

# The Effects of Foreign Aid on Human Rights in Dictatorships: An Empirical Study

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## Abstract

This paper will investigate the relationship between foreign aid and repression in dictatorships. Using a theoretical model developed by Ronald Wintrobe, we separate dictators into tin-pots, who seek to maximize their consumption, and totalitarians, who seek to maximize their power. Following this, we use an econometric model to evaluate Wintrobe's prediction that aid can have a positive impact on repression in both tin-pot and totalitarian dictatorships when it is tied to a human rights constraint. We find that aid has no effect on repression for tin-pots and it has a small positive effect for totalitarians. We finish by providing two case studies which attempt to put our results into a social and historical perspective.

## 1. Introduction

Foreign aid has become a topic of importance that consistently attracts attention in the academic world. Aid is generally given to the poorer countries (once referred to as third world countries) of the world to help alleviate the often harsh conditions in those countries, especially for the people living at the bottom of the social ladder. Aid may also be given to countries for political or economic reasons from allies that consider these reasons as strategic interests. There are different flows of aid. When aid is given directly from one country to another it is referred to as bilateral aid, and when it is given from a third party (such as the World Bank or the International Monetary Fund) to a country, it is called multilateral aid.

William Easterly has written extensively on foreign aid, including the common practices of aid distribution. He has been critical of many of the practices of governments and international organizations, arguing that donors split the aid they give between too many countries and too many sectors. Also, he suggests that aid is less effective when it is given to corrupt or autocratic countries, or when given through particular channels which may be ineffective. These two issues are common in current practices (Easterly and Pfutze 2008, 3). Motivated by these findings, we will look into the possibility of ineffective aid. That is, the prospect that aid which was meant to help the citizens of a country may in fact be causing them harm through the loss of civil and political freedoms.

Our paper focuses on bilateral aid rather than on multilateral aid. The first reason for this focus is that it is reasonable to assume that a country may be giving aid for strategic reasons rather than simply humanitarian purposes, and that this aid may have a negative effect on the citizens of a country. On the other hand, multilateral organizations are

viewed as donating less for political reasons and more for humanitarian reasons, so we will not attempt to investigate the effect of such donations. The second reason is that aid given from countries is easily documented; there are a finite number of countries, all of which are easy to retrieve data for. There are a plethora of organizations involved with multilateral aid; deciding which to include and which to exclude, and then accounting for those that do not make funds public information, is beyond the scope of this study.

To begin investigating the issue of aid we need a theoretical foundation from which we will be able to examine how we might expect aid to be used in the recipient countries. Such a model is found in Wintrobe (1990). Section Two provides a summary of some of this model's workings and its implications relevant for our paper. In Section Three we provide a description of the data we have used in order to test some of the elements of Wintrobe's theory, and Section Four describes how this data will be utilized. Section Five presents the results of our findings. To put the result into context, Section Six will look at two case studies, and finally, our conclusions are presented in Section Seven.

## 2. An Economic Theory of Dictatorship

Wintrobe (1990) describes a theoretical model of the behavior in dictatorships which will provide the basis for our empirical analysis. While Wintrobe provides a detailed description of his model and its implications, the following summary should suffice to provide enough of the relevant information required to understand the interpretations of our analysis. Wintrobe describes two ways in which a non-democratic regime (dictatorship) can amass control over the population:

The first instrument involves *political repression*, that is, outlawing opposition to policies. The use of this instrument requires resources to produce repressive legislation, publicize these laws, police their obedience, and punish offenders. Alternatively, the dictator can bind parts of the population to him as loyal supporters through the creation and distribution of political rents. Rents cost resources and generate a deadweight loss to the economy (of course, expenditures on repression are also deadweight losses). The dictator who wishes to remain in office therefore faces a trade-off between these two alternatives. (Wintrobe 1990, 854)

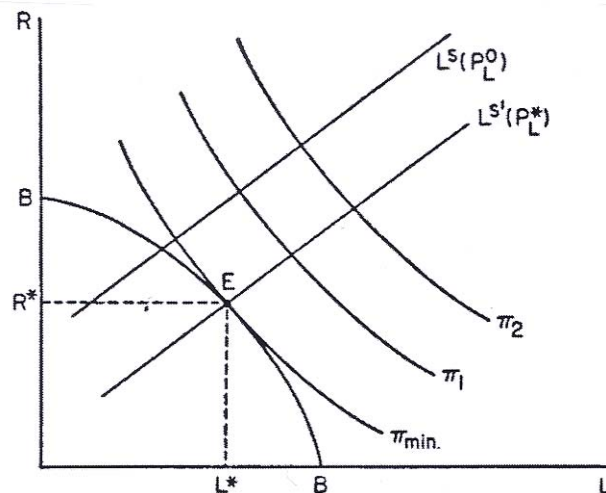
An increase in the level of repression increases the costs of disloyalty. This results in a substitution effect toward increased political loyalty as the level of repression increases. There is also an opposite income effect that results from increasing the level of repression as the total wealth of the citizenry is reduced, leading them to reduce their investments in all normal goods (including political loyalty). Wintrobe reasonably assumes that for relatively low levels of repression the substitution effect will dominate the income effect (linking increases in repression to increases in the aggregate supply of loyalty). As repression increases, the substitution effect will shrink and the income effect will get larger (eventually to a point where increased repression results in a reduction in the aggregate supply of

loyalty). Dictators are assumed to be able to vary their levels of repression in the short run while loyalty is variable only in the long run, since it takes far more time to earn support through trust than it does through coercion. In the case of loyalty, citizens freely choose to support those in power when it is beneficial to them to do so, whereas, with repression, it is costly not to do so. Wintrobe specifies two extreme cases of dictatorial regimes: “a “tin-pot” dictatorship, in which the dictator wishes only to minimize the costs of remaining in power in order to collect the fruits of office, and a “totalitarian” dictatorship, whose leader maximizes power over the population” (Wintrobe 1990, 849).

