

What Influences a Country's Likelihood to Experience Battle Related Deaths?

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Research Question

What causes some developing states to suffer from greater levels of battle related deaths than others? The literature on battle related deaths or more broadly, civil conflict, in a developing state has focused on the lack of institutional means to regulate internal strife as a main contributing factor to civil unrest (Mansfield and Snyder 2008). Countries undergoing change in leadership experience corrupt government and unfair elections. Conversely, the literature on preventing civil conflict from occurring focuses on the use of development assistance programs (Savun and Tirone 2011). Though the research on development assistance programs, as a preventative factor during democratization is extensive, there has been little research on the effects of what happens once the assistance programs are discontinued.

Some developing countries such as Cape Verde off of the coast of Western Africa display a peaceful transition that results in minimal conflict. Cape Verde has maintained peaceful elections with little conflict since declaring independence from Portugal. On the opposite end of the spectrum are countries like Libya, which experience severe civil conflict. What is it that allows for Cape Verde to develop peacefully whereas Libya is unable to obtain development levels similar to Cape Verde's and most importantly why are they unable to do so without the threat of conflict?

I intend to find what variables contribute to the likelihood of conflict occurring within a developing country that result in death of civilians and military persons. This will help to conclude if development aid is the best way to prevent civil conflict or if it does not help as much as previously thought.

For the purpose of this paper, I limit the data to the past twenty years. This will allow for a comprehensive analysis of recent trends. Data from the Cold War era is not included due to the inconsistent reports during the time. The data will include all countries in the world as recognized by the United States Department of State from 1991-2011, with only countries removed will be the thirty-four members of the Organization for Economic Co-operation and Development (OECD).

Battle related deaths are defined as armed conflict that result in a minimum of twenty-five civilian or military deaths. Democracy assistance programs are defined as financial support during the countries development period and is measured in percent of Gross National Income (GNI). I look at whether civil conflict occurred during the period of assistance from outside institutions and governments. Using the net Official Development Assistance (ODA) figures from the World Bank I look at how much financial aid a state undergoing development received and whether civil conflict was occurring during the same time.

With some countries receiving as much as 1 billion US dollars in loans and grants to aid in the development of the state, it is important to find out if the aid is helping or harming the process. The Development Assistance Committee (DAC), OECD, and Political Non Government Organizations (NGO's) all provide monetary assistance to developing countries and could use this research to decide if they want to continue aiding the development process, or if there is a more beneficial and peaceful way to help countries be successful. The World Bank is another organization that would want to know if the development assistance helps prevent conflict because the mission of the World Bank is poverty reduction and conflict prevention (Collier, Sambanis 2002).

This research is helpful to the above organizations but is also helpful to leaders of developing countries. If a country that receives development assistance were more likely to suffer armed conflict as a result it would be in the country's best interest to not accept the assistance. This research could help world leaders in creating a new course of action for achieving peaceful development in countries that are in the process of trying to move forward. It could help to figure out why a country like Cape Verde experiences stability, and a country like Libya experiences such extreme instability.

Current Literature on the Stability of Developing Countries

There are two hypotheses in the literature explaining the variation of why a developing country experience civil conflict. They are, the Resource Curse (Cai, Newth 2013), inequality theory (Besancon 2005) and my hypothesis that developing countries experience civil conflict as a result of the developing aid they receive.

The first hypothesis suggests that a country that has an abundant amount of natural resources contributing to their GDP is more likely to experience conflict. This is because terroristic regimes-meaning regimes that are not a member of the government nor funded by government money, and that use weapons and violence to gain compliance within the country, try to take control of the natural resources (Cai, Newth 2013). Anne Boschini, Pettersson, and Roine (2013) countered this argument by suggesting that the resource curse could be turned around if the "institutions are good enough." The problem with this is that in many developing countries, the institutions are corrupt and far from reaching the necessary level needed to prevent the curse from taking place.

Sudhir Chella Rajan (2011) offers a different view of how the resource curse comes into play with developing countries and suggests that the countries experience

conflict as a result of outside forces pushing themselves onto the resources. Other literature suggests that only certain natural resources lead to the onset of conflict, specifically diamonds (Gleditsch and Gilmore 2005). Some policies that are created by local actors (especially with diamonds) can produce a negative outcome that harms the country while benefitting external political actors i.e. blood diamonds.

