

***Measuring the Impact of Trust on  
Foreign Aid Effectiveness***

Andrew Heritage  
Claremont Graduate University

Paper presented to the  
Western Political Science Association Annual Conference  
Hollywood, CA  
March 28, 2013

**Abstract**

This research is an attempt to analyze the role of informal institutions on development aid effectiveness. The link between quality institutions and economic growth has been established in the literature. However, little analysis in the aid effectiveness literature has been performed on the role of informal institutions. This research uses World Values Survey data to capture the level of trust within a society as a measure of the degree to which its informal institutions and norms promote economic exchange. This research supports past findings that trust has positive effects on economic growth. Furthermore, it is found that development aid does not induce growth when interacted with trust. The implications of this research are that informal institutions that promote trust among individuals serve to lower transaction costs which promote economic exchange and development. Possible policy options are discussed for promoting trust and it is suggested that development aid be refocused as a bottom-up, case specific approach that promotes institutional evolution to achieve development.

**Introduction / Research Motivation**

In an attempt to reduce global poverty and raise living standards, economic development aid has been a common policy tool of international organizations, developed countries, and non-governmental organizations. The focus of foreign aid the past three decades has been to transfer money, physical capital, and technology to poor countries with the goal of generating economic development. However, the effectiveness of foreign aid has been in doubt beginning with Mosely (1987), who found it to have little impact on economic growth. Subsequent literature has attempted to measure economic and political conditions in order to determine the best candidates for effective aid. Burnside and Dollar's (2000) seminal work formed a "Good Policy Index" as one measure that impacts the effectiveness of aid. Two opposing schools of thought have emerged: one argues that aid has failed

due to the lack of necessary physical capital needed to escape a poverty trap while, in contrast, another viewpoint argues that aid has failed due to poor policies and institutions.

This research further examines the latter viewpoint of the institutional impact of foreign aid. To date, most research has solely focused on formal institutions and policy outcomes rather than mechanisms impacting individual decisions at the micro-level. The effects of formal institutions have been well examined with mixed results as to their interactive effects with foreign aid. The role of informal institutions such as norms and social capital have been often acknowledged, but left unexamined as merely noting “culture matters” in passing without explanation of how or what aspects of culture matter for development. To date, little analysis has been performed as to the impact of social capital on foreign aid effectiveness.

This study is an initial attempt to bridge past research on foreign aid effectiveness with informal institutions. More specifically, the role of trust in economic exchange that spurs economic growth is analyzed in conjunction with foreign aid effectiveness literature. While much has been analyzed how high levels of trust lead to better economic outcomes there is little written about its interaction with foreign aid (Knack and Zak, 2001 and 2003). This paper is an initial attempt to examine the effects a central aspect of culture, modeled as social capital in the form of trust, and how it impacts the effectiveness of aid. The overall findings are that trust has a significant and positive relationship on economic growth, but no significant link with foreign aid to impact growth. Thus, this research argues in concurrence with the institutional approach that the role of institutions is paramount in determining the effectiveness of aid rather than the sole magnitude of physical capital. However, my argument differs in the aspect that I argue it is the informal institutions that are captured by the measurement of trust that matter most. Thus, foreign aid as a mere transfer of physical capital may prove ineffective, but the

creation of social capital through policy may be an effective means of stimulating development due to an increase in trust that promotes increasing exchange.

### **Aid Effectiveness Literature Review**

Aid can come in various packages and through various means. Development aid is sometimes provided by international organizations, most prominently the World Bank and the United Nations. However, the most common form of aid is bilateral. According to the OECD, approximately 70% of development aid is in the form of a transfer from one country to another (Easterly, 2003). Finally, development aid projects do sometimes also occur on a smaller scale by non-governmental organizations.

In an examination of 14 past studies on aid effectiveness, Roodman (2007) summarizes the literature into two schools of thought. First, Chenery and Strout (1966) established the link between aid and growth based on macroeconomic models of aid as additional form of savings externally injected into an economy. Bacha (1990) extended their research to incorporate the government fiscal policy. The findings of this body of research were that aid increases savings and investment which has a positive effect on growth due to capital accumulation.

However, given that aid did not have the empirical results of growth as suggested by the “financing gap” theory, Mosely (1987) and Boone (1994, 1996) argued that aid was ineffective due to an “institution gap” driven by poor political determinants. Following the analysis of institutions and aid, Burnside and Dollar (2000) find that aid boosts growth in good policy environments. Burnside and Dollar note 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.” Subsequent studies have

continued their framework and empirically tested the interaction between policy and aid on the effects of economic growth. These studies have used varying measures of formal institutions, macroeconomic policy outcomes, and political stability (Dalgaard, Hansen and Tarp, 2004; and Easterly, Levine and Roodman, 2004). As Roodman notes, the findings have been sensitive to changes in the measurement of variables and expansion of datasets. While recent literature does form a consensus that institutions and quality policy matter for determining the effectiveness of aid, there is a lack of exactly which policies are best at promoting aid effectiveness.

