The Effects of Foreign Aid on Income Inequality

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Abstract

This article furthers the research on the inability of foreign aid to address the economic needs of receiving states, particularly in the area of income inequality. We hypothesize that foreign aid is distributed and used in ways that worsen inequality. Additionally, we predict that foreign aid will cause more inequality in autocracies than democracies. While not contradicting any existing theories on the causes of income inequality, our theory shows that foreign aid may act as a catalyst for many of the established theories about what increases inequality. The newly developed database of foreign aid loans (PLAID) provides data on the independent variable, and the Gini coefficient is used as the measure of the dependent variable. In addition, we control for eight separate causes of income inequality. The study includes two panel datasets including 169 observations from twenty-four countries. To account for limitations in the OLS, we used a Feasible Generalized Least Squared (FGLS) model. The results suggest that a highly substantive relationship exists between foreign aid and inequality, although the effects may be subject to endogeneity. Holding all things constant, this finding shows that while aid may help the poor, it clearly benefits the rich more.

Introduction

In recent years, there has been a proliferation of literature criticizing the current methods for giving foreign aid. There is an abundance of literature that suggests the foreign aid money the West gives to the developing world is limited in its effectiveness (Easterly 2006; Boone 1996; Easterly 1999; Bornschier and Chase-Dunn 1978). Other scholars continue to argue that foreign aid is effective, but only under the right conditions (Burnside and Dollar 2000; Hansen and Tarp 2001; Collier and Dollar 2001; Nunnenkamp 2005). All of these studies use economic growth to determine the effectiveness of foreign aid. A few researchers have approached the question of what other effects of foreign aid exist, such as its effects on quality of life (Kosack
2003), but research on many areas affected by foreign aid remain relatively untouched. One of these areas is the effect of foreign aid on income inequality in the developing world.

Scholars agree that income inequality is detrimental to economic growth in the developed world (Alesina and Rodrik 1994; Persson and Tabellini 1994). Robert Barro concluded that the growth-retarding effect of income inequality is greater in poor countries (2000). In democracies with majority rule or in autocracies where the people have some influence, if the mean income exceeds the median income, redistribution occurs. The redistributive policies retard growth in those economies (Alesina and Rodrik 1994). Inequality also causes sociopolitical unrest (Alesina and Perotti 1996). Income inequality has been directly linked to a reduction in happiness levels, as well (Blanchflower and Oswald 2003). This reduction is greater among those at lower income levels and those with less education. As a result, the poor begin to commit crime, form riots, and participate in other disruptive activities (Barro 2000; Pastor 1995; Alesina and Perotti 1996). This increase in unrest hurts the economy and, more importantly, decreases the quality of life of all people in the country, especially those without the means to protect themselves.

Because of the detrimental economic, political, and sociopolitical effects of inequality, it is important to understand what causes differences in inequality in various countries around the world. Much of the developing world experiences some degree of inequality, but some countries suffer less from economic differences. Why do these differences exist? How do some countries escape extreme inequality, while others experience a rift between the rich and the poor that increases in size every day? In this paper, we theorize that one of the causes of inequality in the developing world is the foreign aid money that the West sends in an attempt to reduce the rift between the rich and the poor. We contend that economic growth is not the only important factor to examine when determining the effectiveness of foreign aid. If aid does increase economic growth but also increases inequality, then the goal of that aid (to reduce poverty) is not met. The aid may also have a reverse effect by increasing inequality, which then retards growth. It is important to understand this relationship so that aid organizations may better determine the effectiveness of their efforts.

Review of Existing Inequality Literature

The study of income inequality has produced a limited amount of literature that addresses the question of what causes changes in inequality. The literature that does exist provides a list of socioeconomic and sociopolitical causes that fall into four related but distinct camps: political explanations, international integration explanations, macroeconomic explanations, and demographic explanations. Each of the camps emphasizes a particular category of independent variables as causes for changes in income inequality. There is some overlap between the camps, as some of the theories do not refute, but rather add to, the theories of the other camps.

Political Explanations

The political explanations camp focuses on four political causes of change in income inequality: social spending, democracy, public sector expansion, and legislative partisan political power distribution. Rudra and Huber et al. found that social spending must be divided into education spending, health spending, and social security/welfare spending in order to see the true
effects of each type of spending (Rudra 2004; Huber et al. 2006). Rudra found that only education spending decreases inequality. She contends that social security and health spending are subject to greater lobbying and clientelism. Huber et al. found that health and education spending have no effect on income inequality; this finding may be due to their use of an aggregate measure that combined the two variables into one. Huber et al. and Rudra also found that social spending increases inequality, yet Huber et al. made this conclusion in the context of non-democracies. This phenomenon occurs because social spending only aids those employed in the formal sector who are usually the political elite in non-democracies.

Several studies looked into the effect of democracy on inequality (Reuveny and Li 2003; Huber et al. 2006; Simpson 1990; Bollen and Jackman 1985). While Bollen and Jackman concluded in 1985 that democracy has no effect on inequality, several recent studies have reversed that conclusion, the most recent of which (Huber et al. 2006) showed that the strength of the democratic tradition is one of the best explanatory variables for changes in inequality in Latin America (see also Muller 1988). Reuveny and Li also made the interesting conclusion that democracy decreases inequality when interacted with globalization, a variable that will be discussed later. Lee also studied the effect of democracy on inequality but in the context of public sector expansion, concluding that public sector expansion in non-democracies increases inequality. In non-democracies, the state supports particular core industries and client populations, which causes this inequality increase. This does not occur in democracies where the political mechanisms allow the state to help meet the needs of the lower classes (Reuveny and Li 2003).

Another political factor that affects inequality is the “legislative partisan political power distribution.” Huber et al. (2006) concluded that in Latin America, countries with strong histories of left-leaning legislatures have lower inequality (see also Mahler 2004). Their conclusion pointed to the idea that income inequality may actually be reduced by political means.

International Integration Explanations

The second camp of scholars is made up of those that believe factors dealing with international integration explain changes in income inequality. There seems to be a consensus in the literature that foreign direct investment and trade both increase inequality (Alderson and Nielsen 1999; Evans and Timberlake 1980; Reuveny and Li 2003; Gustafsson and Johansson 1999). The idea is that the money that comes into a country through FDI and trade goes to the sector where the country has a comparative advantage, increasing incomes in that sector while leaving all other sectors of the economy in the dust. Reuveny and Li did suggest that when trade is interacted with democracy, it actually decreases inequality. As previously stated, this occurs because a democracy allows a country to meet the needs of the poor.