### ***Tin-pots***

Tin-pots are regimes in which “the ruling government does not disturb the traditional way of life of the people and represses them only to the modest extent necessary to stay in office and collect the fruits of monopolizing political power (Mercedes-Benzes, palaces, Swiss bank accounts, etc.)” (Wintrobe 1990, 849). Figure 1 illustrates a tin-pot regime’s equilibrium levels of repression and loyalty.

**Figure 1**



**(Source: Wintrobe 1990, 855)**

The only binding constraint for such a leader is that he must maintain power in order to continue consuming, and therefore his goal becomes maintaining the minimum level of power (represented by the isopower line  $\pi_{\min}$  in Figure 1) necessary to do so.

Wintrobe also describes the foreign policy implications that result from his model. He states that if the goal of aid were to promote freedom, it would have to be tied to a long-term human rights constraint that does not allow the aid to be spent on consumption. A

properly constructed constraint would have to provide the tin-pot dictator with the incentive to invest in loyalty in order to reduce repression in the long-term. If the dictator receives a benefit from this aid, and if he believes that it will be lost if the level of repression in his country increases or remains the same, then the level of freedom would be expected to increase. A final scenario involves any other nation's foreign policy that improves the welfare of the citizenry in the tin-pot nation. If the dictator is able to take some of the credit for this improvement, then the citizenry will supply him with more loyalty. Wintrobe explains how this will result in a lower level of repression (and therefore, higher level of freedom) since, at their current levels, loyalty is relatively cheaper than repression, resulting in substitution towards loyalty.

### ***Totalitarians***

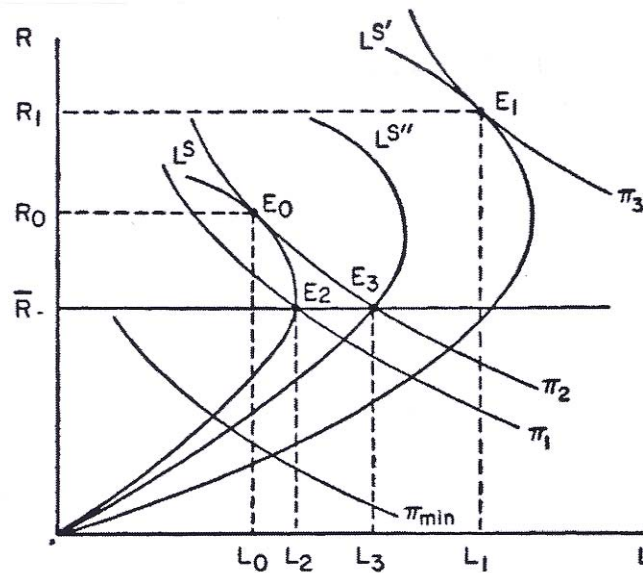
In contrast to tin-pots, a “totalitarian” dictatorship is characterized by massive government intervention into the economic and social lives of the citizenry, motivated by Utopian goals of one kind or another and exemplified by communist dictatorships, Nazi Germany, and possibly contemporary Iran” (Wintrobe 1990, 849). In the model, totalitarians are not restricted in their ability to accumulate resources, as they are free to tax as much as they please, or even to confiscate public resources. Rather, totalitarians are constrained by the diminishing supply of loyalty (represented by the backward bending portion of  $L^s$  in Figure 2). They are expected to maximize power by investing in repression and loyalty, increasing the aggregate supply of loyalty until the point at which any further increase in either repression or loyalty would result in a decrease in aggregate loyalty, and therefore a decrease in power. Figure 2 illustrates a totalitarian equilibrium.

Wintrobe predicts that any foreign policy that improves economic welfare in a totalitarian regime, and for which the dictator can claim credit, will result in an increased supply of loyalty to the dictator (represented by a shift from  $L^s$  to  $L^{s'}$  in Figure 2). This increased supply of loyalty allows the dictator to further increase power (from  $\pi_1$  to  $\pi_3$ ) by increasing investments in both loyalty and repression, resulting in less expected freedom (with the equilibrium shifting from  $E_0$  to  $E_1$ ). Alternatively, if the totalitarian were to believe that lowering repression would be necessary in order to continue receiving aid (such as with a tied human rights constraint), this may result in improved freedom (modeled by equilibrium at  $E_3$ ). If the aid were discontinued, however, and if the dictator was able to avoid taking the blame for this, it would likely cause a ‘rally round the flag effect’ in which the citizens would blame the donor nations and respond by providing more loyalty to the dictator (again, represented by a shift from  $L^s$  to  $L^{s'}$ ). The totalitarian would then be free of any restrictions on freedom and would be expected to increase repression once again.

### ***The Model's Predictions***

With Wintrobe's model in mind, we now consider its predictions for our real-world analysis. In the case of a tin-pot there are, in all likelihood, no humanitarian restrictions tied to foreign aid that affect the recipient nations. Any tin-pot dictator who

Figure 2



(Source: Wintrobe 1990, 863)

is at risk of being overthrown (below the minimum level of power,  $\pi_{\min}$  in Figure 1) would immediately use the aid to increase power (through repression, since loyalty can only be purchased in the long run). In general, however, it can be expected that most leaders do not face an immediate risk of being deposed. Wintrobe's model predicts that such a tin-pot dictator would direct the full sum of aid toward personal consumption; therefore, aid should have no impact on freedom in the tin-pot regime. In the case of a totalitarian, the model also predicts no effect of aid on freedom. The explanation for this is that the totalitarian should already be at the optimal levels of repression and loyalty that allow the dictator to exert the highest level of power possible over the population.

