sweden -0.305</td>
</tr>
<tr>
<td>GNIPC</td>
<td>-0.129</td>
<td>Distance USA -0.991</td>
</tr>
<tr>
<td></td>
<td>(0.07980)</td>
<td>Distance UK -6.023</td>
</tr>
<tr>
<td>Governance</td>
<td>0.457***</td>
<td>Distance France 7.064</td>
</tr>
<tr>
<td></td>
<td>(0.12600)</td>
<td>Distance Germany 2.859</td>
</tr>
<tr>
<td>PQLI</td>
<td>-0.00246</td>
<td>Distance Japan 0.0283</td>
</tr>
<tr>
<td></td>
<td>(0.00910)</td>
<td>Distance Italy -4.167</td>
</tr>
<tr>
<td>ODA</td>
<td>0.329***</td>
<td>Distance Sweden -0.0832</td>
</tr>
<tr>
<td></td>
<td>(0.06800)</td>
<td>Distance Netherlands 1.158</td>
</tr>
<tr>
<td>English</td>
<td>-0.522**</td>
<td>_cons 4.353*</td>
</tr>
<tr>
<td></td>
<td>(0.19300)</td>
<td>(1.76800)</td>
</tr>
<tr>
<td>French</td>
<td>-0.163</td>
<td>Standard errors in parentheses,</td>
</tr>
<tr>
<td></td>
<td>(0.22800)</td>
<td>* p&lt;0.05, ** p&lt;0.01, *** p&lt;0.001</td>
</tr>
<tr>
<td>German</td>
<td>6.547</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4.82800)</td>
<td></td>
</tr>
<tr>
<td>Dutch</td>
<td>0.15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.23500)</td>
<td></td>
</tr>
<tr>
<td>Colony UK</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>(0.16500)</td>
<td></td>
</tr>
<tr>
<td>Colony France</td>
<td>0.287</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(0.16000)</td>
<td></td>
</tr>
</tbody>
</table>

\[ n = 449 \quad R^2 = 0.677 \quad Adj R^2 = 0.681 \quad \text{rmse} = 0.807 \quad \text{Adj rmse} = 0.681 \]

---

variables language, colonial relationship, geographic distance). Therefore, Figure 6.11 displays the results of a fixed effect regression (Fixed), and contrasts it with the results of a random effect regression (Random), and a Feasible Generalized Least Square cross-sectional time-series regression (FLGS), all with the independent variables lagged by one year behind the dependent outcome.

<table>
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<tr>
<th></th>
<th>Fixed Aid Allocation</th>
<th>Random Aid Allocation</th>
<th>FLGS Aid Allocation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>1.722559</td>
<td>.6274847***</td>
<td>.5719704***</td>
</tr>
<tr>
<td></td>
<td>(0.92689)</td>
<td>(0.06495)</td>
<td>(0.05188)</td>
</tr>
<tr>
<td>GNIPC</td>
<td>-0.0383878</td>
<td>-0.1649125</td>
<td>-0.15453</td>
</tr>
<tr>
<td></td>
<td>(0.30627)</td>
<td>(0.10811)</td>
<td>(0.08166)</td>
</tr>
<tr>
<td>Governance</td>
<td>1.092692**</td>
<td>.6133316***</td>
<td>.5328206***</td>
</tr>
<tr>
<td></td>
<td>(0.36478)</td>
<td>(0.16541)</td>
<td>(0.12525)</td>
</tr>
<tr>
<td>PQLI</td>
<td>.0419416**</td>
<td>0.0116435</td>
<td>0.0022166</td>
</tr>
<tr>
<td></td>
<td>(0.01470)</td>
<td>(0.01219)</td>
<td>(0.00936)</td>
</tr>
<tr>
<td>ODA</td>
<td>0.1289121</td>
<td>.2962659***</td>
<td>.3651626***</td>
</tr>
<tr>
<td></td>
<td>(0.07286)</td>
<td>(0.07231)</td>
<td>(0.06655)</td>
</tr>
<tr>
<td>languk</td>
<td>.</td>
<td>-0.4682299</td>
<td>-0.4949124*</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>(0.28644)</td>
<td>(0.19417)</td>
</tr>
<tr>
<td>_cons</td>
<td>-12.52305</td>
<td>5.57522*</td>
<td>5.201555*</td>
</tr>
<tr>
<td></td>
<td>(14.07879)</td>
<td>(2.34435)</td>
<td>(1.77946)</td>
</tr>
<tr>
<td>R-squared</td>
<td>Within 0.0775</td>
<td>Within 0.0424</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between 0.7800</td>
<td>Between 0.9122</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall 0.6216</td>
<td>Overall 0.6757</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>F(5,384)=6.45,</td>
<td>463</td>
<td>463</td>
</tr>
<tr>
<td>n</td>
<td>p&lt;.00</td>
<td>463</td>
<td></td>
</tr>
</tbody>
</table>