Macroeconomic Explanations

The third group of scholars is mostly made up of economists who believe that macroeconomic factors best explain changes in inequality. The original theory about income inequality falls into this camp. This theory suggests that all countries are somewhere on the Kuznets Curve, an upside-down U (Kuznets 1955; Alderson and Nielsen 1995; Robinson
Kuznets suggested that income inequality in countries increases as the country develops (defined as increases in per capita income) and then decreases after it reaches a critical point. Much of the literature on inequality seeks to explain why this curve exists, because most economists do not accept changes in per capita income as an adequate explanation.

Samuel Morely put forth several additional macroeconomic explanations for inequality in Latin America. He claimed that inflation increases inequality because it hits the poor harder than the rich (Morely 2001; Albanesi 2007; Bulir 2001). The rich can invest in capital or land when inflation occurs, and these investments do not decrease in value with inflation. The poor, however, cannot do this because such a large percentage of their income goes toward consumption. Morely suggested that recessions also increase inequality because they hit the poor harder than the rich (Morely 1995; Psacharopoulos et al. 1995). Recessions cause unemployment, usually at the low end of the income bracket. They also cause the rich to spend less on the goods and services that the poor provide, decreasing the income of the poor and increasing inequality. Morely's final explanation for inequality was change in the minimum wage (1995). He suggested that a decrease in the minimum wage leads to more formal sector jobs, decreasing inequality, and that an increase in the minimum wage leads to fewer formal sector jobs, increasing inequality.

Demographic Explanations

The final group of scholars explains changes in inequality using demographic variables. The most prominent theory in this camp is that an increased youth population increases inequality (Simpson 1990; Bollen and Jackman 1985; Gustafsson and Johansson 1999). Young people have less experience and are more often unemployed. They also provide a competitive pool for employers to draw from, decreasing the wages of the youth and increasing the profits of the employers. Huber et al. suggested that the effect on inequality of the youth population actually decreases inequality, but only insignificantly. This finding is interesting, yet not well explained. Morely suggested that the real explanation for inequality is not in the size of the youth population but rather in the dependency ratio, the number of workers compared to the size of the family they are supporting (1995).

Another demographic variable that helps explain changes in inequality is the percent of the population employed in the informal sector (Huber 2006 et al.; Gustafsson and Johansson 1999; Alderson and Nielsen 1995; Nielsen 1994). The literature concludes that a higher percent of the population employed in agriculture (high sector dualism) increases inequality because wages are often lower in the informal sector, and the workers do not receive much of the benefit of government social spending through social security and welfare programs.

Another demographic factor that affects income inequality is ethnic diversity. There are certain levels of ethnic diversity or racial diversity that cause large discrepancies in income distribution (Meisenberg 2007). When political leaders come from a particular race or ethnic group, they tend to reward that race or ethnic group. In his article, Bayart listed African dictators who diverted money to tribe members (1992). This tendency to divert funds to the leader's ethnic group leads to inequality; as one group is preferred over others, that group obtains better jobs, government contracts, and higher income.

The final demographic explanatory variable is education. Most scholars argued that education decreases inequality over time (Lee 2005; Morely 1995; Alderson and Nielsen 1995).
1995; Crenshaw 1992). Education allows the poor to escape poverty and obtain jobs that pay better wages. Widespread education also attracts widespread foreign direct investment, not just FDI in certain sectors, but in all sectors where there are educated individuals.

Our theory that foreign aid affects changes in inequality falls into the international integration explanation camp. Although foreign intervention through foreign aid is not the same as intervention through trade and FDI, it still involves foreign powers or organizations investing money into an economy. The differences are that aid organizations invest this money through the governments of the developing countries, and the goal of the money is to improve the welfare of the poor instead of to gain profits. The foreign aid theory does not contradict any of the established theories about the causes for changes in income inequality. Instead, it seems that foreign aid money acts as a catalyst for many of the established theories about what increases inequality. Aid is used by developing countries to fund various programs that increase inequality: education spending, health spending, social security/welfare spending, public sector expansion in non-democracies, FDI attraction, trade liberalizing, and economic growth. Because foreign aid supports these inequality-increasing programs, it should lead to increased inequality itself.

Why Foreign Aid Leads to Inequality

Several mechanisms describe how foreign aid money leads to an increase in inequality. All of the mechanisms play some role in the process of aid money flowing to certain groups and away from other groups.

The first causal mechanism exists through politics. As rational actors, politicians act to please their supporters. Often, a politician’s supporters are made up of a group of high-income private citizens with special interests. The politicians have a vested interest in pleasing their supporters so that the supporters help them win subsequent elections, pay living expenses, and find employment after several faithful terms in public office. In his study on the effectiveness of foreign aid, Boone concluded that all political systems favor a “high-income political elite” when it comes to aid distribution (Boone 1996). He divided countries into three groups: those with elitist governments, egalitarian governments, and laissez-faire governments. From his evidence, he concluded that all three government types favor the high-income political elite. Since the governments are the organizations that ultimately control how aid money is used, it can be assumed that the money is distributed in a manner that favors those high-income individuals who support the politicians in office. This increases the incomes of a small group of individuals, including the politicians and their supporters, but leaves the poor essentially in the same position before the government received the aid money, leading to an increase in income inequality. Even if the government decides to give equal amounts of aid money to the poor and their supporters, income inequality increases because the money given to the poor has to be distributed among a large group. The money given to the supporters is distributed among a much smaller group, allowing each individual to receive a larger share. Easterly claimed that governments also have little incentive to increase the productive potential of the poor because this might foster political activism that would threaten the politicians’ and their supporters’ social and political standing (Easterly 2003).

Some argue that the conditionalities aid agencies include in loans and grants are designed to force governments to use aid in ways that benefit the poor. The conditionalities often require
a liberalization of economic policies (which may or may not help the poor) and improvements in institutions. Over the last several decades, these conditionalities have been under attack because of ineffectiveness, lack of enforcement, and lack of credibility (see Bauer 1993; Collier et al. 1997; Leandro et al. 1999; Morrissey 2004; Svensson 2000). The conditionalities force unwanted policies on unwilling governments. Because of this, the governments find ways to get around the conditionalities. Sometimes they do not fully implement the policies, sometimes they repeal the policies as soon as they get the money, and sometimes they refuse to implement the policies and count on the benevolence of the aid organization to induce the giving of the loan or grant without the conditionalities. Because of these problems with aid conditionalities, the money still goes to the high-income political elites, increasing inequality.