### 3. Data

The data utilized in the study comes from a variety of sources. The data for real GDP growth (PGDPA, NGDPA) comes from the Penn World Tables. Data for primary schooling levels and secondary schooling levels (PRISCH, SECSCCH) comes from two different sources. The values for 1960 to 1996 are from William Easterly's *The Lost Decades Social Indicators and Fixed Factors* (2001) compiled for the World Bank. For 1997 to 2004, the data comes from the World Bank Group's World Development Indicators (2007). Both primary and secondary schooling levels are presented in terms of percentage gross enrollments, which are the total enrollments (regardless of age) as a percentage of the age group officially corresponding to the respective level of schooling in the population. Primary education refers to schooling which provides basic levels of reading, writing, and math, while secondary education refers to lifelong learning and human development. The OPEC value is a dummy variable where zero represents years

that correspond to non-OPEC membership and one represents years that correspond to membership in OPEC. One of the more important data sets, aid values (AID), comes from the Organization for Economic Co-operation and Development (OECD), which covers the years 1960 to 2004. The aid data compiles all bilateral aid given to aid-receiving countries, and excludes multilateral aid from international organizations or NGOs. The data, unfortunately, does not distinguish between different types of aid, restricting the depth of our analysis. To ensure that inflation does not bias the results, all aid data is reported in 2006 U.S. dollars. To measure freedom in a country, we use Freedom House's *Freedom in the World* (2008) report, which measures civil liberties and political freedom in a country. Both of these values are measured on a scale of one to seven, with one being the freest and seven being least free; these are subjective indices. While this may appear, *prima facie*, to create a bias, there are many previous studies, including Schoultz (1981) and Stohl, Carleton, and Johnson (1984), which justify the use of the Freedom House's data, as they conclude that it is comparable to data compiled from other organizations and has no evidence of discernable bias. To use this data more effectively, we use a transformation supplied by Islam and Winer (2004) that turns the two variables into a single digit from zero to one. The new variable, called freedom (FR) is calculated as being equal to:

$$\{14 - (\text{Civil Liberties} + \text{Political Rights})\}/12$$

Bounding the variable between zero and one allows us to conduct more appropriate testing. Another benefit of this transformation is that, since zero will represent an absolute totalitarian and one will represent the ultimate democracy, the corresponding coefficients resulting from our empirical analysis will be interpreted intuitively. That is, positive coefficients contribute to a more democratic society and negative coefficients contribute to a more despotic society.

#### 4. Model

Our modeling techniques are based largely on Islam and Winer (2004). In this paper, the authors investigate the relationship between real GDP growth and freedom in a given country. As our investigation focuses on the effect of foreign aid on freedom in a country, we have augmented the original model to include data for foreign aid. Written in equation form, the model is as follows:

$$FR_t = \beta_0 + \beta_1 PGDPA_t + \beta_2 NGDPA_t + \beta_3 SECSCH_t + \beta_4 PRISCH_t + \beta_5 AID_{t-n} + \beta_6 OPEC_t + v_t$$

where

FR = the amount of freedom, between zero and one.

PGDPA = the five year average of the positive values of real GDP growth per capita; it is equal to zero when the growth rate is negative for all years.



NGDPA	=	the five year average of the absolute values of the negative values of real GDP growth per capita; it is equal to zero when the growth rate is positive for all years.
SECSCH	=	net enrollment in secondary education.
PRISCH	=	net enrollment in primary education.
AID	=	foreign aid given to country (measured in U.S. dollars); lags are used in this variable.
OPEC	=	dummy variable; 1 indicates membership in OPEC, 0 otherwise.
T	=	time period; from 1972-2004.
N	=	number of periods lagged behind the time period being measured, where $n = 0, 1, 2, 3, 4, 5$ (we feel that further lags would be excessive).
$v$	=	error term.

We have chosen to leave out some of the dummy variables that Islam and Winer (2004) used for both practical and feasibility reasons. First, the authors included a dummy for OECD membership. It is impractical for us to use this term in our research due to the nature of foreign aid. There are few, if any, countries that are both receiving aid and are members of the OECD; instead it is aid-donating countries (not measured in the study) that are members of this organization. Secondly, the authors included a dummy for whether or not a country was allied with the Soviet Union. The fact that our research advances well beyond the collapse of the USSR leads us to believe that it would be too difficult to include such a dummy in our study.

Five-year averages of real GDP growth per capita were chosen in an attempt to reduce the influence of large swings, or single years which may otherwise appear to be outliers. Using these averages helps in decreasing the effect of short term macroeconomic fluctuations, as well as in tempering the impact of declines in positive growth rates, implying that bad economic performance is only associated with negative growth rates. Another result of this choice is that each term contains only positive rates or negative rates, but never both (Islam and Winer, 2004).

We have also included variables that explain the role of education, following Islam and Winer (2004), who reference previous relevant studies that recommend this inclusion. For example, Lipset (1959, 79) notes that all the “relevant studies indicate that education is far more significant [at influencing democratic values] than income or occupation.” He also points out that education has been a force that hinders anti-democratic forces. For example, post-war data from Germany “indicates clearly that higher education is linked to the rejection of strong-man and one-party government” (Lipset 1959, 79). Following

Lott (1999), we separate primary from secondary education due to the possibility that a dictator, or more specifically a totalitarian, may use early education as a form of indoctrination. Should this occur, the totalitarian may save resources that normally would be put towards loyalty in the theoretical model and use these resources to increase repression, resulting in less freedom.<sup>1</sup>

Lastly, there is a noteworthy issue concerning the model regarding the error term. There is a possibility that  $v_t$  could be cross-sectionally heteroskedastic, even though real GDP growth terms are measured per capita in order to account for population differences in countries.<sup>2</sup>

## 5. Results

First we will confront caveats we encountered during our study. There is the question in the results of where to stop classifying dictatorships as tin-pots and to begin classifying them as totalitarians. That is, a cutoff point is expected in the classification of dictatorships. We follow the methods of Islam and Winer (2004), who chose to use the values of the sum of civil liberties and political rights between 5 and 12 as tin-pots, and those between 13 and 14 as totalitarians. Further in our study, we adjust these classifications to see if any differences come about. A second issue is how to classify these regimes throughout time, since there are changes in the sum of civil liberties and political rights as time progresses, and moving regimes back and forth between classifications would skew the results.