Andrew Williams (2011) suggested in his research that establishing a more transparent and accountable government would help prevent the so-called resource curse from occurring. This goes back to the argument that Boschini (2013) makes, which suggests that most developing countries do not have a stable government let alone a government that can be transparent. Though countries that are politically stable are able to offer more transparency a developing country does not experience that luxury and is therefore unable to meet the criteria proposed to reduce the likelihood of the resource curse from occurring.

Though many political scientists find value in the resource curse, others dispel the idea by suggesting that the onset of civil conflict initiates the resource curse. Mitchell and Theis (2012) found their results were not statically significant in concluding that resources were the cause to the onset of civil war. This suggests that the resource curse is not as strong of an effect as some argue it to be.

Inequality theory is the second approach commonly used to explain the likelihood of a country experiencing civil conflict. According to Marie Besancon (2005), income inequality plays the most significant role within a country's likelihood to experience civil conflict. An area within a country that has an income lower than the national average is far more likely to experience civil conflict than a different area within the same country

that is at average (Buhaug, Gleditsch, Holtermann, Ostby, Tollefsen 2011). This suggests that a country with a high GDP could still possibly experience civil conflict because the wealth within the country isn't distributed evenly.

In most countries wealth is not distributed evenly but rather there is a small percentage of people controlling the wealth of the country while a much larger percentage lives well below the national poverty line. A country that is poor and not up at the same economic standards as other well off countries is more likely to experience civil conflict. This is exacerbated if the country is also under a repressive regime (Zimmerman, Do Couto Alves 2007). Though the idea that repressive regimes leads to civil conflict is not surprising, it is in keeping with the literature trend that one of the main causes of civil conflict within a country is the lack of evenly distributed wealth.

When the wealth in a country is not evenly distributed, the government can use social welfare as a way to subsidize the poverty gap (Taydas, Peksen 2012). This helps to prevent the onset of civil war, but also creates a society dependent on welfare and puts the country into a lasting poverty trap (Kugler, Kook Kang, Kugler, Arbetman-Rabinowitz, Thomas 2013). The welfare assistance is similar to the programs created in western economic policy, and the developing countries do not have the same resources as the western countries to make the policy work (Elhadary, Samat 2011). This ultimately leads to a larger poverty gap and reinforces the poverty trap. The poverty trap continues over generations because the per-capital income per person falls from generation to generation and creates a cycle, which is difficult for a state to overcome. The more citizens on welfare increases the strain on a country's economy to be able to continue providing the necessary funds. In a system similar to the United States it would strain the

wealthiest citizens by increasing their taxes to contribute to the welfare needed by the poorest citizens.

My hypothesis is that official development assistance, (ODA), causes civil conflict in a country. When a country receives ODA it must adhere to the conditions set forth by the organization from which it receives the aid. These organizations can be the Organization for Economic Co-Operation and Development (OECD), the Development Assistance Committee (DAC), and Political Non Government Organizations (NGO's). All of these provide monetary assistance to developing countries either to improve the status of the country or to help in regards to a regime change.

These organizations also have their own set of rules and regulations that a country must follow in order to be eligible to receive the money. These rules can include adhering to the United Nations Human Rights requirements, as well as showing that the country is working towards closing the poverty gap. What can occur as a result is that leadership of the country will give a portion of the aid to the terroristic regimes in order to show inspectors that they are adhering to the Human Rights requirements. The result is a shift in the balance of power and although the money should be going towards closing the poverty gap, instead it is going towards maintaining peace by paying off the regimes that create the civil unrest in a country. When aid is given to developing countries it allows for the government to fund civil peace, and accommodate the demands of new groups (Larsen 2011). The internal problems are not solved in the developing country. Instead, the government is paying groups to keep the peace. This internal conflict can be across socio-economic groups, ethnic groups, or religious groups.

It is thought that developing countries want to achieve democracy to create a more stable country, and this is highly encouraged by many democratized countries. This comes from the democratic peace theory, which states democracies are less likely to go to war with one another (Bruce and Oneal 2001). This theory is part of the reason the OECD gives money to developing countries in the hopes that the aid will help the country undergo a successful regime change.