This might, however, still decrease inequality if these high-income individuals would invest the money in the domestic economy. An increase in investment could cause economic growth by increasing the number of jobs and the amount of credit available to all members of society. Commonly referred to as a “trickle down” effect (Azam and Laffont 2003), this effect does not fully occur unless the money is invested domestically, which seldom occurs (See Easterly 1999 and Boone 1996). Investors in poor countries favor foreign markets for several reasons. Investments in developing economies may provide more opportunity for profit, but the associated risk often encourages local investors to look abroad. Globalization has facilitated international investment and expanded investment choices, enabling a broader and more stable portfolio. In cases where the trickle down effect does occur, inequality continues to increase because the political elite continue to receive the majority of the funds.

The aid organizations’ selection process for giving aid causes another disincentive for politicians to improve the welfare of the poor. Logically, aid organizations make decisions based on the needs of the poor, giving aid to those nations whose poor need it. If the welfare of the poor improves, the aid money will eventually slow. For this reason, the governments that receive aid money have little incentive to actually help the poor; if the welfare of the poor does not improve, the aid money will keep coming (Svensson 2000). Bauer claimed that the problem is that aid goes to governments whose policies retard growth and create poverty (1993). These countries have an incentive to keep their institutions from improving; more economic crises means an increase in aid money (Azam and Laffont 2003). The improvement of institutions is crucial to decreasing inequality because better, more democratic institutions allow the government to meet the needs of the poor (Reuveny and Lee 2003). Better institutions and governance could also decrease inequality by redistributing income through effective taxation and by decreasing the influence of the high-income political elites through crackdowns on corruption.

International aid-giving organizations are also subject to the interests of their member states (Nielson and Tierney 2003), giving a new incentive to the politicians in aid-receiving countries. If they want to receive aid, they need to encourage programs that cause the member countries of the aid organizations to give them aid, suggesting that the developing country is more likely to use the money to improve its standing with the donor countries than to help the poor. This causes an increase in income inequality because the money is spent on programs that favor the elite that are well connected with the West, rather than those programs that aid the lowest income groups.
For a moment, let us assume that aid money does actually get through the government and is invested wisely in the domestic economy. It is logical to assume that the aid is directed to the sector that has the highest potential to generate profits and, thus, has a potential to cause economic growth. If the money is directed to these sectors, the owners of those sectors profit most. The workers in those sectors should profit some as well. While the other sectors probably experience some growth due to the success of the highly profitable sector, the growth is much less pronounced. This causes an increase in income inequality because, while the incomes of the members of the specified sector rise significantly, other incomes remain unchanged or increase insignificantly.

Foreign aid can also affect inequality through the ethnic diversity hypotheses listed in the literature review. If the political leaders who distribute the aid money belong to a particular ethnic group, they tend to prefer that ethnic group when distributing foreign aid. They use the aid to make sure the members of that ethnic group receive better-paying jobs. They also use the money to directly improve infrastructure in the areas where members of their ethnic group reside. Since the literature has established that ethnic diversity tends to lead to inequality, we add to that literature by suggesting that one way that this relationship exists is through the distribution of foreign aid.

From this theoretical discussion we extract two hypotheses: 1) foreign aid will lead to income inequality, and 2) foreign aid will cause more inequality in autocracies than democracies. We suggest that this increase in inequality is caused by aggregate aid. It may be the case that some aid programs actually decrease inequality, but the goal of this study is to discover the effect of net inflows of foreign aid money. We hypothesize that most of the aid distributed in the form of projects that are meant to decrease inequality is not spent in the way that is desired by the donors. The aid is often used for other purposes that actually increase inequality. Because of this misuse of aid and the other natural effects of aid mentioned in our theoretical framework, we hypothesize that the net impact of aid on inequality will be positive: foreign aid increases inequality. We used aggregate aid as our dependent variable because of its availability and because it is the measure of aid most frequently used in foreign aid literature (see Burnside and Dollar 2000, Hansen and Tarp 2001, Easterly 2003).

Data Collection

The dependent variable of this study is the Gini index of income inequality. It was provided by the United Nations’ University World Inequality Database, WIID (UNU-Wider 2005). This database provides quality ratings and other information for each of the observations. Following the methods of Huber et al. (2006), we filtered the data in order to obtain the most valid observations. First, we deleted those observations with expenditure, consumption, earnings, or market income as the measure of income. Second, we deleted all observations that did not include data for the entire population. The observations were given a quality rating of 1, 2, or 3, 3 being the lowest and 1 being the highest. We eliminated all observations with a quality rating of 3. In many cases, there remained several observations for the same year. When this occurred, we deleted all cases that used the household or family as the unit of analysis. Where multiple values still existed, we deleted any observation with the quality rating of 2. A few
multiple year observations still remained, so we averaged the remaining values. This process yielded a dataset with valid observations and one observation per year.

There is much contention over the use of the Gini coefficient as a measure of inequality. It may not provide the most valid measure for this variable, but it is the measure with the most available data. Because of the high level of availability in comparison to other measures of inequality, we decided to use the Gini coefficient as our measure of inequality for this study. The vast majority of scholarly articles in the field of inequality research have also used this measure.

Unfortunately, the data on the Gini coefficient, while much more prevalent than other measures of inequality, is limited. For most countries, the Gini coefficient is not available for multiple consecutive years. Because of this limited availability of data, our datasets were limited in their inclusion of countries and years. However, we did include all of the countries and years possible in our analysis.

Data for our independent variable, foreign aid, comes from a newly developed comprehensive database of foreign aid loans and grants called the Project-level Aid Database (PLAID) (Brigham Young University 2007). PLAID is a database currently under construction by Brigham Young University and the College of William and Mary. The project has been funded by the National Science Foundation and is currently under consideration for further funding from the Gates Foundation. Its database contains bilateral and multilateral loans and grants to all countries across the world since 1970. While the database is still under construction, the data it provides is more complete than any other data source for foreign aid inflows because it includes data from the OECD and the World Bank. We use aggregate foreign aid data for each country each year there is a Gini coefficient. The aggregate data is obviously less descriptive than disaggregated. In fact, it is possible that some types of aid may decrease inequality. Upon the completion of the PLAID database, we will run further tests to determine which types of loans cause income inequality to increase and which types cause income inequality to decrease. Nevertheless, this aggregate study should reveal the overall net effect of foreign aid on income inequality. We expect this relationship to be positive because recipient countries use this aid at their own discretion. Aid money intended for income equalizing programs may be misused, as our theory predicts. We followed the trend in the current literature by using an aggregate aid database.