To tackle these potential pitfalls, we have used 1988 as the base year in which countries are assigned a classification as tin-pots or totalitarian; that label will remain with them for the entire study. This follows from Islam and Winer (2004) as well, who use this year since it just precedes the fall of the Soviet Union and the beginning of a new world order in which numerous countries changed from oppressive regimes to more open societies. If a country is on the cusp between being a tin-pot or totalitarian, and narrowly moves into the other category, is it still as repressive as before? One must keep in mind that, since the Freedom House data is somewhat subjective, changing the classification of a country requires just as strong an assumption about the change in repression as it does to keep the country in its current classification, assuming that there is no bias in moving a country one way rather than the other. It should also be noted that a model that is able to take these types of regime switches into account is not provided by Wintrobe, and although taking these switches into consideration may seem opportune for this type of study, there are too many complexities involved in each individual case (Islam and Winer 2004, 297). We believe that frequent reclassification is beyond the scope of our paper, just as Islam and Winer (2004) state in their paper.

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<sup>1</sup> See page 311 in Islam and Winer (2004).

<sup>2</sup> See page 298 in Islam and Winer (2004).



### ***Ordinary Least Squares Method***

We will now turn to a static model tested using the ordinary least squares method, whose results are recorded in Table 1. We begin by testing freedom as the dependent variable in both tin-pots and totalitarian dictatorships, and introduce new variables to be controlled for at each step. In tin-pots, we can see that the amount of foreign aid appeared to have no discernable effect on the amount of freedom in a country, as the results were insignificant at a 5% and 10% level. This is consistent with the theoretical model that predicts that in the absence of a human rights constraint, a tin-pot would simply spend all foreign aid on personal consumption (Wintrobe 1990, 868). Turning to the case of totalitarian regimes, the model reports that foreign aid has a small, yet statistically significant effect (at the 5% level). This coefficient can be interpreted to mean that a \$1 million USD increase in aid flows would increase FR by only .0000523. Although we did not predict any effect of aid on freedom using the theoretical model, as mentioned in section 2.2., this result might indicate that the dictator receives some benefit from receiving aid which he believes would be discontinued if repression did not appear to decrease. It is also worthy to note that our inclusion of aid data produces results that are consistent with the findings in Islam and Winer (2004).

### ***Fixed Effects Method***

Using the variables in the final columns of Table 1, we conduct a fixed-effects estimation of the model, which is summarized in Table 2. The fixed-effect model removes unobserved error terms which are constant over time, allowing them to be arbitrarily correlated with any of the explanatory variables without a resulting bias (Wooldridge 2006, 482). The fixed-effects model is also much more convincing when using aggregated data for policy analysis than the random-effects model (Wooldridge 2006, 493). The results are similar to those from the OLS method from above. In the case of tin-pots, there is no discernable effect from foreign aid at either the 5% or 10% level. But once again, in the totalitarian case there is a very small, yet statistically significant effect (at the 5% level) for foreign aid flowing into a country. This coefficient can be interpreted to mean that a \$1 million USD increase in aid flows would increase FR by only .000082. Both of these results are consistent with those from the previous section, and could suggest that totalitarians have reason to believe that future aid is dependant on appearing to reduce repression (this does not apply to tin-pots). A possible explanation is that totalitarian regimes are the most repressive, and that human rights initiatives likely focus more of their attention on those countries which define the extremes of repression.

### ***Incorporating Lagged Aid Variables***

Having examined a static model, we will turn to a dynamic model where we have lagged the aid variable in order to examine whether there are dynamic effects of aid on freedom. Both of the dynamic models use a least squares regression. The first model is summarized in Table 3 and examines tin-pots. All of the original variables are included with the addition of five aid variables, representing one to five years of lagged aid. We can see that while most of the results for the other variables are statistically significant, at

no point are the aid variables significant over the five year period. In fact, the results move from a slightly negative value to a slightly positive value over time, but the t-statistic tends to decrease for the first three years and then jumps in the fifth year, though not enough to be a significant value. In the case of totalitarians, summarized in table 4, one can see that the aid variable is statistically significant in each period. It in fact grows in value over time, as does the strength of the t-statistic, with the largest t-statistic attained when aid is lagged for four years. The tin-pot result follows the prediction that, in the absence of an incentive to reduce repression, any foreign aid may simply be spent on the dictator's personal consumption, and not on increasing freedom (Wintrobe 1990, 868). The totalitarian result would seem to indicate that foreign aid can increase freedom in this type of dictatorship. The coefficient on aid lagged five years is .0002506. To put this into perspective, it would require \$332 million USD in aid flows given in year one to increase FR by 0.08333 by year five (enough to move a dictator on the cusp of the totalitarian label to being labeled a tin-pot). The increasing effect of aid as it is lagged may provide evidence that it would be possible to use a long-term binding human rights constraint when giving aid to totalitarian oriented regimes.

Another interesting result that can be seen in Tables 3 and 4 is the effect that OPEC membership appears to have on freedom. Tin-pot regimes who are members of OPEC appear to have lower freedom than tin-pots who are not members. The result is statistically significant and is also fairly large in magnitude and negative in value compared to all other controlling variables. Totalitarian regimes that are members of OPEC do not appear to have significantly lower freedoms than totalitarian regimes who are not OPEC members. Even though these results show that there is no incentive to donate to a tin-pot in hopes of reducing repression, one still observes large amounts of aid flowing into such countries. One possible explanation for this is that donating countries may not find it as morally repugnant to send aid to a tin-pot country instead of to a totalitarian when there is no hope of reducing repression, or when this is not the primary objective of the donor countries. In contrast, when donor countries do aim to reduce repression, they are likely more concerned with improving conditions for the worst of the worst rather than helping those in only 'mildly' repressive regimes.