Most important to note, Easterly et al. follow up the Burnside and Dollar study by extending their dataset to 1997 and re-testing their findings. Easterly et al. “raise new doubts about the effectiveness of aid and suggest that economists and policy makers should be less sanguine about concluding that foreign aid will boost growth in countries with good policies.” They find that the interaction of good policy with aid was not robust to support Burnside and Dollar’s claim. Thus, the overall finding of the “institutions gap” research is that the political elements that drive economic development are important, but there is a lack of a causal mechanism to explain their effectiveness on aid.

My motivation in this research is to provide a more systematic account of how institutions impact aid effectiveness than previously offered in the literature. For example, Burnside and Dollar’s study measure good policy as an index that accounts for “budget surplus, the inflation rate and a measure of the openness of an economy developed” (Easterly, 2003). I argue, following the logic from Glaesar et al. (2004), that these indicators merely measure macroeconomic outcomes and do not truly capture the institutions and politics within a country.

While formal institutions and government policy have been examined, there has been no analysis of the effect of informal institutions on aid. This is a crucial gap in the literature given that

informal institutions such as norms and cultural practices are arguably more influential in dictating human behavior in developing countries (North, 1990). In the absence of a strong, well-functioning state as is the case in developing countries, informal institutions are of utmost importance.

Furthermore, as informal institutions are comprised of the social capital held by individuals, it comprises a micro-level explanation at the individual level of analysis that is absent in the current “institutions gap” literature. Recent literature on development has focused on the role of trust as the central form of social capital. Knack and Zak (2001 and 2003) find that high levels of trust correlate with good macroeconomic outcomes such as higher per capita income, lower income inequality, and high education levels. Given the importance of trust to economic development, it ought to be analyzed specifically within the foreign aid effectiveness literature.

### **Theoretical Construct of Trust as an Informal Institution**

Trust in formal institutions and among individuals is rarely found in societies that are underdeveloped. Generally, poor institutions are a byproduct of historical roots of conflict and corruption (Knack and Zak, 2001). Mistrust prevails in these societies more than trust, and thus exchange is less frequent and gains from exchange are unrealized. Path dependence occurs when social norms originate out of a conflictual and insecure environment and then such norms reinforce mistrust. However, while culture plays an important role in the creation of institutions, it is not permanent and does change over time albeit at a slow pace (North, 1990).

The history of a society matters, but there is a need for an explanation of *how* history matters in the evolution of institutions. The argument put forth by Frank (1988) is that culture does matter a great deal, but by itself it does not explain the variation in economic outcomes. Individuals have biological makeup that encourages exchange for our own self-interest that requires “reciprocal altruism” (Frank,

27, 1988). Culture itself as an explanation is underspecified as it can both foster trust or generate mistrust and opportunism. Rather, the element of culture that can explain these divergent outcomes is the existence of social capital.

Putnam (1994) argues that trust is a form of social capital as “the greater level of trust within a community, the greater likelihood of cooperation.” Social capital is defined as the collective benefits that arise from norms and cultural practices (Putnam, 1994). While the definition of social capital is abstract and broad, for the purpose of this research, it should be considered the central institution outside the state that shapes human behavior as it encompasses cultural practice and commonly held norms within a society. This research will consider the role of trust as a measure that captures the broad notion of social capital.

In terms of transaction costs, trust is central to economic exchange. High trust societies are low transaction cost societies and societies with low levels of trust are high transaction cost societies (Putnam, 1994). Trust has a direct causal effect on exchange; it can make it more or less likely due to its influence on the cost and risk associated with exchange among individuals. For economic development, trust and its associated cost is a central concept in order to shift in development from a reputation-driven, small group societies to more developed societies with nameless, faceless exchange.

Rodgers (2006) outlines three properties of trust: it is a central property of human interaction, it is multidimensional, and it is emergent rather than constructed. Rodgers notes that trust is the fundamental building block of how humans interact. “[P]eople’s sense of trust is embodied – or not – in the unscripted detail of each and every interaction that they have with one another. It is personally and socially constructed... in these moments that people come together. As such, it reflects participants’ past history of interactions... and the current immediacy of the exchange.” Furthermore, the dimensions of trust are pervasive throughout all human interaction involving how people communicate

with one another, the degree to which others are perceived as credible, and whether or not others commitments can be depended upon. Finally, trust is also emergent, which means that it cannot be “designed and built” but rather is a product of complex human interactions over time. “People derive their sense of trust from the detail of the actions, interactions and transactions that comprise everyday life in the organization. The sense they make of their world, including the feeling of trust (or mistrust) that this evokes, emerges from this ongoing interactional process.”