Standard errors in parentheses; Robust standard error used; Coefficients on constants and most dummy variables not reported. * p<0.05, ** p<0.01, *** p<0.001
In the fixed effects model, the measures of governance and human development (PQLI) are the only variables that show significant relationships with aid allocation. Surprisingly, the coefficient for PQLI is positive, indicating that as health indicators improve aid also increases. The results from the random effect and FLGS models are similar, both finding that higher populations and better governance scores have positive relationships with aid allocation. They also find that overall ODA has a positive relationship with IDA aid, indicating that IDA’s aid allocation to countries increases as the overall development aid given to a country increases. None of the models find that per capita GNI has a significant relationship with aid, though this variable is one of those explicitly included in IDA’s allocation formula.

The final statistical test used is a first-difference estimator with three-year averaged, lagged independent variables (Fig. 6.10 with robust standard errors in parentheses). This model finds very little in terms of explaining aid allocations. The significant findings on two of the donor interest variables (speaking English and being close geographically to Sweden) are likely random, given the low R-squared (0.0184). This model lost observations due to the constraints placed on it, including the requirement that the three-year averaged periods could not include observations with no allocation. Further discussion of this model is found in the next Chapter, Discussion and Conclusions.
<table>
<thead>
<tr>
<th>Population</th>
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<th>(5.34816)</th>
</tr>
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<tbody>
<tr>
<td>GNIPC</td>
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<td>(0.56790)</td>
</tr>
<tr>
<td>Governance</td>
<td>0.6713016</td>
<td>(0.78016)</td>
</tr>
<tr>
<td>PQLI</td>
<td>0.0056353</td>
<td>(0.01672)</td>
</tr>
<tr>
<td>ODA</td>
<td>0.1316996</td>
<td>(0.11360)</td>
</tr>
<tr>
<td>English</td>
<td>0.2346432*</td>
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</tr>
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<td>French</td>
<td>0.1069298</td>
<td>(0.14958)</td>
</tr>
<tr>
<td>German</td>
<td>-1.840339</td>
<td>(6.52768)</td>
</tr>
<tr>
<td>Dutch</td>
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</tr>
<tr>
<td>Colony UK</td>
<td>(0.11901)</td>
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</tr>
<tr>
<td>Colony France</td>
<td>(0.03245)</td>
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<table>
<thead>
<tr>
<th>n</th>
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<tr>
<td>R-sq</td>
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<th>(0.13079)</th>
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<td>Distance USA</td>
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</tr>
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<td>Distance UK</td>
<td>3.715504</td>
<td>(4.054186)</td>
</tr>
<tr>
<td>Distance France</td>
<td>(4.21559)</td>
<td>(3.838637)</td>
</tr>
<tr>
<td>Distance Germany</td>
<td>1.63294</td>
<td>(1.315957)</td>
</tr>
<tr>
<td>Distance Japan</td>
<td>(0.00422)</td>
<td>(0.0455077)</td>
</tr>
<tr>
<td>Distance Italy</td>
<td>0.5921973</td>
<td>(1.34021)</td>
</tr>
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<td>Distance Sweden</td>
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<td>(0.71140)</td>
</tr>
<tr>
<td>Distance Netherlands</td>
<td>-0.4149282</td>
<td>(1.08306)</td>
</tr>
</tbody>
</table>

_cons: 0.9879139 (0.65276)

Standard errors in parentheses, * p<0.05, ** p<0.01, *** p<0.001
7. DISCUSSION AND CONCLUSIONS

a. Discussion of Results

Perhaps not surprisingly, the data analyzed present a mixed picture in answer to the stated research question. Chapter six began with bivariate analyses, which in general would be expected to overstate relationships relative to multivariate models. The results of figures 6.5b, 6.5c and 6.8 were thus unexpected insofar as they called into question the significance even of recipient country population and GNI in IDA allocation. The lack of a clear relationship between governance (WGI) and IDA allocation in these analyses must be considered in this context. Even separating out the small subset of countries that demonstrated a distinctive trend in their governance ratings over the study period (Figure 6.7) failed to demonstrate a robust relationship. The multivariate regression models present a different though inconsistent picture.