Our study also includes several independent variables established in the literature to allow us to understand the effects of our independent variables after controlling for the explanatory variables that scholars have established. Summary statistics for these variables, along with our independent and dependent variables, appear in Table 1. Following the table are theoretical explanations for including each of the control variables.

Inflation

Several authors agreed that inflation promotes inequality. Morley argued that labor markets lag when adjusting to high inflation (2001, 72). This lag causes a decrease in real wages, which hurts minimum wage workers proportionately more than other workers. The IDB (1998) and De Ferranti et al. (2004) suggested that hyperinflation has strong effects on inequality. We agreed with these authors and hypothesized that inflation increases income inequality. To measure
inflation, we use the World Bank’s World Development Indicator’s measure of inflation, the GDP deflator (WDI 2005).

**Education**

The literature suggested that education also has an effect on inequality. As a country becomes more educated, more people obtain meaningful employment. This increase in employment causes inequality to decrease. Measures for education are plentiful, but many of those measures are unavailable for countries and years in our sample. Because of this, we chose to use the most widely available measure of education, the literacy rate (WDI 2005).

**Youth Population**

The argument that inflation hurts unskilled workers is extended to the variable of demography. The youth population is one of the principal suppliers of unskilled labor. Many authors made a link between youth population and income inequality. Alderson and Nielsen argued that a large youth population causes an oversupply of unskilled workers, thus driving down the wage of unskilled labor (1999). Therefore, we expect that a high youth population increases inequality. For this data we used the World Bank’s World Development Indicators, WDI (2005). This dataset provides a percentage of each nation’s population younger than fifteen years. We used this percentage as the measure of youth population in a society.

**Agricultural Share of GDP**

There were differing views regarding employment in agriculture and its effects on income inequality. Alderson and Nielson argued that decreasing proportions of employment in agriculture increase inequality, based on the assumption that inequality in the agricultural sector is lower (1999). Huber et al. argued the opposite for Latin America. They found that the Gini index in urban areas suggests less inequality than in rural areas (2006). Thus, increased employment in agriculture leads to greater inequality. Because of the limited availability of data on employment in agriculture, we used the World Bank’s WDI (2005) to obtain the agricultural share of GDP. We used this data as the measurement of employment in agriculture.

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**Table 1: Summary Statistics for Model Including Agricultural Employment**

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gini Coefficient</td>
<td>169</td>
<td>8.7845</td>
<td>.4764</td>
<td>7.9914</td>
<td>9.7739</td>
</tr>
<tr>
<td>Agricultural Employment</td>
<td>169</td>
<td>27.6317</td>
<td>8.5415</td>
<td>14.8644</td>
<td>43.6666</td>
</tr>
<tr>
<td>Youth Population</td>
<td>169</td>
<td>22.8479</td>
<td>15.0327</td>
<td>1</td>
<td>66.7</td>
</tr>
<tr>
<td>FDI Net Inflows</td>
<td>169</td>
<td>3190000000</td>
<td>7070000000</td>
<td>0</td>
<td>4380000000</td>
</tr>
<tr>
<td>Inflation (GDP Deflator)</td>
<td>169</td>
<td>90.6111</td>
<td>312.5484</td>
<td>-23.4789</td>
<td>2509.465</td>
</tr>
<tr>
<td>Ethnic Diversity</td>
<td>169</td>
<td>.4116</td>
<td>.2419</td>
<td>.007</td>
<td>.859</td>
</tr>
<tr>
<td>Polity Democracy Scores</td>
<td>169</td>
<td>5.515</td>
<td>5.5152</td>
<td>-7</td>
<td>10</td>
</tr>
<tr>
<td>Log Foreign Aid</td>
<td>169</td>
<td>20.5092</td>
<td>1.3323</td>
<td>13.6523</td>
<td>1023.1212</td>
</tr>
<tr>
<td>Polity X Log Foreign Aid</td>
<td>169</td>
<td>3.75112</td>
<td>.2972</td>
<td>3.1224</td>
<td>4.1865</td>
</tr>
</tbody>
</table>

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**Ethnic Diversity**

Some literature argued that ethnic divisions create more inequality. De Ferranti *et al.* (2004) argued that this inequality is better explained by differences within ethnic groups instead of between them. However, we predict that countries with higher levels of ethnic diversity have more inequality. People seek to elect politicians from their same ethnic group, and these politicians return favors to people of their ethnic group. This promotes income inequality along ethnic lines. We used the Ethnolinguistic Fractionalization index, ELF (Roeder 2001), as the measure of ethnic diversity. The ELF index is an estimate of the probability that any two people in a population will belong to the same ethnic group. The data supplied a probability value for the years 1961 and 1985. We selected the 1985 value because it is more relevant to our research. We expected those countries with a lower value in the ELF index (more ethnically diverse) to have more income inequality.

**Democracy**

Many theorists agree that democracy provides institutions that empower the poor. This provides more opportunity for redistribution mechanisms. As the level of democracy increases, politicians are more responsive to the needs of the citizens. Thus, one would expect that democracy would decrease inequality. The empirical data has been ambiguous in many studies, but Reuveny and Li (2003) found a significant relationship between democracy and inequality when controlling for trade openness. We agreed with Reuveny and Li and hypothesize that our model will yield a negative relationship between the level of democracy and income inequality. We used data from Polity IV as a measure for democracy (CIDCM 2004). The Polity IV dataset provides a measure of democracy and a measure of autocracy. The sum of these two measures is the polity score.

**GDP per capita (PPP)**

The dominating theory regarding economic development and income inequality is Simon Kuznets’ (1995) inverted U-shaped curve. At lower levels of development, income inequality increases as per capita income increases. At higher levels of development, income inequality decreases as per capita income increases. In our dataset, we focus on countries that receive foreign aid. It is safe to assume that most of these countries are at lower levels of development, so we predict that per capita GDP growth increases income inequality. Our measurement of per capita GDP (Purchasing Power Parity) comes from the WDI (2005) data.