When a country experiences a regime change the opportunity for civil conflict to occur is high. During the transition into a democracy, uncertainty about future political commitments among domestic groups increases (Savun and Tirone 2011). When a country has tension the likelihood of conflict to occur increases. This can be between socio-economic, religious, or political groups and can cause conflict across the country. Development assistance as shown in the other two theories can help limit the poverty gap but also creates a poverty trap that makes it more difficult for a country to come out of poverty and thrive in the global economy. The resource curse is not definitive and has literature countering what many used to believe to have been the cause and the resulting effect. Researchers have found that civil conflict can ultimately lead to resource curse instead of the other way around. This suggests that a country is vulnerable to groups trying to gain control of their resource rich areas once a civil conflict has already been initiated.

I argue that development assistance is what leads to civil conflict in a country because there is little literature focusing on the impact that the assistance has on a country in a broad spectrum. The current research focuses on how the aid helps a country undergoing a regime transition, but not on the continued aid to the developing countries.

The Argument

I hypothesize that a developing country is more likely to experience conflict when it receives official development assistance. Most research I found focuses on development assistance as a way to prevent conflict in a developing country, my argument is that it causes conflict.

There are reports of monetary aid being used to pay off terroristic regimes to keep the country above the Human Rights requirements needed in order to be a recipient of money from OECD or IMF (Best 2012). However, it is difficult to find data regarding this problem because the occurrence of this is technically against the law and there is no way to track the validity of it being reported. Paying off regimes can create instability in the country because the equilibrium is shifted and the regimes have the power. The instability results when the monetary aid is either decreased, or discontinued all together, and the regimes no longer receive the same amount of money they were once promised. The second cause to conflict is known as the resource curse, this occurs in countries that have a high percent of natural resources accounting for their GDP. The result is being targeted by the terroristic regimes for power over the land that contains said natural resources.

Once a country begins to receive monetary aid the structure of power is shifted. The money does not get distributed evenly, which can result in a larger poverty gap and ultimately make the rich richer instead of helping the poor move up in society. Poverty gap is defined as the percentage of people living above and below the national poverty line. This number is important because it helps to understand the distribution of wealth and to recognize if a small percentage of citizens control the country's wealth.

There are also reports of OECD countries providing assistance to countries that appeal to their own economic interests. “The United States, and The Netherlands are biased in favor of rewarding certain policies in particular, pro-market and trade-oriented policies” (Hout 2004). When an outside country is giving a large sum of money to a government they will direct how the money is being spent. Hout also mentions that the donating countries will overlook bad governance or structural problems if they receive trade benefits.

When control over how the money is distributed is given to the wrong people, it can lead to unrest amongst the civilians and end with retaliation to the regime that is in charge at the time. Though guidance from the donating organizations/countries could be helpful, unless they negatively impact the interests of said organization/country will most likely not occur. As a result the aid becomes the cause to the domino effect that results in civil conflict.

Though many think that the monetary aid is beneficial to maintaining peace in a country that is undergoing development I counter that by suggesting that very same aid creates the instability which leads to internal conflict and turmoil. I am using natural resources as one of the independent variables along with the poverty gap. These two variables will suggest how large of an impact they have on conflict when development assistance is involved. Most importantly this question will answer if development assistance is something organization and countries should continue participating in or if resources should be spent trying to find a more successful approach to the democratization of countries.

Methods Used for Data Analysis

I hypothesize that development aid contributes to civil conflict rather than preventing it. I will regress battle related deaths on my variable of interest, official development aid. I include natural resources, GNI per capita, and polity score in my analysis as well. These variables will test the other hypothesis mentioned in the literature, and the results will suggest which variable is most influential in battle related deaths.

Battle related deaths include military and civilian deaths, totaling at least twenty-five deaths. Battle related deaths will be used to measure civil conflict, if a country experiences a high number of deaths than the likelihood of experiencing civil conflict is high, if a country has a lower number, the likelihood of civil conflict is also low. The independent variables include natural resources, GNI per capita, and polity. Natural resources are defined as the total natural resources that a country has, and is figured using percent of GDP. It is important to measure any monetary numbers using percentages because of the difference in currency across countries. In terms of natural resources, they are best measured as the percentage of gross domestic product, meaning the percentage the resources make of a countries total gross domestic product. This is an important variable because it shows if countries with a higher percentage of GDP from natural resources are experiencing more conflict as a result of the resource curse. The GNI per capita variable is based on purchasing power parity. It is calculated in international dollars, this variable allowed for a more complete dataset than using a poverty gap variable. The polity variable was gathered from the Polity IV dataset and is an indicator of nation-states stability; it is a democracy score on a scale of zero to ten.