One of the central reasons foreign aid has failed is because it has neglected to analyze informal institutions such as social capital. Attempts to spur development through institutional reform have largely been made through exogenously imposed political reforms and welfare transfers in the form of foreign aid. As, Boettke, Coyne, and Leeson (2008) argue, social capital has a great deal of explanatory power for why transfers of physical capital have not provided sustainable growth. They highlight the shortcoming of the “institutions gap” literature in the respect that good policy and institutions have been equated solely with positive macroeconomic outcomes. Efforts to create good institutions and policies have focused on constitutional reform or reducing corruption through judicial reform as a one-size-fits all solution. However, these reforms impact only the elite members of a society and not the population at-large. These measures are largely top-down and only alter formal institutions while ignoring culture and social norms.

Given that the role of trust is an all encompassing mechanism that can both hinder and spur human exchange, it ought to be thought of as a mirco-level explanation that determines individual economic behavior. The informal institutions within a society that comprise by social capital, as measured in this research by trust, ought to function just as formal institutions such as the enforcement of property rights to lower transaction costs (North, 1990). When transaction costs are lowered, economic exchange possible that otherwise would not take place.



Trust has long been thought of as a central mechanism to economic development, but it has not been observed in the aid effectiveness literature. Arrow (1972) observed that “much of the economic backwardness in the world can be explained by the lack of mutual confidence.” Given the central nature of trust to human interaction, its analysis is important when analyzing economic exchange and specifically, in the case of this research, the effectiveness of foreign development aid. If trust functions to lower transaction costs and spur exchange as theorized here, then trust in high levels ought to make aid more effective. Therefore, this research will synthesize the past institutions literature on aid of Burnside and Dollar and Easterly et al. that focus on formal institutions and policy outcomes with this theoretical construct of trust.

### **Hypotheses**

In order to measure the impact of trust on the effectiveness of foreign aid and its impact on growth, four hypotheses will be tested:

- H1: Positive real growth rate is associated with a high percentage of trust.
- H2: Positive real growth rate is associated with high percentage of trust and aid.
- H3: Positive real growth rate is associated with good institutional quality.
- H3: Positive real growth rate is associated with good policies.

Hypotheses 1 and 2 test the effects of trust on aid effectiveness. H1 will examine the direct effect of trust on growth within the sample of aid recipients. This link has previously been established by Knack and Zak as they associate high levels of trust with higher economic growth. H2 will test the interaction effects of trust and aid on growth. This hypothesis treats trust in the same manner that previous literature measures the interactive effects of policy with development aid. It is hypothesized

that higher levels of trust will make aid more effective in the same manner as good policy. Hypotheses 3 and 4 test previous research by Burnside and Dollar on the role of formal institutions and policy leading to effective aid outcomes.

### **Research Design and Model Specification**

In order to make comparisons to past research, this paper will follow the specification of Burnside and Dollar's original model that tested for the impact of good policy on aid. Given that their research provides for the correct specification for the theory, it is appropriate to use their model as specified with the addition of a variable to account for trust and the interaction of trust with aid. Furthermore, specifying the model in various forms has made comparisons across studies more difficult as mentioned previously that some studies have upheld the finding that good policy benefits aid leading to economic growth and others have found that the policy environment has no effect. Easterly et al. note that "there are more plausible specifications than there are data points in the sample" without clear guidance from the theory of the correct specification.

Following the specification of previous literature, this paper will use an OLS regression model as originally specified by Burnside and Dollar (2000) with the trust variable added to the model. It ought to be noted that while Burnside and Dollar also have a model that focuses on the allocation of aid based upon good government policies by the recipient, this paper will focus solely on the effectiveness of aid on growth when accounting for institutions and policy. Burnside and Dollar also used a two-stage least squared model (2SLS) as they note their two equations may have correlated error-terms. However, this research is solely focused on the effectiveness of aid and only uses one equation with GDP growth as the dependent variable.

The regression model (without control variables listed) that is adapted from Burnside and Dollar to include trust is:

$$\text{GDP GROWTH}_{it} = \beta_0 + \beta_1 \text{TRUST}_{it} + \beta_2 \text{POLICY}_{it} + \beta_3 \text{AID}_{it} + \beta_4 \text{INSTITUTIONS}_{it} + \beta_5 \text{INITIALGDP}_{it} + e_{it}$$

This model measures the effect of the central institutions and aid on real GDP growth for a recipient country of foreign aid,  $i$ , at time period  $t$ . The variables and their respective data sources will be discussed in the following section.