The first model – pooled OLS (Figure 6.9) – did show a statistically significant positive influence of governance once the CPR variable (which is closely correlated with governance) is removed. This relationship is preserved in the fixed effects model (Figure 6.11), and more strongly so, but the population and GNI variables unexpectedly lose their statistical significance. Of the two, this latter model considers the data as panel data rather than a 10-year pool, which likely more closely approximates the way the IDA board reviews countries characteristics each year. This treatment of the data may account for the inconsistency between the pooled and fixed effects models. The latter, treating each country as a time-linear series, necessarily de-emphasizes the effects of population and GNI on the outcome. They are of course highly relevant in setting the baseline aid expectation, but vary little on an annual basis, forcing the model to use other variables to account for year-to-year variations. In this fashion, it may help us better understand the inter-relationship between governance and these other contributors to the country allocation ranking.
By enacting reforms in the areas measured by governance ratings, country governments can significantly alter the way they are perceived by their citizens and the international community, and these perceptions are largely reflected in governance scores. That said, the lack of a clear relationship in Figure 6.7 suggests that the effects of governance scores (and perceptions) are inconsistent. As discussed previously, the IDA allocation process concludes with a closed-door meeting during which modifications are made to the allocations suggested by the ranking formula. Undoubtedly, many country and time-specific factors come up in these discussions, factors which would be very difficult to model in a consistent fashion, even if they were known. Similarly, one would expect that the government characteristics described herein under the term 'governance' would remain salient during these discussions. In contrast, there is arguably less to discuss about a country's population or GNI, and one might therefore infer that these factors contribute less to the final round of negotiations. It appears, then, that governance broadly defined does influence IDA allocations. All other things being equal, one could reasonably expect that a better and/or more fairly governed country would receive more aid. However, within this data pool all other things are never equal. Moreover, it will likely remain impossible to discern with the data currently available whether IDA weights governance in proportion to the significance it continues to be given in policy memos and speeches.

b. Limitations of the Data and Estimation Techniques

There are a number of limitations to this study resulting from the data collection methods and availability, the statistical techniques used, and how well the data reflect the concepts they are intended to measure. The first significant issue is the lack of access to data on IDA's country ratings (CPR and CPIA), which leaves researchers to guess at those factors that lead one country to receive aid over another. Related to this, the lack of transparency around negotiations also obscures these
relationships. Future work will benefit from IDA’s recent decision to release CPR and CPIA ratings, though the problems of secrecy around negotiations will remain into the foreseeable future.

In addition to this lack of data on the basic inputs, several of the explanatory variables used in this study are subject to inexact measurement, which can produce biased results. All measures of governance, including WGI, are subject to an array of critique, mostly centering on the lack of objective standards by which governance is judged. Further, the governance data used in this study is a composite of six un-weighted indicators, though the decision to use a simply average of these indicators is not based on theory, but rather on the example of prior studies that similarly could not provide a convincing reason to weight any indicator more heavily. Measures of maternal mortality, literacy, and life expectancy that make up PQLI also have varying degrees of availability and the sources are not standardized. Some research suggests these indicators are more likely to be mis-measure when a country is under stress, such as political turmoil economic turmoil, though these considerations were not explored. These issues notwithstanding, there is still debate about whether PQLI and GNIPC adequately capture the concept of “recipient need” as donors might understand it.

Cleaning the dataset also presents some issues of potential selection bias and accuracy. The dataset used in this paper was intended to reflect IDA’s non-exceptional aid allocation, based on the idea that extreme or unusual circumstances likely supersede governance considerations. However, clearing the data of these exceptions eliminates up to a third of countries from IDA’s original recipient list in any given year, which raises questions about whether the non-exceptional subset can offer valid or useful information about IDA’s approach.