### ***Evaluating the Classification of Tin-pots and Totalitarians***

All of the results above have examined tin-pots and totalitarians with an arbitrary division of civil liberties plus political freedoms of 5-12 as tin-pots and 13-14 as totalitarians. We feel it is appropriate to alter these divisions and examine the new results. To do this we once again arbitrarily chose a new division with the values of 5-10 and 11-14 to represent tin-pots and totalitarians respectively. The new results of OLS estimation are summarized in Table 5. The largest change in the results is that, for totalitarians, there is no longer a significant effect of foreign aid on freedom. The result for tin-pots (with regard to human aid) remains statistically insignificant as it was before, although a stronger t-statistic is returned, as well as a larger coefficient for the aid variable. Another interesting result is that OPEC membership seems to have an even larger negative effect on freedom in tin-pots than in the previous specification, and OPEC membership now has a negative and significant effect on freedom in totalitarian regimes. It is also noteworthy

that, resulting from this change in division under the new specification, a lower value of  $R^2$  is returned for both tin-pots and totalitarians.

Extending the analysis to lagged data (summarized in Tables 6 and 7), we find that aid has no effect on freedom at the 5% significance level, both for tin-pots and for totalitarians. At the 10% level, aid does have a significant negative effect in the case of tin-pots when lagged for two or three years, suggesting that increasing aid actually dynamically decreases freedom, whereas there was no significant change in freedom due to aid in the totalitarian case.

Following the results from the static and dynamic models, it seems that the first division of tin-pots and totalitarians (5-12 and 13-14 respectively) may be more appropriate. Not only did the first division fit Wintrobe's model much more appropriately, but in every case the first division had a higher value of  $R^2$ . Also, increasing the range of totalitarians leads to the inclusion of many countries to which one generally would not give this label. To conclude, although seemingly arbitrary at first, the first division is more suitable for our study.

### ***Causality***

Even though we have seen that aid has an effect on freedom in some cases, it could be argued that changes in freedom may, in fact, be affecting aid. To examine this issue we need to make use of a model that examines causality potentially going in both directions. This can be done using a vector autoregressive (VAR) model. This model incorporates lags of both freedom and aid to check whether each variable affects current values of the other as well as present values of itself. The results are summarized in Table 8, with an accompanying formula. From the results we can see that when controlling variables are included, aid is confirmed as having an effect on freedom, while freedom does not appear to have an effect on aid. Even in the absence of any controlling variables (Table 8), aid has a significant effect on freedom, while no effect on aid is detected when varying levels of freedom.

## **6. Case Studies**

When examining the results from each of the models, one can see that the predictive power of each of the models is relatively low. Each model has an  $R^2$  of less than 0.2, and though the model did predict many of the variables to be statistically significant, this may cause one to doubt the usefulness of our study. Until this point, our focus has simply been an examination of quantitative data without investigating some of the other qualitative human factors which are behind any dictatorship. In order to examine our results from a more social viewpoint, we shall now look at two case studies: one tin-pot and one totalitarian. This will provide a human face to the study, and allow us to investigate why we may have attained the results we did.

## ***Afghanistan***

In our study Afghanistan was classified as a totalitarian style government, in accordance with the aforementioned method of classification. Afghanistan's history is rife with violence and civil war. During the 1980s millions were killed during the Soviet invasion of the country. Following the Soviet withdrawal in 1989, war broke out between two rival factions within the country, the Mujahedeen and the Taliban. Thousands of citizens lost their lives in these conflicts, and there was a notable absence of order in the country. In 1996 the Taliban took control of the government and remained in power for the rest of the 1990s. The Taliban was known for following strict Islamic law and ruled as such (BBC News, 21 November 2008). Accordingly, throughout this period Afghanistan received a rating of 'not free' in Freedom House's Index. During this period there were also very little aid flows into the country since most of the Western world, the primary donors of aid, terminated their aid inflows after the Soviet invasion (Goodhand 2002, 842).

Recall that our study found a small but significant effect of aid on freedom in totalitarian style governments. In the history of Afghanistan mentioned so far, the country had very little aid coming in and was under the control of highly repressive regimes. A big change occurred at the beginning of the 21<sup>st</sup> century. Immediately following the attacks of September 11, 2001, Afghanistan was in a very precarious position, still being ruled by the Taliban and facing a U.S.-lead invasion if they did not notify the United States of Osama bin Laden's whereabouts. Since they did not, the country was invaded and the repressive Taliban regime was forcefully removed by the U.S. (BBC News, November 21, 2008). In addition, aid inflows to the country increased dramatically during this time period, not just in 2001, but also in every year after that.

By simply performing a statistical analysis, it would be perceived that aid increases lead to a decrease in repression in Afghanistan. Though the timing of both events is accurate and aid increases did precede a fall in repression, it is unlikely that aid, in fact, caused this change. The history involved in these events would indicate that it was the forceful removal of a repressive regime and the presence of a massive foreign military that, in fact, caused the drop in repression. These lower levels of repression have since been maintained by the new regime installed by the U.S. and backed by the U.S. military. As Goodhand notes in his article, in cases like this, where repression is so high, "aid is unlikely to be a leading edge in a peace process and is usually the 'junior partner' in relation to other policy instruments" (Goodhand 2002, 841).

While aid may be a factor that accompanies a lowering of repression, it may not be the cause of that drop in repression, even when appropriately preceding it, as this study on Afghanistan has noted. This suggests that in many cases it may be that there are immeasurable factors which are responsible for the change, and which can only be evaluated on a case by case basis, since each country faces different political situations.

## ***The Philippines***

A good study for the case of tin-pots is the Philippines, specifically when it was under the rule of Ferdinand Marcos. Recall that we classified countries according to their status in 1988. This is a few years after Marcos' rule, which ended in 1986, when he was replaced by democratically elected Corazon Aquino. Even though some may have considered the country to be democratic at this point, the Freedom House index still rated the Philippines as a tin-pot due to the fact that institutions were not yet democratized and social freedoms were not yet generally recognized (Overholt 1986, 1163).