### **Data Sources and Explanation of Variables**

#### **Dependent Variable:**

##### **Real GDP Growth Rate**

As development is the focus of this research, the dependent variable used to measure this construct is real GDP growth rate. The source of this data is the World Bank Development Indicators.

#### **Independent Variables:**

##### **Trust**

To measure trust this research uses the World Values Survey question A165 (World Values Survey, 1981-2008). Survey respondents were coded by country and asked: “Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?” People that answered “most people can be trusted” were coded as a “1” and respondents that answered “can’t be too careful” were coded as a “2”. Answers of “don’t know” and instances with no response given were also recorded.

For the purpose of this research, the individual level responses need to be scaled up to the nation-state level. To do this, individual responses were aggregated and each country for the given survey was measured as a percentage of the respondents that answered “most people can be trusted”. The trust variable is a percentage from zero to one with higher values indicating more overall trust within the country. Survey years were matched with the data from Easterly et al. three year period. For example, a three year aid period from 1997 to 1999 was matched with the survey data for that country for 1998. In the few cases where more than one year of survey data was available for a given period, the survey data was averaged.

### **Policy Index**

Burnside and Dollar (2000) construct a policy variable is constructed by using these three macroeconomic policy variables: i) Budget surplus relative to GDP as a measure of government fiscal policy, ii) a measure of trade openness by Sachs and Warner (1995), and ii) inflation as a measure of government monetary policy. The index is meant to capture the outcomes of good macroeconomic policy. A weighted index is created in the same manner used by Burnside and Dollar. The index is weighed by running the regression model without the aid and trust terms, and then weighting the values to create an indexed value for each country.

As explained by Burnside and Dollar (2000): “Where the constant term is the country’s predicted growth rate for given values of budget surplus, trade openness and the inflation rate assuming that it had the mean values of all other characteristics. The weights are obtained from the OLS regression of these variables on growth. The intuition is that the policy index should weight the policies according to their impact on growth. This will allow to discussing the effectiveness of aid in “good” and “bad” policy environment where “good” and “bad” would have a precise meaning.”

## **Aid**

Aid is measured as an infusion of external investment into a recipient economy. The level of “effective” aid received by a country divided by GDP per capita is measured over three year periods from 1980 to 2000. Aid levels are attained from Easterly, Levine, and Roodman’s (2004) dataset.

## **Institutional Quality**

To account for the quality of formal institutions such as property rights and contract enforcement by the judiciary, Knack and Keefer (1995) construct an institutional quality metric that is used. The data originally used in Burnside and Dollar was the 1980 measurement for each country. This research uses the extension of this measure as provided by Easterly, Levine, and Roodman’s (2004) dataset.

## **Control Variables:**

### **M2/GDP**

M2 is a measurement that captures the money supply. This measure is used as a control for development of a country’s financial system. As explained by Burnside and Dollar, to account for endogeneity, M2 is lagged one time period.

### **Assassinations**

Civil unrest and political instability theoretically may impact the effectiveness of aid. It is well established that political instability has a dampening effect on aid (Feng, Kugler, and Zak, 2000). Thus, it

is appropriate to control for this effect. As consistent with past literature, assassinations data from Banks (2002) is used.

### Regional Dummy Variables

To account for regional effects of Sub-Saharan Africa and East Asia, both regions are assigned dummy variables of “1” when the country is located within the specific region. Sub-Saharan African countries are controlled for to account for the “African exception” hypothesis (Easterly and Levine, 1997). East Asian countries are controlled for due to their fast-paced growth over the time period of the dataset.

### Findings

**TABLE 1: Summary Statistics of Major Variables**

Variable	GDP Growth	Aid	Trust	Policy Index
Mean	1.359	0.276	0.250	1.889
Median	2.177	0.081	0.239	1.280
Minimum	-14.582	-0.048	0.03	-1.366
Maximum	9.27	2.723	0.65	3.587
Standard Deviation	4.883	0.492	0.121	1.250
Observations	345	270	83	345

Over the time period of the sample of cases of development aid as provided by Easterly, Levine, and Roodman’s (2004) from 1981 to 2000, there were 83 cases that had data available with the World Values survey. As shown in Table 1, the percentage of respondents that said they could trust others ranged from 3 percent to 65 percent over the sample.