In addition to these concerns about the data, the estimation techniques used in the quantitative portion of the paper are only useful insofar as they reflect a reasonable approximation of IDA’s allocation process. Because many of the considerations that play a role in allocation
decisions are unknown, it is difficult to say if, for example, using pooled data or lagged 3-year averages of explanatory variables better reflects the concept that donors make decisions based on a general sense of country performance or whether a year-by-year analysis might capture a largely data-driven approach to decision-making. What is likely is that the process is a combination of both these practices. In regard to the estimators themselves, a fixed effects estimator is known to exacerbate bias from other types of data problems, especially measurement error. Given the level of likely measurement error in several variables, this may present a problem in the results. In addition, though the first difference model did not produce significant results, the time span studied in this paper may have been too short to accommodate this type of analysis and, as a result, may provide misleading conclusions.

c. Broader Implications of IDA’s Application of the Governance Agenda

This positive investigation of whether IDA allocates aid in accordance with governance raises some normative question of whether IDA should prioritize governance. At face values, the virtues of good governance seem self-evident. One could hardly argue against reforms that target decreased corruption, greater institutional accountability and effectiveness, enhanced public voice, and respect for the rule of law. However, there is a case to be made that the Bank’s interpretation of governance inadequately assesses governance-related factors on an individualized basis. The heterogeneous factors that make up ‘governance’ are defined under a Euro-American conception that is rooted in governmental characteristics largely found in current-day, democratic donor countries. They provide an end-goal rather than the means by which development might occur. Though the idea that better governance is necessary to facilitate development, many recent success stories would likely fail to meet standards of good governance as defined by WGI. Among them,
Korea rapidly developed into one of the wealthiest countries in East Asia under an authoritarian government before adopting democracy and China has brought half a billion people out of dire poverty since the 1980s.\textsuperscript{55} This is not to say that governance does not matter. Rather, the World Bank’s conception of governance fails to account for fact that the relative importance of particular aspects of governance in a nation’s development processes will vary based on country-specific factors and, likely, by stage of development.

The World Bank’s approach to governance presumes that there is a discrete set of policies and institutional arrangements that is suitable for facilitating development. This assumption is convenient for doing cross-country comparisons, but likely fails to adequately address on-the-ground realities in each member-country. Whether the IDA allocation process rewards only a comprehensive application of the governance goals outlined by WGI is not proven conclusively in this or other studies, but it remains a reoccurring theme in the organization’s publications and rhetoric. Because of the influence IDA holds in the development community,\textsuperscript{56} clarifying whether its focus on governance is intended to be the broad-brush application, as it appears, or whether the organization’s leadership takes a more nuanced approach in its closed-door negotiations has far-reaching implications, both for those countries that seek IDA aid and for those development institutions that model their work on IDA. A better understanding of the actual impact of governance on aid decisions can only be achieved, however, if IDA chooses to allow greater scrutiny of its allocation process.


\textsuperscript{56} Birdsall and Kharas (2010), who say that IDA is highly influential and “often provides the underlying infrastructure of country dialogue and analytic work that helps shape and support the design and implementation of other funders’ country programs.”
APPENDICES

Appendix 1. Official Development Assistance: Total, Multilateral, and IDA 2002-12

<table>
<thead>
<tr>
<th>IDA as a Percentage of Total and Multilateral Official Development Assistance (current $, millions)</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Donors, Total ($)</td>
<td>88826</td>
<td>114785</td>
<td>128942</td>
<td>151816</td>
<td>166687</td>
<td>165661</td>
<td>202526</td>
<td>202054</td>
<td>202367</td>
<td>207447</td>
<td>210090</td>
</tr>
<tr>
<td>Multilateral Agencies ($)</td>
<td>20796</td>
<td>24437</td>
<td>28876</td>
<td>28115</td>
<td>32939</td>
<td>39457</td>
<td>44716</td>
<td>51766</td>
<td>48564</td>
<td>56742</td>
<td>63400</td>
</tr>
<tr>
<td>IDA ($)</td>
<td>8157</td>
<td>7603</td>
<td>11568</td>
<td>7756</td>
<td>7894</td>
<td>12837</td>
<td>11405</td>
<td>14299</td>
<td>14610</td>
<td>16555</td>
<td>16270</td>
</tr>
<tr>
<td>IDA as % of multilaterals</td>
<td>39%</td>
<td>31%</td>
<td>40%</td>
<td>28%</td>
<td>24%</td>
<td>33%</td>
<td>26%</td>
<td>28%</td>
<td>30%</td>
<td>29%</td>
<td>26%</td>
</tr>
<tr>
<td>IDA as % of ODA</td>
<td>9.2%</td>
<td>6.6%</td>
<td>9.0%</td>
<td>5.1%</td>
<td>4.7%</td>
<td>7.7%</td>
<td>5.6%</td>
<td>7.1%</td>
<td>7.2%</td>
<td>8.0%</td>
<td>7.7%</td>
</tr>
</tbody>
</table>