**FDI—Percentage of GDP**

Many authors agreed that the inflow of foreign direct investment has a positive effect on inequality. Reuveny and Li found this to be the case for a sample of countries from around the world (2003). Tsai found that this effect of foreign direct investment on inequality is region specific (1995). Huber *et al.* hypothesized that FDI increases inequality in Latin American and the Caribbean because this type of investment applies to capital-intensive industries that provide relatively few jobs (2006). However, the jobs provided are relatively well paying. For this variable, we use the WDI to determine foreign direct investment as a percentage of
GDP (2005). We used the percentage of GDP that comes from FDI because only net inflows of FDI that make up a significant portion of the country’s GDP, not just high inflows of FDI, should affect inequality.

**Other Variables**

In our literature review, several additional variables were mentioned. The first of these is social spending. Both Huber *et al.* (2006) and Rudra (2004) suggested that social spending has a positive impact on inequality in developing countries. The logic behind this effect is sound, but the results seem questionable. When deciding whether or not to include this variable, we weighed the cost of losing a large number of cases due to holes in the social spending data against the benefit of including a slightly significant control variable. We decided that the cost outweighed the benefit and left out the variable.

Huber *et al.* (2006) also found that the legislative partisan political power distribution has an effect on income inequality. We would have controlled for this variable, but we could not obtain the data required. However, the variable only became extremely significant after controlling for the interaction between democracy and social spending. Since we could not include the social spending variable, we determined that our results would not be harmed by omitting the legislative partisan political power variable.

The final variable omitted from our study was the minimum wage. Morely (1995) suggested that a high minimum wage tends to increase inequality because of its effect in causing a lower number of people to be employed in the formal sector.

**Methodology**

To test the relationship between foreign aid and income inequality (Gini coefficient), we used two unbalanced panel datasets. The first dataset omits a control variable, percent of total employed population employed in agriculture, because of its limited coverage throughout the time period. The second dataset includes the agricultural employment variable but has a smaller sample size. We ran tests on both datasets to test for the robustness of our results across difference sample sizes and different control variables.

Model 1 (omitting agricultural employment) includes 211 observations from twenty-nine developing or transition countries from 1975 to 2002. The countries included in the first dataset are: Bangladesh, Belarus, Bolivia, Brazil, Bulgaria, Chile, China, Colombia, Ecuador, El Salvador, Estonia, Greece, Guatemala, Hungary, Indonesia, Latvia, Lithuania, Malaysia, Mexico, Moldova, Paraguay, the Philippines, Portugal, Romania, Post-Communist Russia, Slovenia, Sri Lanka, Thailand, and Venezuela. Model 2 (including agricultural employment) includes 169 observations from twenty-four countries from the same time period as the first dataset. The countries included in the second dataset are the same as those included in the first dataset minus Bangladesh, Belarus, Moldova, and Sri Lanka. We selected countries and years based on the availability of Gini coefficients in the WIDER database. We also selected the countries based on the availability of key control variables. The lack of inequality data was problematic, but we made due with what was available. Because of data availability problems, this group does not represent a truly random sample of developing and transition countries. As is evident in the lists of countries, there are no African countries in the sample. The results of this study,
then, cannot necessarily be generalized to developing African nations. However, the sample does include a fair number of countries from Europe, Asia, South America, and Central America, allowing for some generality of the results of this study throughout those regions.

Attempting to estimate regression models from panel data presents several problems that must be addressed. First, with most panel data, the errors produced by ordinary least squares (OLS) regression models exhibit strong heteroskedasticity—that is, there is not constant variance across the error terms. Heteroskedasticity causes OLS to use incorrect standard errors when producing $t$ statistics for the coefficients. Normally, this problem may be corrected for by using robust standard errors that provide the correct $t$ statistics for the coefficients. However, heteroskedasticity also causes the OLS estimators to be poor linear unbiased estimators. This problem can also be corrected, and we will discuss our method for doing so below. The second problem that occurs when using OLS to estimate a model using panel data is correlation between the error terms (autocorrelation). Autocorrelation often occurs in panel data because of the time-series nature of the data. The errors are not independent of each other because they rely somewhat on the errors that precede them. Autocorrelation also causes OLS estimated $t$ statistics to be invalid and OLS estimators to be poor linear unbiased estimators. Because of these violations of key assumptions of OLS, certain strategies must be used to allow for the best estimation of the models.

There are several ways to overcome the problems of autocorrelation and heteroskedasticity, but it would first be wise to test for the existence of the two violations of OLS. In order to test for serial correlation between the errors, we used a Wooldridge test for autocorrelation in panel data (Statacorp 2007). For Model 1, the test suggested that we could reject the hypothesis of no first order autocorrelation with 90 percent confidence. For Model 2, the test suggested that we could reject the same hypothesis with 99.9 percent confidence. Because of the high probability that autocorrelation exists, we corrected for this problem. In order to test for heteroskedasticity, we first ran a generalized least squares (GLS) regression (which we will discuss more in depth later) allowing for heteroskedasticity. Secondly, we ran the same GLS regression forcing homoskedasticity. We then used the results to run an LR test to determine the statistical significance of the restriction placed on the model; in other words, we tested to see if the models were significantly different when allowing for heteroskedasticity and when forcing homoskedasticity. The LR tests for both models produced results suggesting that we could reject the hypothesis of homoskedasticity in the original model with 99.9 percent confidence.

Because we found that the OLS model for our data exhibits both autocorrelation and heteroskedasticity, we must transform the model to obtain maximum likelihood estimators and valid $t$ statistics. There are several ways to transform panel models to correct for these problems. We chose to use a feasible generalized least squares (FGLS) model because it does a fairly good job of correcting for these problems. OLS assumes constant variance among the error terms and an absence of covariance between the error terms, but we have shown that these assumptions are invalid for our models. An FGLS model transforms the OLS model by multiplying the dependent variable, the independent variables, and the error terms by the square root of a matrix $\Omega$ that is equal to the quantity $\sigma^2 C$, where $\sigma^2$ is an unknown constant and $C$ is a known $G \times G$ matrix where $G$ is equal to the number of linear equations involved in the model, or the number of countries (Wooldridge 2002). Because $C$ is usually unknown in GLS estimation,
FGLS estimation is used to estimate it. When $\Omega$ is used to transform the model, FGLS produces estimators that are consistent, unbiased, and of minimum variance. The transformation also forces the variance/covariance matrix to have constant variance down the diagonal and zero covariance in the upper-left and lower-right portions of the matrix. This variance/covariance matrix produced by the transformed model now complies with the OLS assumptions of homoskedasticity and no autocorrelation. Because of this, the $t$ statistics are valid and the estimators are the best unbiased linear estimators. According to Wooldridge, the FGLS model also complies with the first assumption of OLS, normality, because the transformation causes the model to be asymptotically normal, providing completely robust estimators (Wooldridge 2002).