TABLE 2: OLS Regression of Development Aid Cases (1981-2000)

DV: GDP Growth Per Capita	1	2	3	4
Trust	8.46*	6.87*	8.23*	7.14*
	(4.02)	(3.41)	(3.31)	(3.49)
Aid/GDP * Trust	---	---	4.46	-4.73
			(2.5)	(1.90)
Aid/GDP	1.15	-0.33	0.45	0.22
	(1.47)	(1.09)	(2.75)	(1.68)
Policy Index	---	0.53	---	0.57*
		(0.34)		(0.28)
Budget Surplus	24.20	---	24.17	---
	(19.66)		(19.92)	
Sachs-Warner Openness	0.64	---	0.57	---
	(1.15)		(1.21)	
Inflation	-2.55*	---	-2.59*	---
	(0.96)		(0.99)	
Institutional Quality	0.67*	0.37	0.71*	0.32
	(0.33)	(0.31)	(0.32)	(0.33)
Initial GDP	-0.91	-0.92	-0.99	-0.83
	(0.96)	(0.83)	(0.95)	(0.82)
Assassinations	-0.18	-0.26	-0.19	-0.25
	(0.33)	(0.37)	(0.34)	(0.38)
M2 / GDP	-0.06*	0.00	-0.06	0.00
	(0.03)	(0.02)	(0.03)	(0.02)
Sub-Saharan Africa	-2.25	-1.29	-2.31	-1.23
	(1.63)	(1.61)	(1.62)	(1.66)
East Asia	3.55**	4.44**	3.87**	4.50**
	(1.19)	(1.29)	(1.23)	(1.34)
N	57	83	57	83
R <sup>2</sup>	0.45	0.39	0.61	0.39

Standard Errors are in parentheses.

\* p < 0.05, \*\* p < 0.01

First, before discussing the findings of the regression analysis in Table 2, it should be noted that the sample used in the regression model is reduced by three-quarters when using the adding the trust due to imputation. Furthermore, the missing data is not likely random as it is dependent on the World Values Survey. As some regions within the initial sample are quite poor, prone to political unrest, and

largely underdeveloped, there is likely some selection bias that the trust variable introduces to the model. However, while selection bias does limit the degree to which this study can be generalized across countries, it is the only data readily available to measure what has previously been an unoperationalized theoretical construct.

Four models of the regression are run in as similar specification as possible to Burnside and Dollar's (2000) model. Models 1 and 3 use the three policy variables rather than the policy index to account for the individual effects of a budget surplus, inflation, and economic openness. Models 1 and 2 measure trust without the interaction of aid while Models 3 and 4 assess the impact that trust has with aid effectiveness. This treatment of the trust variable is similar to the policy index in past research.

In all models, the trust variable has a positive and significant effect on economic growth. This confirms H1 and is consistent with the literature on the economic effects of trust. However, the interaction term of (aid \* trust) is insignificant in both models and the sign is negative in Model 4. Thus, H2 cannot be accepted. Furthermore, the negative sign is the opposite direction than hypothesized. This means that within this dataset of this research, the relationship between aid leading to growth in high trust countries cannot be established.

Finally, the data does seem to be sensitive to change as noted by Roodman's (2007) previous analysis on comparing the findings that institutional quality and good policy make aid more effective. Within this sample, H3 on the impact of quality institutions on growth is supported by Models 1 and 3, but is insignificant in Models 2 and 4. Also, the policy index which is tested by H4 is only significant in Model 4 and, of its components tested in Model 1 and 3, only inflation has a negative and significant effect on growth. Thus, the evidence that quality institutions and good policy lead to growth is present, but not statistically strong in this sample.