During time that he was ruling the Philippines, Marcos served as a perfect example of the many tin-pots from around the world. He seemed to have been concerned with personal consumption and enhancing his position more than anything else, almost exactly what Wintrobe describes a tin-pot to be (Wintrobe 1990, 849). Recall that our study found no statistically significant effect of foreign aid on the level of repression in a tin-pot dictatorship, even when several time lags were taken into account. Marcos' rule can be seen to parallel our results based on our findings. Aid to the Philippines was fairly consistent across time and there was very little change (if any at all) in repression during this time. One of the reasons for this was simply that the entire government was tied up in corruption and red tape (Overholt 1986, 1143). Another likely reason is that aid, whether food, humanitarian, or any other aid (as stated earlier, our study did not differentiate among types of aid), was not what Marcos wanted; he would not have exchanged his power, and thus consumption, simply for seeing his people being supplied with aid.

It is well known that Marcos was accustomed to living a highly lavish lifestyle that included owning several Mercedes Benzes and large palaces, and that also allowed his wife to spend wildly. Imelda Marcos was not only looked after well, but was also granted the power by her husband to control public spending and the right to seize public property, if she wished, with no recourse (Overholt 1986, 1148). Another interesting revelation about Imelda Marcos, discovered after she fled the country when her husband was removed from power, was her vast collection of shoes (Morrow, 31 March 1986). While many in the third world might expect their leaders to spend on themselves, the Marcos' exceeded what many would have found to be an acceptable evil. Expenditure by the couple was so excessive that it is thought to have deepened the financial crisis taking place under Marcos' rule (Overholt 1986, 1154).

The aforementioned traits of the Marcos are common to many tin-pots, and even though spending preferences and forms of aid vary from country to country, aid is not likely to affect repression since the tin-pot is expected to use aid to fund his own habits. In some cases, if the goal of a donor was to reduce repression in a tin-pot, they could conceivably simply donate aid in the form of cash, which could be used to satiate the tin-pot's spending needs, in exchange for the dictator's promise to increase his nation's freedom. Or better yet, send these tin-pots lavish goods (shoes perhaps?) and tie their continued donations to a human rights constraint.

The Philippines under the rule of Marcos exemplifies a case for which we would not expect to find a discernable effect of aid on repression. It also exemplifies, however, a situation in which one could conceivably conclude that aid could have been structured in such a way as to affect freedom in the Philippines.

## 7. Conclusion

Our paper began by looking at Wintrobe's theoretical model of dictatorship in order to provide a basis for further study. This model separates dictators into two types – tin-pots and totalitarians, each of which has unique traits. We then moved on to describe the data that we had collected and its relevance for our study. In order to turn this data into meaningful results, we based our statistical analysis on Islam and Winer's (2004) paper. Proceeding with our study we found some interesting results.

First, looking at an OLS model we found that aid had no effect on repression in tin-pots, but did have a significant positive effect on repression in totalitarians. We then turned to a fixed-effects estimation in order to remove time-constant error terms, and still found no effect of aid on repression in tin-pots and a significantly positive effect of aid on repression in totalitarians.

We then investigated the effects of aid on repression with five lags of the aid variable. In the tin-pot case, there was no effect over any of the five years, and in the totalitarian case, there was a significant effect for each of the five years. We then altered the constraints in our model to change the division between tin-pots and totalitarians. We found that our original division returned more appropriate results, and that the newer division seemed too broad, having an unrealistically large number of countries labeled as totalitarians.

Next we examined causality – whether aid affects repression or repression affects aid. To do this, we used a vector autoregressive model where we aggregated all of our data and found that aid was having a significant effect on repression, but not vice versa. Finally, we concluded with two case studies to give our statistical results a more social perspective.

Throughout our analysis we attempted to establish a relationship between freedom and aid. There are some realities, however, that we feel should be addressed. Any study attempting to address issues of aid faces a major hurdle. This fact is summed up well by William Easterly and Tobias Pfutze in the conclusion of their paper, *Where Does the Money Go? Best and Worst Practices in Foreign Aid*:

The aid effort is remarkably splintered into many small efforts across all dimensions—number of donors giving aid, number of countries receiving aid from each donor, and number of sectors in which each donor operates. A lot of aid still goes to corrupt and autocratic countries and to countries other than those with the lowest incomes. Aid tying, the use of food aid-in-kind, and the heavy use of technical assistance persist... despite



decades of complaints about these channels being ineffective. (Easterly and Pfutze 2008, 23)

Thus, the multidimensionality of aid made it quite difficult to analyze its effects as thoroughly as we might have liked.

Following the difficulties with utilizing aid in our analysis, there are issues with our results that are also worthy of mention. Although we were able to find some statistically significant relationships, these findings must be put into a wider perspective. As mentioned earlier, the predictive power of our model was quite low, as were the coefficients relating to aid. Therefore, even though we obtained some statistically significant results, they are, unfortunately, relatively insignificant in comparison to what would be required to allow us to make concrete inferences about the very complicated relationship between aid and other variables, such as freedom. Finally, we still believe that our work provides a meaningful investigation into the relationship between aid and repression. Our hope is that our research contributes to a deeper understanding of the real and potential impacts that aid might have on freedom.

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Note that  $n$  in the tables refers to the number of observations, in country years (ie. the number of countries multiplied by the number of years for which there were relevant observations)

Table 1: Static Model. Ordinary Least Squares Method. Dependent Variable is FR.