The FGLS model still makes several strong assumptions, however, that could cause problems for the model. The FGLS model assumes that the effects of the independent variables on the dependent variable are equal across all of the countries and time periods. We would hope that this is the case, but it is possible that it is not. The FGLS model also uses a zero conditional mean assumption $\mathbb{E}(u_i|X_i) = 0$ which implies that every element of $X_i$ and $u_i$ are uncorrelated where $u_i$ represents the error terms. This assumption may also be violated, but we hope that it is not. Other models may do a better job of providing the best linear unbiased estimators without making such “heroic” assumptions as FGLS. A preferred model is the Seemingly Unrelated Regressions model. While this model may provide better estimators, it requires larger samples than those which are available to us within each unit (country). Because of this, a Seemingly Unrelated Regressions model is infeasible. However, despite the possible violation of the FGLS assumptions, according to Wooldridge, “the FGLS is more efficient than any other estimator that uses the orthogonality conditions, $\mathbb{E}(X'u) = 0$” (Wooldridge 2002). Because of the efficiency of the FGLS estimators, we have chosen to model our data using a FGLS model.

Other problems may exist with our model because of a possible difficulty with endogeneity. It is possible that income inequality causes foreign aid payments rather than the other way around. This problem could be overcome by including a lagged dependent variable on the right side of the equation, making an autoregressive model; however, the extreme lack of data on the dependent variable prevents us from including a lagged dependent variable. In the future, we may attempt to control for this problem by using software to impute past values. We also hope that the availability of income inequality data will improve in the future to allow for better testing of hypotheses like ours. For now, we are content with our model that does not include a lagged variable, and we will rely on our theoretical framework for the relationship between foreign aid and inequality to establish the definite possibility that foreign aid actually causes income inequality to increase. Nevertheless, the potential endogeneity problem may cause our estimators to be incorrect.

Despite these myriad problems, we are confident that our model provides consistent, best linear unbiased estimators to show how each of our independent variables affects income inequality.

Results

The results of the analysis are found in Tables 2 and 3. Table 2 contains the results of the initial FGLS regressions, and Table 3 contains the results of the FGLS regression including additional variables. We will first focus our discussion on the results in Table 2.
Table 2: Feasible Generalized Least Squares (FGLS) Regressions of the Relationship Between Foreign Aid and Income Inequality (Omitting Agricultural Employment)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log GDP per capita (PPP)</td>
<td>2.9990***</td>
<td>2.9008***</td>
<td>2.7884***</td>
</tr>
<tr>
<td></td>
<td>(.6090)</td>
<td>(.5851)</td>
<td>(.5852)</td>
</tr>
<tr>
<td>Youth Population</td>
<td>.9596***</td>
<td>.85915***</td>
<td>.8610***</td>
</tr>
<tr>
<td></td>
<td>(.0645)</td>
<td>(.0663)</td>
<td>(.0658)</td>
</tr>
<tr>
<td>FDI percent of GDP</td>
<td>.1202***</td>
<td>.1239***</td>
<td>.1311***</td>
</tr>
<tr>
<td></td>
<td>(.0421)</td>
<td>(.0404)</td>
<td>(.0404)</td>
</tr>
<tr>
<td>Inflation (GDP Deflator)</td>
<td>.0059***</td>
<td>.0051***</td>
<td>.0048**</td>
</tr>
<tr>
<td></td>
<td>(.0017)</td>
<td>(.0016)</td>
<td>(.0016)</td>
</tr>
<tr>
<td>Ethnic Diversity</td>
<td>14.0200***</td>
<td>15.2084***</td>
<td>14.7894***</td>
</tr>
<tr>
<td></td>
<td>(2.302)</td>
<td>(2.2276)</td>
<td>(2.2275)</td>
</tr>
<tr>
<td>Polity Democracy Scores</td>
<td>.3516***</td>
<td>.3251***</td>
<td>1.2034</td>
</tr>
<tr>
<td></td>
<td>(.0883)</td>
<td>(.0850)</td>
<td>(9248)</td>
</tr>
<tr>
<td>Log Foreign Aid</td>
<td>1.4414***</td>
<td>1.4225***</td>
<td>.0749*</td>
</tr>
<tr>
<td></td>
<td>(.3401)</td>
<td>(9248)</td>
<td>(.0452)</td>
</tr>
<tr>
<td>Polity X Log Foreign Aid</td>
<td></td>
<td></td>
<td>.0749*</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(.0452)</td>
</tr>
<tr>
<td>Constant</td>
<td>-16.1642***</td>
<td>-42.2893***</td>
<td>-40.94772***</td>
</tr>
<tr>
<td></td>
<td>(5.4625)</td>
<td>(8.0932)</td>
<td>(8.0814)</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.684</td>
<td>0.709</td>
<td>0.7123</td>
</tr>
<tr>
<td>N</td>
<td>211</td>
<td>211</td>
<td>211</td>
</tr>
</tbody>
</table>

The dependent variable is the logged Gini coefficient. The values outside of the parenthesis are the FGLS estimates of the coefficients. The numbers inside the parenthesis are the standard errors. The probability f is as follows: * p<.1, ** p<.05, *** p<.01.

The model presented in Table 2 attempts to replicate the results suggested by the literature. All of the variables that are discussed in the literature review proved to be significant except for agricultural employment. Because of its insignificance in initial estimations of all of the models, we left out the agricultural employment variable in the final estimations. Model 1 shows that all of the variables except for democracy are correlated with income inequality in the hypothesized directions. GDP per capita, youth population, FDI as a percent of GDP, inflation, and ethnic diversity all increase inequality. It is interesting to note, however, that democracy is significantly positively correlated with inequality. This goes against the literature, which establishes a nonexistent or negative relationship. Perhaps a ruling majority in a democracy could use its power to repress a large minority, helping the majority and hurting the minority. This could cause inequality to rise.

Model 2 adds the key independent variable, foreign aid, as an explanatory variable for inequality. Again, all of the control variables, except democracy, are significant and correlated in the hypothesized direction. As we hypothesized, the regression results also suggest that a significant positive relationship exists between foreign aid and inequality. The null hypothesis that there is no relationship between foreign aid and inequality can be rejected with over 99.9 percent confidence.