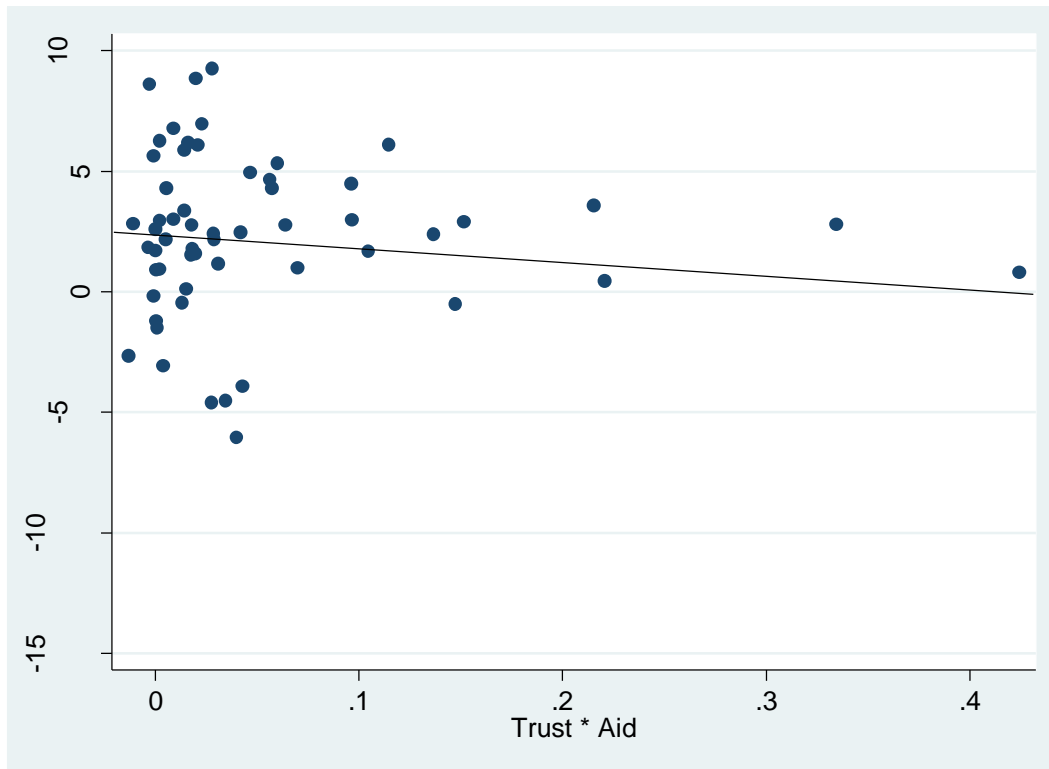


**TABLE 3: Comparison of Results to Burnside and Dollar and Easterly et al.**

<b>DV: GDP Growth Per Capita</b>	<b>BD</b>	<b>ELR</b>	<b>Model 4</b>
Trust	---	---	7.14* (2.04)
Aid/GDP * Trust	---	---	-4.73 (-0.43)
Aid/GDP	-0.02 (1.43)	-0.25 (1.10)	0.22 (1.68)
Policy Index	0.71** (3.63)	1.22** (5.51)	0.57* (1.60)
Institutional Quality	0.69** (3.90)	0.31* (2.53)	0.32 (0.96)
Initial GDP	-0.60 (-1.02)	-0.40 (-1.06)	-0.83 (-1.28)
Assassinations	-0.45 (-1.68)	-0.37 (-1.43)	-0.25 (-0.65)
M2 / GDP	0.01 (0.84)	0.00 (0.16)	0.00 (0.19)
Sub-Saharan Africa	-1.87* (-2.41)	-1.68* (-3.07)	-1.23 (-0.75)
East Asia	1.31* (2.19)	1.18* (2.33)	4.50** (3.34)
N	270	345	83
R <sup>2</sup>	0.39	0.33	0.39

*T-Statistics in parentheses*

Table 3 compares Model 4 of this study with the past results of Burnside and Dollar (BD) and Easterly, Levine, and Roodman (ELR). As noted previously, imputation due to the inclusion of the trust variable results in much smaller sample used in this research. Thus, comparisons should not be made directly with past research as Model 4 does not include a significant portion of the previous sample. However, the results here are mostly consistent with past research though support for the good policy and institutional quality hypotheses is weaker in this study than in past research.

**GRAPH 1: The Effect of Trust on Aid Effectiveness**

Graph 1 displays the interaction effect of trust with aid on real GDP growth. In Models 3 and 4 of the regression analysis, this variable is statistically insignificant and has opposite signs in each model. As the graph shows, this relation between real GDP growth and aid magnified by trust is spurious. The conclusion of this finding is that foreign aid cannot be said to be more effective in countries with high levels of trust.

#### **Implications of Findings: Refocusing Aid Policy**

The findings of this research show that trust is a significant component of economic growth, but that foreign aid by itself does not generate growth. Furthermore, development aid when magnified by trust does little to stimulate growth. As the interaction term with trust and aid is insignificant, the lack

of statistical relationship calls into question whether aid in the form of physical capital transfer is effective spurring economic development.

As shown, trust plays a role both in re-enforcing existing poor institutional outcomes as well as forming the new social capital necessary to create economic development. Though physical capital transfers may be ineffective, this is not to say that nothing can be done about global poverty and the perils associated with it. However, institutional change is necessary in order for development to take place. Institutions can change in two ways: through modifications of formal rules through legislation and governing structure or through the modification of informal rules that occur as norms and culture evolves (Boudreaux and Aligica, 2007).

As Knack and Zak (2001) show, policymakers can foster trust by “strengthen the rule law, reducing inequality, and by facilitating interpersonal understanding.” Policy measures can be taken by increasing education, use of government transfers to reduce income inequality, and enhancing personal freedoms for the individual. Institutions that foster trust will lead to increasing exchange. In turn, institutions create a “virtuous circle” that overcomes path dependencies and evolves cultural norms.