	Tinpots				Totalitarians			
	Civil Liberties + Political Freedom = (5-12)				Civil Liberties + Political Freedom = (13-14)			
Constant	.4417152* (57.23)	.2623358* (11.14)	.2404307* (10.37)	.2415569* (10.09)	.176911* (15.13)	.1526232* (5.88)	.1513828* (5.84)	.1375455* (5.18)
PGDPA	-.0020383 (-1.47)	-.0034778 (-1.85)	-.0013583 (-0.73)	-.0017779 (-0.95)	-.00222411 (-1.64)	-.0037917* (-2.09)	-.0031867 (-1.73)	-.0031768 (-1.73)
NGDPA	-.0193125* (-9.61)	-.0165366* (-5.65)	-.0086837* (-2.89)	-.0100461* (-3.27)	-.0080617* (-3.21)	-.0085372* (2.62)	-.0064148 (-1.84)	-.0073829* (-2.11)
SECSCH		.001798* (4.17)	.0022807* (8.08)	.0022746* (7.85)		-.0030269* (-5.14)	-.0027946* (-4.63)	-.0026029* (-4.29)
PRISCH		.0011827* (6.36)	.0011905* (4.30)	.0012434* (4.44)		.0016485* (3.89)	.0015632* (3.67)	.0015228* (3.59)
OPEC			-.1703819* (-8.56)	-.1584283* (-7.61)			-.0538449 (-1.64)	-.0454946 (-1.38)
AID				-.0000004 (-0.35)				.0000523* (2.18)
n	2433	1611	1611	1578	622	363	363	363
R <sup>2</sup>	0.0358	0.1050	0.1436	0.1441	0.0175	0.0908	0.0951	0.1045

Note: t-statistics are in brackets. R<sup>2</sup> is adjusted.

\* indicates statistical significance at the 5% level.

Table 2: Static Model. Fixed Effects Estimation. Dependent Variable is FR.

	Tinpots Civil Liberties + Political Freedom = (5-12)	Totalitarians Civil Liberties + Political Freedom = (13-14)
Constant	.284366* (7.91)	-0.959196 (-1.92)
PGDPA	.001673 (1.09)	.0039696 (1.43)
NGDPA	.000233 (0.09)	.0020303 (0.56)
SECSCH	.0019737* (5.30)	-.0011041 (-0.85)
PRISCH	.0005224 (1.38)	.0032129* (4.83)
OPEC	-.171715 (-1.03)	Dropped
AID	.0000202 (1.30)	.000082* (3.43)
n	1578	363
R <sup>2</sup>	0.1884	0.0332

Note: t-statistics are in brackets. R<sup>2</sup> is adjusted.

\* indicates statistical significance at the 5% level.

Table 3: Dynamic Model. Least Squares Method. Dependent Variable is FR.

	Tinpot Civil Liberties + Political Freedoms = (5-12)				
Constant	.2403441* (10.02)	.2408132* (10.03)	.2396355* (9.96)	.238268* (9.91)	.2342818* (9.74)
PGDPA	-.0017518 (-0.94)	-.0016651 (-0.89)	-.0015197 (-0.81)	-.0013066 (-0.70)	-.0011847 (-0.63)
NGDPA	-.0099225* (-3.22)	-.0099955* (-3.23)	.0031083* (-3.18)	-.0095736* (-3.07)	-.0091547* (-2.94)
SECSCH	.0023017* (7.94)	.0023147* (7.99)	.0022986* (7.95)	.0022793* (7.91)	.0022862* (7.97)
PRISCH	.0012417* (4.41)	.0012365* (4.40)	.0012417* (4.41)	.0012452* (4.43)	.0012575* (4.48)
OPEC	-.1588657* (-7.63)	-.1592469* (-7.64)	-.1620228* (-7.77)	-.1650908* (-7.97)	-.1686752* (-8.23)
AID <sub>t-1</sub>	-.00000028 (-0.24)				
AID <sub>t-2</sub>		-.00000037 (-0.33)			
AID <sub>t-3</sub>			-.00000013 (-0.11)		
AID <sub>t-4</sub>				.00000016 (0.14)	
AID <sub>t-5</sub>					.00000081 (0.70)
n	1577	1576	1575	1575	1578
R <sup>2</sup>	0.1450	0.1456	0.1454	0.1447	0.1469

Note: t-statistics are in brackets. R<sup>2</sup> is adjusted.

\* indicates statistical significance at the 5% level.



Table 4: Dynamic Model. Least Squares Method. Dependent Variable is FR.

	Totalitarian Civil Liberties + Political Freedoms = (13-14)				
Constant	.1110154* (3.95)	.1029047* (3.68)	.0998696* (3.62)	.0979666* (3.62)	.097878* (3.60)
PGDPA	-.0029139 (-1.60)	-.0029306 (-1.62)	-.0031325 (-1.74)	-.0033895 (-1.90)	-.0032453 (-1.82)
NGDPA	-.0075297* (-2.18)	-.0077013* (-2.24)	-.0086559* (-2.52)	-.0098965* (-2.87)	-.0085322* (-2.50)
SECSCH	-.0023168* (-3.79)	-.0022102* (-3.64)	-.0021646* (-3.58)	-.0021169* (-3.54)	-.0021449* (-3.58)
PRISCH	.0014715* (3.50)	.0014635* (3.51)	.0014697* (3.54)	.0014704* (3.57)	.0014527* (3.52)
OPEC	-.0309086 (-0.94)	-.0245551 (-0.75)	-.0327646 (-0.62)	-.0166595 (-0.51)	-.0201613 (-0.62)
AID <sub>t-1</sub>	.0001527* (3.43)				
AID <sub>t-2</sub>		.0001902* (4.11)			
AID <sub>t-3</sub>			.0002181* (4.62)		
AID <sub>t-4</sub>				.0002487* (5.15)	
AID <sub>t-5</sub>					.0002506* (5.09)
n	363	363	362	363	362
R <sup>2</sup>	0.1216	0.1337	0.1442	0.1555	0.1544

Note: t-statistics are in brackets. R<sup>2</sup> is adjusted.

\* indicates statistical significance at the 5% level.

Table 5: Static Model. Least Squares Method. Dependent Variable is FR.