Model 3, the final model, also adds the interaction variable, testing for a magnified effect of foreign aid on inequality in democracies. The regression results show that the interaction
is positive, but only slightly significant. The null hypothesis that there is no additional effect in democracies can be rejected with 90 percent confidence, not the 95 percent benchmark we would like. However, the relationship is positive as the theory suggests. The final model produced by the regressions is as follows:

\[
\text{Income inequality} = -40.95 + 2.78(\ln(\text{GDP per capita})) + 0.86(\text{youth pop}) + 0.13(\text{FDI}) + 0.0048(\text{inflation}) + 14.80(\text{ethnic}) - 1.20(\text{democracy}) + 1.42(\ln(\text{aid}))+ .07(\text{aid}^*\text{democracy}) + \epsilon
\]

It is important to note that the results of these regressions have proven robust to several different tests. The foreign aid variable remained positive and significant when using GLS fixed effects models, GLS random effects models, FGLS models, OLS models controlling for year and country, and models including more independent variables which proved insignificant. We also ran regressions using a dataset that contained values imputed using the statistical program Amelia to determine whether or not the results would be robust to a large increase in the sample size. The dataset, including the imputed values, had about 360 cases and produced similar results for the effect of foreign aid on inequality, proving the robustness of the results. We concluded that the two additional variables, foreign aid and the interaction variable, added significant explanatory power by running a Chow test. The test suggested that the two variables were important.

To provide further interpretation of the results, we will examine the coefficients for the variables. In the final model, the coefficient for foreign aid is 1.4225. Because the foreign aid variable is a logged variable, this coefficient can be interpreted to mean that a 1 percent increase in aid flows causes a 1.4225 point increase on the Gini index, a substantively significant relationship. Because the Gini coefficient is a slow-moving variable, an increase of 1.42 points is large. This relationship is especially significant after observing that many activists are currently calling for a doubling of aid, or a 100 percent increase. Our results suggest that an increase of this magnitude would cause income inequality to increase rapidly.

Further significance of the aid variables may be determined by examining the r-squared values of each of the regressions. The r-squared value of the initial model (without the aid variables) was 0.684, suggesting that 68.4 percent of the variance in income inequality can be explained by the control variables. This is a large portion of the variance and suggests that the original model explained much of the change. The r-squared value for the final model was 0.712, suggesting that the aid variables explained an additional 3 percent of the variance in inequality. This may seem like a small increase, but because the goal of this study was to determine whether or not aid explained any of the variance in inequality, and not to determine a list of causes of inequality, a 3 percent increase is significant. As mentioned earlier, a Chow test was also used to determine that the aid variables were important to the model.

Another way to determine the explanatory power of the final model is to examine some of the predictions the model made. We ran a regression with the last two cases (Venezuela 2001, 2002) omitted and then predicted the Gini values for those two cases. The model predicted that the 2001 value would be 47.96 and the 2002 value would be 45.02. The actual values for these two years were 46.39 and 47.52 respectively. These predictions were fairly accurate; however, the model seems to be inconsistent at either over predicting or under predicting. This could be a problem, but comparing the predicted values to the actual values on the chart below (Figure
1) shows that the model predicts the Gini coefficient on a fairly consistent basis. Because of this, we assume that the forecasting ability of the model is relatively strong. These variables do an excellent job of explaining variance in income inequality.

Figure 1: Predicted Values vs. Actual Values

In Table 3, we include the agricultural share of GDP and literacy as additional control variables and also add multiple lagged foreign aid variables. We will discuss the purpose of these lagged variables below; the reasoning for including the agriculture and literacy variables is found above.

The first model found in Table 3 presents the control variables we extracted from the literature. Some differences exist between this model and the previous models. One of the major differences is the direction of the relationship between GDP per capita and inequality. In these models, the direction appears negative; previously the relationship appeared positive. Perhaps this difference exists because of the ambiguity of the relationship between GDP and inequality. Because the relationship changes as GDP increases, it is hard to tell the nature of the actual relationship in a normal regression. The significance of the variable also seems to fluctuate from regression to regression. The other variables remain significant in this first model.

The addition of the literacy and agricultural share of GDP variables provided some interesting findings. The model suggests that higher literacy rates actually lead to higher inequality. It is possible that literacy is an indicator of education, and when education is higher, more inequality exists. This relationship could be explained by the idea that higher education leads to a higher variation in jobs, with a higher variation in income from those jobs. Higher education may also lead to a larger job market, which increases competition among the workers and decreases wages. The other interesting finding presented in this model is the idea that as the agricultural share of GDP increases, inequality decreases. This is different from the hypothesized
Table 3: Feasible Generalized Least Squares (FGLS) Regressions of the Relationship Between Foreign Aid and Income Inequality (Omitting Agricultural Employment)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Share of GDP</td>
<td>-.6534*** (.1319)</td>
<td>-.5489*** (.1286)</td>
<td>-.4680*** (.1367)</td>
</tr>
<tr>
<td>Log GDP per capita (PPP)</td>
<td>-2.3232** (1.113)</td>
<td>-1.852* (1.072)</td>
<td>-1.0661 (1.1452)</td>
</tr>
<tr>
<td>Youth Population</td>
<td>1.2302*** (.0928)</td>
<td>1.176*** (.0888)</td>
<td>1.1351*** (.0937)</td>
</tr>
<tr>
<td>Literacy</td>
<td>.1688*** (.0632)</td>
<td>.2217*** (.0618)</td>
<td>.2099*** (.0633)</td>
</tr>
<tr>
<td>FDI share of GDP</td>
<td>.0638* (.0404)</td>
<td>.0727** (.0388)</td>
<td>.0896** (.0399)</td>
</tr>
<tr>
<td>Inflation (GDP Deflator)</td>
<td>.0052*** (.0016)</td>
<td>.0047*** (.0015)</td>
<td>.0041*** (.0015)</td>
</tr>
<tr>
<td>Ethnic Diversity</td>
<td>8.194*** (2.508)</td>
<td>8.697*** (2.406)</td>
<td>9.474*** (2.518)</td>
</tr>
<tr>
<td>Democracy</td>
<td>.4420*** (.0839)</td>
<td>.4032*** (.0809)</td>
<td>.1347* (.9221)</td>
</tr>
<tr>
<td>Foreign Aid (logged)</td>
<td>1.419*** (.3269)</td>
<td>1.2236*** (.4776)</td>
<td></td>
</tr>
<tr>
<td>Foreign Aid (lagged 1 yr)</td>
<td></td>
<td></td>
<td>3.15e-10 (4.88e-10)</td>
</tr>
<tr>
<td>Foreign Aid (lagged 2 yrs)</td>
<td></td>
<td></td>
<td>1.88e-10 (4.55e-10)</td>
</tr>
<tr>
<td>Aid X Democracy</td>
<td></td>
<td></td>
<td>.0857** (.0447)</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.727</td>
<td>0.749</td>
<td>.734</td>
</tr>
<tr>
<td>N</td>
<td>210</td>
<td>210</td>
<td>201</td>
</tr>
</tbody>
</table>