However, in practice such policy prescriptions may prove impossible to implement in underdeveloped countries. Societies where conflict exists are unlikely to have the existing capacity or will of the elites who benefit most from the existing income inequality within their society. Furthermore, even if reforms are able to be implemented by the state, there is the risk of a moral hazard. As Knack and Zak acknowledge but do not examine, government action may create have perverse effects.

Thus, the dilemma remains of how to induce trust that lead to institutional evolution. It is important to remember, as Rodgers (2006) notes, that trust is emergent and cannot be built. However,

Knack and Zak's notion "virtuous circle" provide a framework for thinking of how trust can emerge and result in greater economic exchange.

Norms are able to evolve over time as coordination problems are solved endogenously (Ostrom, 2000). But this process can take centuries for norms to evolve. Thus, building social capital is not merely a one-size-fits-all engineering problem that can be solved by restructuring societies with a given set of reforms. Rather, effective institutional evolution must come from within societies in order to promote harmony within the existing culture.

While creating trust has proven elusive, one tool that may prove effective is education that provides individuals with the skills and knowledge to take advantage of the gains from mutual exchange. New research shows that use random control trials (RCTs) show that norms can be transferred through education and skill-training. As McKenzie and Woodruff (2012) find, "training programs help prospective owners launch new businesses more quickly. Most studies find that existing firm owners implement some of the practices taught in training, but the magnitudes of these improvements in practices are often relatively modest." The training of capital owners of the notion of private property rights and the teaching of business skills allow for reform to be embraced at the level of the individual which causes cultural change necessary to foster trust and bring harmony with formal institutions that protect private property and promote exchange. Skill-training can be exogenously introduced into a society that can punctuate path dependent equilibriums that currently exist. This can be thought of as injecting the seeds of trust into a society, and then allowing the existing culture to evolve.

In the context of this research, trust-building efforts may be a form of aid that ought to be considered in the future. Rather than transferring physical capital to poor countries, aid efforts should focus on building social capital by promoting trust. Foreign aid should be thought of not as a mechanism that transfers savings and physical capital, but rather one that focuses on social capital. The fundamental policy implication of this research is that aid should be refocused from a development

planning perspective toward one that shifts its focus away from formal institutions and more towards the informal institutional environment that all within a society experience day-to-day. Note this is a more nuanced conclusion than the simple “aid does not work” implication of most aid ineffectiveness studies that find similar results as this one. Rather, the notion that trust is a causal mechanism for growth implicates that if trust can be generated where it does not exist, then over time growth will occur as the “virtuous circle” lowers transaction costs.

A final note should be added that humanitarian aid may be an exception to this proposed shift in aid policy. Humanitarian aid, such as relief efforts providing food and shelter in the wake of natural disasters or political conflict, undoubtedly does good in the short term by sustaining lives. However, humanitarian assistance differs from development assistance in that its aims are generally short-term and life persevering rather. Rather, development aid is a form of aid with the intent to create long-term economic benefits to a society. This study focuses solely on development aid and top-down approaches to transfers of physical capital and it not the focus of this study.

### **Future Research: Toward a Theory of Institutional Change**

Thus far, research on the causal link between institutions and economic development are theories of institutional persistence. This study is another contribution to the literature that shows how the persistence of quality institutions has economic benefit. Institutions function to create and support the incentive structure within which exchange takes place. Most prominently, Acemoglu, Johnson, and Robinson (2001) outline the benefit of inclusive institutions for economic growth. However, what is required to understand how development arises is a theory of institutional change. Currently the literature lacks theory of how societies transform from low-trust and growth-detering, extractive institutions to high-trust and growth-inducing institutions.

As North (1993), notes “successful economic growth has been linked with the evolution of representative government and secure property rights with the rule of law; but puzzles abound.” Overall, we understand that both formal governance and informal rules that embody trust are necessary for growth, but we do not understand how to create such an institutional framework where it does not exist; or if the creation of a framework is even feasible. This research has emphasized that informal norms and the degree to which they promote trust among individuals is essential for exchange, and at least as important if not more so than formal institutions. However, more research is needed to generate a theory that accounts for institutional evolution of formal governing mechanisms and informal norms over time.

### **Conclusion**

This research has been an initial attempt to model a previously unoperationalized theoretical construct of trust in the foreign aid effectiveness literature. While overall results are not as statistically strong as preferred, the findings suggest that aid in the form of physical capital is ineffective. Rather, efforts to induce trust through policy and skill-transfer may be more effective forms of aid.