	Tinpots				Totalitarians			
	Civil Liberties + Political Freedom = (5-10)				Civil Liberties + Political Freedom = (11-14)			
Constant	.5163441* (56.79)	.2982739* (8.61)	.2579237* (7.76)	.2734907* (7.81)	.2759047* (34.25)	.1887899* (9.84)	.1844895* (9.67)	.1817846* (9.30)
PGDPA	-.0008208 (-0.52)	-.0011187 (-0.51)	.0026192 (1.23)	.0020063 (0.93)	-.00457* (-3.77)	-.0072477* (-4.64)	-.0063674* (-4.06)	-.0062831 (-3.97)
NGDPA	-.0159977* (-6.18)	-.0130725* (-3.21)	.0013218 (0.32)	-.0011779 (-0.27)	-.0126817* (-6.77)	-.0112126* (-4.57)	-.0081821* (-3.21)	-.0082535 (-3.21)
SECSCH		-.0009075* (-2.41)	-.0008579* (-2.40)	-.0009601* (-2.59)		.000975* (2.97)	.0015079* (4.29)	.001455* (4.01)
PRISCH		.0028447* (6.45)	.0031841* (7.56)	.0031718* (7.39)		.0007753* (3.08)	.0006306* (2.49)	.0006849* (2.67)
OPEC			-.2384452* (-9.80)	-.2175472* (-8.25)			-.0885636* (-4.02)	-.0970727* (-4.29)
AID				-.000173 (-1.39)				.00000022 (0.13)
n	1405	924	924	908	1650	1050	1050	1033
R <sup>2</sup>	0.0252	0.0547	0.1433	0.1266	0.0328	0.0746	.0878	.0880

Note: t-statistics are in brackets. R<sup>2</sup> is adjusted.

\* indicates statistical significance at the 5% level.

Table 6: Dynamic Model. Least Squares Method. Dependent Variable is FR.

	Tinpots Civil Liberties + Political Freedoms = (5-10)				
Constant	.2746169* (7.85)	.2772875* (7.95)	.2766867* (7.94)	.2745042* (7.91)	.2732703* (7.88)
PGDPA	.0020686 (0.96)	.0020799 (0.97)	.0021456 (1.00)	.0022361 (1.04)	.0023826 (1.11)
NGDPA	-.0012352 (-0.28)	-.0015278 (-0.35)	-.0014122 (-0.32)	-.0012912 (-0.29)	-.0007576 (-0.17)
SECSCH	-.0009087* (-2.46)	-.0008672* (-2.35)	-.0008577* (-2.34)	-.0008445* (-2.31)	-.0008222* (-2.27)
PRISCH	.0031429* (7.33)	.0031154* (7.27)	.0031192* (7.29)	.0031252* (7.32)	.0031068* (7.30)
OPEC	-.2156969* (-8.11)	-.2148621* (-8.07)	-.2182638* (-8.21)	-.2210925* (-8.40)	-.2268713* (-8.78)
AID <sub>t-1</sub>	-.0000184 (-1.49)				
AID <sub>t-2</sub>		-.0000216 (-1.76)			
AID <sub>t-3</sub>			-.000022 (-1.78)		
AID <sub>t-4</sub>				-.0000199 (-1.63)	
AID <sub>t-5</sub>					-.0000155 (-1.30)
n	908	907	907	906	907
R <sup>2</sup>	0.1312	0.1259	0.1278	0.1298	0.1329

Note: t-statistics are in brackets. R<sup>2</sup> is adjusted.

\* indicates statistical significance at the 5% level.

Table 7: Dynamic Model. Least Squares Method. Dependent Variable is FR.

	Totalitarians Civil Liberties + Political Freedoms = (11-14)				
Constant	.1830608* (9.25)	.1822597* (9.19)	.1807499* (9.12)	.1799845* (9.11)	.1777611* (8.94)
PGDPA	-.0062251* (-3.93)	-.006131* (-3.88)	-.005989* (-3.79)	-.0058948* (-3.74)	-.0059301* (-3.76)
NGDPA	-.0083615* (-3.26)	-.0083648* (-3.26)	-.0083491* (-3.26)	-.0083077* (-3.25)	-.0082477* (-3.22)
SECSCH	.0014722* (4.03)	.0014325* (3.91)	.0013622* (3.72)	.0013104* (3.59)	.0013458* (3.69)
PRISCH	.0006656* (2.58)	.0006664* (2.59)	.0006703* (2.61)	.0006684* (2.61)	.0006616* (2.59)
OPEC	-.0957473* (-4.24)	-.0937725* (-4.15)	-.0905283* (-4.02)	-.086876* (-3.88)	-.0853577* (-3.82)
AID <sub>t-1</sub>	.00000013 (0.06)				
AID <sub>t-2</sub>		.00000064 (0.30)			
AID <sub>t-3</sub>			.0000157 (0.71)		
AID <sub>t-4</sub>				.0000228 (0.99)	
AID <sub>t-5</sub>					.0000319 (1.33)
n	1032	1030	1027	1026	1025
R <sup>2</sup>	0.0869	0.0846	0.0814	0.0783	0.0795

Note: t-statistics are in brackets. R<sup>2</sup> is adjusted.

\* indicates statistical significance at the 5% level.

Table 8: Vector Autoregressive (VAR) Model

As a formula:

$$\begin{pmatrix} FR_t \\ AID_t \end{pmatrix} = \begin{pmatrix} \phi_1 \\ \phi_2 \end{pmatrix} + \begin{pmatrix} \phi_1^{11} & \phi_1^{12} \\ \phi_1^{21} & \phi_1^{22} \end{pmatrix} \begin{pmatrix} FR_{t-1} \\ AID_{t-1} \end{pmatrix} + \dots + \begin{pmatrix} v_{1t} \\ v_{2t} \end{pmatrix}$$

Table:

Coefficient	Short Description	Value with controlling variables present	t-statistic with controlling variables present	Value without controlling variables present	t-statistic without controlling variables present
$\phi_1^{11}$	Lagged FR on current FR	.313346	1.9216	.424403	2.63
$\phi_1^{12}$	Lagged AID on current FR	.000143823	2.8435	.000153252	2.9555
$\phi_1^{21}$	Lagged FR on current AID	-550.557	-1.0215	-195.982	-0.3520
$\phi_1^{22}$	Lagged AID on current AID	-.00220824	-0.0132	-.0259952	-0.1453

Note that this table does not include any value for  $n$ , since we were required to aggregate the data in order to construct this vector autoregressive model.