The dependent variable is the logged Gini coefficient. The values outside of the parentheses are the GLS estimates of the coefficients. The numbers inside the parentheses are the standard errors. The probability is as follows: * = p<.1, ** = p<.05, *** = p<.01

positive relationship. It could be that the agricultural share of GDP increases as farmers begin to become more efficient and better at farming. If this is the case, the incomes of farmers should be increasing and inequality should be decreasing. This finding does fall in line with the findings of Crenshaw (1992). The logic behind these relationships is not incredibly solid, but the findings are quite interesting.

Model 2 adds our foreign aid variable. The relationship observed in the models from Table 2 is observed again in this table. After controlling for literacy and the agricultural share of GDP, both significant explanatory variables for inequality, foreign aid remains highly significant. The coefficient for foreign aid also remains about equal to the coefficients found in the models discussed above. This suggests that a highly substantive relationship exists between foreign aid and inequality and that this relationship is robust to changes in the model and sample size.
We also ran one final regression to test for the time effects of aid on inequality. Pieces of our causal logic require time for aid to actually increase inequality, so we created two lagged foreign aid variables. The first variable is a lag of one year, and the second variable is a lag of two years. We included both lags in our final model, which produced some interesting findings. Neither of the lagged variables was significant when controlling for the current year’s aid. However, further tests showed that both of the lagged variables had significant effects on inequality on their own, not controlling for the current year’s aid. Because of this, there is still some ambiguity surrounding the relationship between foreign aid and inequality. The results have two possible implications. The first is that aid has a real effect on inequality, but that effect is instantaneous; it does not occur over time. The second is that the relationship between aid and inequality is endogenous; inequality could cause aid organizations to give more aid. Because both of these relationships are possible, it is difficult to make solid conclusions about the relationship from these tests. Further research must be done, including more observations and further tests, in order to reveal the true relationship between aid and inequality. However, even if the relationship is occurring in the other direction (inequality causing aid), this is a new and significant finding. Nobody has ever suggested that aid organizations are concerned with inequality. Through this selection process, aid organizations may be looking for countries that have worse inequality so they can use aid to decrease that inequality and, therefore, improve the conditions for economic growth. This would be a positive impact of the selection process.

The insignificant nature of the lagged variables is still quite interesting, however. If aid has no effect on inequality over time, it is failing with respect to its goal of decreasing inequality. Aid is either helping nobody or it is helping the rich and the poor rather than just the poor. This finding has implications somewhat similar to the implications that come from a positive relationship between aid and inequality. Aid is not doing what it is meant to do, and this may impact some donors’ willingness to give.

Implications and Conclusions

The analysis of this data supports our theoretical framework suggesting that foreign aid increases income inequality in developing and transition nations. The quantitative tests show that foreign aid is a robust explanatory variable for increases in inequality in these nations. While the limited sample of countries precludes us from generalizing our results to all nations across the globe, the varying characteristics of the countries studied allow for some conclusions to be made. It must be remembered, however, that our sample included no African countries, meaning that these results cannot be applied to African nations. Nevertheless, our datasets do include multiple countries from Eastern Europe, Asia, South America, and Central America, making it possible to generalize our results to those areas.

The quantitative analysis suggests that the effect of foreign aid on income inequality is statistically and substantively significant. After controlling for all the other factors, increases in foreign aid are related with limited increases in inequality. It must be remembered, however, that foreign aid is intended to increase the well being of the poor alone. Most aid-giving organizations obtain contributions and operate under the goal of decreasing world poverty. Thus, our finding that foreign aid has a small but statistically significant effect on inequality is important. We have found that while aid may help the poor, it is obviously helping the rich.
more, which is a problem. Most contributors to organizations that provide aid assume their money is used for the poor. While there is a chance that these donors would still be satisfied if they knew a small portion of their money helped the rich, they would probably not be satisfied knowing that their money increases the incomes of the rich more than the incomes of the poor, an implication of our findings.

While the effect of foreign aid on income inequality may be small, it exists, and it causes inequality to increase in these developing countries where inequality is already a problem. Inequality causes slowed growth, higher crime rates, and other serious problems across the world. One goal of foreign aid is to decrease this inequality and provide better lives for the poor. This goal is not being met; even worse, the opposite is occurring. Foreign aid causes inequality to increase.

Foreign aid money is given to these countries every year in amounts equaling millions and sometimes billions of dollars. If those amounts are causing a small increase in inequality every year, after ten or fifteen years, inequality will be much higher than it is today. This will cause the growth that foreign aid is meant to encourage to slow or stop and extreme hardship for many of the citizens of these developing countries, while providing unnecessary luxuries for a select few.

We do not mean to suggest that aid organizations should cease giving aid. We do suggest, however, that the way in which aid is given to these developing countries improve. It is obvious from our results that foreign aid is not decreasing inequality but increasing it. Because of this, aid organizations should reevaluate their methods for giving foreign aid. Careful analysis should be performed using the newly released Project-level Aid Database (PLAID) to determine which types of aid cause increases in inequality and which types of aid cause decreases. Aid organizations should then focus their efforts on providing aid through those which decrease inequality. The PLAID database provides scholars and aid workers with a comprehensive database of aid loans and grants classified by project type. This data could be used to determine each type of aid project’s effects on inequality. We suggest that aid organizations intensify their level of responsibility and use their money to improve the conditions and the incomes of the poor more than the rich. If reducing inequality, one of the key goals of foreign aid, is not met, the way in which aid is distributed should be changed.

WORKS CITED


Center for International Development and Conflict Management (CIDCM). 2004. Polity IV


Easterly, William. 2006. *The white man's burden: Why the West's efforts to aid the rest have done so much ill and so little good*. New York: Penguin Press.