Appendix 2. Low Income Countries: IDA as Percentage of Multilateral & Total ODA

<table>
<thead>
<tr>
<th>IDA Aid as a Percentage of Multilateral and Total ODA Directed to Least Developed Countries (LDCs), Other Low Income Countries (OLICs), and Low Middle Income Countries (LMICs)</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>IDA as % of Multilaterals</td>
<td>46%</td>
<td>40%</td>
<td>50%</td>
<td>35%</td>
<td>33%</td>
<td>44%</td>
<td>33%</td>
<td>37%</td>
<td>39%</td>
<td>40%</td>
<td>37%</td>
</tr>
<tr>
<td>IDA as % of Total ODA</td>
<td>17%</td>
<td>11%</td>
<td>16%</td>
<td>8%</td>
<td>9%</td>
<td>15%</td>
<td>10%</td>
<td>14%</td>
<td>14%</td>
<td>16%</td>
<td>16%</td>
</tr>
</tbody>
</table>


IDA Aid as a Percentage of Overall Multilateral ODA Average from 2002-12

- IDA: 29%
- Other Multilaterals: 60%
- IDA: 71%

IDA Aid as a Percentage of Overall Multilateral for Low Income Countries Average from 2002-12

- IDA: 40%
- Other Multilaterals: 50%

72
Appendix 3. IDA Donor Country Cumulative Contributions as of IDA16

Cumulative Donations as Percentage of Total Donor Funds as of IDA16 Replenishment

Source: World Bank Finances Site (2013)

Appendix 4. World Bank Income Categorization (FY2012)

Below is a breakdown of the Bank’s income-class categorization system from FY2012. Low Income Countries (LICs) and Lower Middle Income Countries (LMICs) fall under the purview of IDA.

<table>
<thead>
<tr>
<th>FY2012 World Bank Income Categorization (USD)</th>
<th>GNI Per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Income Countries</td>
<td>&lt; $1,035</td>
</tr>
<tr>
<td>Middle Income Countries</td>
<td>$1,036 - $4,085</td>
</tr>
<tr>
<td>Upper Middle Income</td>
<td>$4,086 - $12,615</td>
</tr>
<tr>
<td>High Income Countries</td>
<td>&gt; $12,616</td>
</tr>
</tbody>
</table>

### Appendix 5. List of IDA Countries Over Period of Interest (2002-2012)

**Countries Eligible for IDA Assistance 2002-2012**

The following countries have been IDA-eligible recipients during the period studied in this paper. Albania, Azerbaijan, Indonesia, Montenegro, and Serbia graduated within this time frame.

1. Afghanistan  
2. Albania  
3. Angola  
4. Armenia  
5. Azerbaijan  
6. Bangladesh  
7. Benin  
8. Bhutan  
9. Bolivia  
10. Bosnia and Herzegovina  
11. Burkina Faso  
12. Burundi  
13. Cambodia  
14. Cameroon  
15. Cape Verde  
16. Central African Republic  
17. Chad  
18. Comoros  
19. Congo, Dem Republic of  
20. Congo, Republic of  
21. Cote d’Ivoire  
22. Djibouti  
23. Dominica  
24. Eritrea  
25. Ethiopia  
26. Gambia, The  
27. Georgia  
28. Ghana  
29. Grenada  
30. Guinea  
31. Guinea-Bissau  
32. Guyana  
33. Haiti  
34. Honduras  
35. India  
36. Indonesia  
37. Iraq (special case)  
38. Kenya  
39. Kiribati  
40. Kosovo  
41. Kyrgyz Republic  
42. Lao People's Dem Rep  
43. Lesotho  
44. Liberia  
45. Madagascar  
46. Malawi  
47. Maldives  
48. Mali  
49. Marshall Islands  
50. Mauritania  
51. Micronesia, FS  
52. Moldova  
53. Mongolia  
54. Montenegro  
55. Mozambique  
56. Myanmar  
57. Nepal  
58. Nicaragua  
59. Niger  
60. Nigeria  
61. Pakistan  
62. Papua New Guinea  
63. Rwanda  
64. Samoa  
65. Sao Tome and Principe  
66. Senegal  
67. Serbia  
68. Sierra Leone  
69. Solomon Islands  
70. Somalia  
71. South Sudan  
72. Sri Lanka  
73. St. Lucia  
74. St. Vincent & the Grenadines  
75. Sudan  
76. Tajikistan  
77. Tanzania  
78. Timor-Leste  
79. Togo  
80. Tonga  
81. Tuvalu  
82. Uganda  
83. Uzbekistan  
84. Vanuatu  
85. Vietnam  
86. Yemen, Republic of  
87. Zambia  
88. Zimbabwe
Appendix 6. List of Dataset Exclusions