What is needed and lacking in the current literature is an on-the-ground assessment of aid assistance programs and how institutions both formal and informal interact with aid efforts. The current approach of testing aggregate macroeconomic indicators makes for convenient empirical research, but its value to the research may prove to be limited. Informal institutions such as cultural norms, trust, and common practices vary largely on a case-by-case basis. Furthermore, what proves effective in one country may not in another; there is no one-size-fits-all solution to engineer prosperity. Within the field of the political economy of development and aid effectiveness, there exists a gap in the

theory to account for institutional change. I propose future research use both case study and game theory to generate a framework that better accounts for institutional evolution.

Finally, future research should include informal institutions in their analysis despite the issues with missing data as it provides a framework for the micro-foundations of aid effectiveness. While much of the focus has been on formal institutions and macroeconomic policy variables due to the difficulty of measuring abstract notions such as culture, future World Values Surveys and new aid data will allow for the current dataset to be expanded. It is hoped that this will give the results here more statistical power. In the meantime, the theoretical construct of trust should be expanded as it applies to the effectiveness of foreign aid.

## References

- Acemoglu D., S. Johnson and J. A. Robinson (2001), "The colonial origins of comparative development: An empirical investigation", *American Economic Review* 91(5): 1369-1401.
- Banks, A. (2002) "Cross-National Time-Series Data Archive." Databanks International, Bronx, NY.
- Boettke, Peter, Christopher Coyne, and Peter Leeson (2008) "Institutional Stickiness and the New Development Economics." *American Journal of Economics and Sociology*. Vol. 62(2): 331-358.
- Burnside C. and Dollar (2000), "Aid, policies and growth", *American Economic Review* 90(4): 847-868.
- Burnside, C. and D. Dollar. (2004) "Aid, Policies, and Growth: Revisiting the Evidence." Policy Research Working Paper O-2834. World Bank, Washington, DC.
- Easterly W. (2006), "Reliving the 1950s: the big push, poverty traps, and takeoffs in economic development", *Journal of Economic Growth*, 11: 289–318
- Easterly, W. and R. Levine (1997) "Africa's Growth Tragedy: Policies and Ethnic Divisions." *Quarterly Journal of Economics* 112(4): 1203–50.
- Easterly W., R. Levine and D. Roodman (2004), "Aid, policies and growth: A comment", *American Economic Review* 94(3): 774-780.
- Feng, Yi, Jacek Kugler, and Paul Zak (2000) "The Politics of Fertility and Economic Development". *International Studies Quarterly*. 44: 667-693.
- Frank, Robert H. (1988) *Passions Within Reason: The Strategic Role of Emotions*. New York: W.W. Norton & Company
- Glaeser, Edward L., et al. (2004). Do Institutions Cause Growth? *Journal of Economic Growth*. 9 (3). Pp. 271-303.
- Knack, S. & Zak, P. J. (2001). Trust and growth. *The economic journal*, 111(470), 295-321.
- Knack, S., & Zak, P. J. (2003). Building trust: public policy, interpersonal trust, and economic development. *Sup. Ct. Econ. Rev.*, 10, 91.
- McKenzie, David J. and Christopher Woodruff. (2012) "What Are We Learning from Business Training and Entrepreneurship Evaluations Around the Developing World?" World Bank Policy Research Working Paper No. 6202.
- Mosley, P. (1985). The political economy of foreign aid: A model of the market for a public good. *Economic Development and Cultural Change*, 33(2), 373-393.
- North, Douglass C. (1990) *Institutions, Institutional Change, and Economic Performance*. New York: Cambridge University Press.



- North, Douglass C. (1993) "Institutions and Credible Commitment." *Journal of Institutional and Theoretical Economics (JITE)*: 11-23.
- Ostrom, Elinor. (2000) "Collective Action and the Evolution of Social Norms." *Journal of Economic Perspectives*. Vol. 14(3): 137-158.
- Putnam, Robert. (1994) *Making Democracy Work: Civic Traditions in Modern Italy*. Princeton University Press.
- Rodgers, C. (2006). *Informal Coalitions: mastering the hidden dynamics of organizational change*. Palgrave Macmillan.
- Roodman, D. (2007). The anarchy of numbers: aid, development, and cross-country empirics. *The World Bank Economic Review*, 21(2), 255-277.
- Sachs J. (2005), *Investing in Development: A Practical Plan to Achieve the Millennium Development Goals*, UN Millennium Project: New York.
- Sachs, J. D. (2003) "Institutions Don't Rule: Direct Effects of Geography on per Capita Income." Working Paper W9490. National Bureau of Economic Research, Cambridge, MA.
- WORLD VALUES SURVEY (1981-2008) OFFICIAL AGGREGATE v.20090901, 2009. World Values Survey Association (<http://www.wvsevsdb.com/wvs/WVSDData.jsp>). Aggregate File Producer: ASEP/JDS, Madrid.