Graduated from IDA
Albania (graduated 2009)
Azerbaijan (graduated 2011)
Indonesia (graduated 2008)

Some Years Omitted
Central African Republic (war 2002-5)
Congo, Dem Rep (violent conflict 2002-4)
Cote d'Ivoire (civil war, 2002-6)
Haiti (coup d'état 2002-4, earthquake 2010)
Liberia (war, large post-conflict funds in 2007, 2002-7)
Timor Leste (funding position unclear, met GNI requirements to graduate, 2012)
Togo (political turmoil, elections happened in 2007, 2002-8)

Excluded for All Years
Afghanistan (ongoing violent conflict)
Iraq (a special case in IDA, GNI is too high, ongoing violent conflict)
Kosovo (extreme civil unrest, ongoing violent conflict)
Serbia & Montenegro (split in 2006, Serbia IDA-eligible, Montenegro not IDA eligible, but unclear how funding from when the two were together are divided in the WB data)
South Sudan (came into existence in 2011, unclear how funding is divided from Sudan)

In Arrears and/or No Government Ability to Receive Funds
Somalia (nominally eligible, but not actually eligible)
Myanmar (Burma) (nominally eligible, but not actually eligible)
Sudan (nominally eligible, but not actually eligible)
Zimbabwe (nominally eligible, but not actually eligible)

Small Island exceptions
Cape Verde (small island exception)
Dominica (small island exception)
Grenada (small island exception)
Maldives (small island exception)
Marshall Islands (small island exception)
Micronesia (small island exception)
Papua New Guinea (small island exception)
Samoa (small island exception)
Sao Tome and Principe (small island exception)
Solomon Islands (small island exception)
St. Lucia (small island exception)
St. Vincent and the Grenadines (small island exception)
Tonga (small island exception)
Tuvalu (small island exception)
Vanuatu (small island exception)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>overall</td>
<td>39.79</td>
<td>25.11</td>
<td>2.00</td>
<td>N = 644</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>25.34</td>
<td>2.00</td>
<td>107.00</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.00</td>
<td>39.79</td>
<td>39.79</td>
<td>T-bar = 10.3871</td>
</tr>
<tr>
<td>Year</td>
<td>overall</td>
<td>2007.05</td>
<td>3.14</td>
<td>2002</td>
<td>N = 644</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>7.88</td>
<td>2005</td>
<td>2011</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.08</td>
<td>2001</td>
<td>2012</td>
<td>T-bar = 10.3871</td>
</tr>
<tr>
<td>Eligibility</td>
<td>overall</td>
<td>1.14</td>
<td>0.35</td>
<td>2.00</td>
<td>N = 644</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>0.32</td>
<td>0.35</td>
<td>2.00</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.15</td>
<td>0.23</td>
<td>2.05</td>
<td>T-bar = 10.3871</td>
</tr>
<tr>
<td>IDA Allocation (log)</td>
<td>overall</td>
<td>18.12</td>
<td>1.43</td>
<td>13.12</td>
<td>N = 598</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>1.24</td>
<td>15.24</td>
<td>20.92</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.73</td>
<td>14.45</td>
<td>19.67</td>
<td>T-bar = 9.64516</td>
</tr>
<tr>
<td>Population(log)</td>
<td>overall</td>
<td>16.16</td>
<td>1.48</td>
<td>13.23</td>
<td>N = 644</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>1.48</td>
<td>13.36</td>
<td>20.87</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.07</td>
<td>15.97</td>
<td>16.34</td>
<td>T-bar = 10.3871</td>
</tr>
<tr>
<td>GNIPC(log)</td>
<td>overall</td>
<td>6.42</td>
<td>0.73</td>
<td>4.82</td>
<td>N = 513</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>0.71</td>
<td>4.91</td>
<td>8.05</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.15</td>
<td>5.85</td>
<td>6.97</td>
<td>T-bar = 8.27419</td>
</tr>
<tr>
<td>Governance</td>
<td>overall</td>
<td>-0.70</td>
<td>0.40</td>
<td>1.67</td>
<td>N = 644</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>0.39</td>
<td>1.61</td>
<td>0.12</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.12</td>
<td>1.37</td>
<td>-0.18</td>
<td>T-bar = 10.3871</td>
</tr>
<tr>
<td>PQLI</td>
<td>overall</td>
<td>22.62</td>
<td>7.16</td>
<td>0.00</td>
<td>N = 644</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>6.95</td>
<td>8.73</td>
<td>33.44</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>1.70</td>
<td>3.63</td>
<td>26.85</td>
<td>T-bar = 10.3871</td>
</tr>
<tr>
<td>ODA - IDA Aid(log)</td>
<td>overall</td>
<td>20.05</td>
<td>1.07</td>
<td>16.29</td>
<td>N = 644</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>0.97</td>
<td>17.51</td>
<td>21.90</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.46</td>
<td>18.34</td>
<td>22.18</td>
<td>T-bar = 10.3871</td>
</tr>
<tr>
<td>Real ODA Aid(log)</td>
<td>overall</td>
<td>1780000000</td>
<td>326000000</td>
<td>347000000</td>
<td>N = 644</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>264000000</td>
<td>2919578</td>
<td>141000000</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>187000000</td>
<td>-727000000</td>
<td>224000000</td>
<td>T-bar = 10.3871</td>
</tr>
<tr>
<td>Population</td>
<td>overall</td>
<td>433000000</td>
<td>153000000</td>
<td>556028</td>
<td>N = 644</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>150000000</td>
<td>634372</td>
<td>116000000</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>7245161</td>
<td>-358000000</td>
<td>124000000</td>
<td>T-bar = 10.3871</td>
</tr>
<tr>
<td>CPR Score</td>
<td>overall</td>
<td>3.18</td>
<td>0.41</td>
<td>2.28</td>
<td>N = 410</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>0.39</td>
<td>2.37</td>
<td>3.91</td>
<td>n = 60</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.12</td>
<td>2.59</td>
<td>4.32</td>
<td>T-bar = 6.83333</td>
</tr>
<tr>
<td>cpia_b</td>
<td>overall</td>
<td>3.38</td>
<td>0.49</td>
<td>1.50</td>
<td>N = 468</td>
</tr>
<tr>
<td></td>
<td>between</td>
<td>0.47</td>
<td>1.63</td>
<td>4.69</td>
<td>n = 62</td>
</tr>
<tr>
<td></td>
<td>within</td>
<td>0.16</td>
<td>2.36</td>
<td>3.82</td>
<td>T-bar = 7.54839</td>
</tr>
<tr>
<td>cpia_c</td>
<td>overall</td>
<td>3.35</td>
<td>0.44</td>
<td>2.20</td>
<td>N = 463</td>
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Appendix 8. IDA Aid Allocation and Log IDA Aid Allocation and CPR Scatter Plots

IDA Aid Allocation (millions) and CPR (2006-12)

\[ R^2 = 0.0086 \]

Log IDA Aid Allocation and CPR (2006-12)

\[ R^2 = 0.00297 \]
Appendix 10. Population and IDA Aid Allocation and Log IDA Aid Allocation Scatter Plots

Population (millinos) and Log IDA Aid Allocation

\[ R^2 = 0.16392 \]

Population (millions) and IDA Aid Allocation (millions)

\[ R^2 = 0.38943 \]
Appendix 11. Log IDA Aid Allocation of Countries with Robust Governance Trends

Georgia

\[ R^2 = 0.22843 \]

Indonesia

\[ R^2 = 0.65772 \]

Moldova

\[ R^2 = 0.05011 \]

Rwanda

\[ R^2 = 0.17222 \]

Angola

\[ R^2 = 0.07148 \]

Eritrea

\[ R^2 = 0.58056 \]
REFERENCES


Moss, Todd and Stephanie Majerowicz (2012). “No Longer Poor: Ghana’s New Income Status and Implications of Graduation from IDA.” Center for Global Development.