The variable of interest is Official Development Aid (ODA) received, through assistance programs, and will be defined as financial support during the countries development period. This variable will be measured in percent of Gross National Income (GNI). It is important to measure it in percent of GNI instead of in dollar amount so that it can be comparative to other countries. This variable is found via the World Bank, and includes numbers reported by the OECD and the developing countries.

For the purpose of this research, all years from 1991 up to 2011 are included. This allows for a greater number of observations to test the hypothesis, as well as for the data to have occurred post Cold War and preventing the Cold War from acting as a z variable

I had to remove the territories that the World Bank includes in the data sets such as Guam, U.S. Virgin Islands, French Polynesia, etc. I also had to remove countries that did not have a complete data set. Some countries were missing information and are not included in my results. Countries that are members of the OECD are also not included in the data set. A complete list of countries included can be found in appendix A.

Results for Interpretation

I ran a panel corrected standard error test on the variables (PCSE), I chose to run a PCSE because the dataset has a continuous dependent variable of time over a twenty year period. The results of the panel corrected standard error are in table 1. These results show the coefficients of each independent variable I ran in my regression analysis against deaths from battle. The results from the panel corrected standard error (PCSE) are included in this paper, and the findings from the PCSE are consistent with findings found from other tests. I ran a poisson regression, a negative binomial regression, various cross

sectional time series and count models, and tested for non-normally distributed data. The variables had similar coefficients and z values in all the different models. This indicates that the results in the PCSE are reflective of the data and summarizes the relationship between the independent and dependent variables with a similar outcome to the other tests

Table 1

Net ODA Received	-6.38 (1.65)**
Natural Resources	1.31 (1.43)
GNI Per Capita	-0.03 (.005)**
Polity	1.57 (2.97)
N-Size	1427
R²	0.02
Constant	331.63 (32.8)

Panel Corrected Standard Error Analysis Summary

[^] statistical significance at the .10 level

* statistical significance at the .05 level

** statistical significance at the .01 level

Table 2

Variable T-values

Battle Related Deaths	z
Net ODA	-3.86(.000)
Natural Resources	0.910(.361)
GNI Per Capita	-6.33(.000)
Polity	0.530(.597)
N-Size	1427
Constant	10.10

With these variables, the Net ODA variable is at -3.86, which indicates that it does impact the dependent variable, however the relationship is negative, meaning that as Net ODA increases, battle related deaths decrease. This is shown in table 2, the t values of the independent variables are listed and to be statistically significant the value needs to

be above absolute value 1.96. When the t value is above 1.96 the null hypothesis can be rejected, because Net ODA has a t value of -3.86, the null can be rejected. The t value of Net ODA from this PCSE regression model shows that Net ODA is significant to the cause of battle deaths. If Net ODA decreases the number of battle related deaths than it would be in the best interests of the OECD and IMF to not only give loans to countries but continue to loan money to prevent the outbreak of conflict. The argument can be made that loaning money to a country will maintain peace within that country because for every percentage increase of Net ODA received by a country the number of battle related deaths decreases by 6.38.

It also shows that the relationship between GNI per capita is also significant, as GNI per capita increase, battle related deaths decrease. This is important because if a country has less poverty, they will also have less battle related deaths. GNI per capita lowers the number of deaths at a lower rate than Net ODA received, but still at high enough rate that it is statistically significant.

Both the polity and natural resources variables are not statistically significant which is interesting. The polity score is another way of discussing stability within a country and one would assume that this score would have an impact on this data. Polity not influencing the data or being statistical significant allows for a different approach to be taken with this data. I was expecting natural resources to be more statistically significant because of the literature. The resource curse is a theory that has been discussed frequently and makes logical sense. The lack of statistical significance of this variable was surprising.

Final Thoughts

The results from the PCSE were not what I was expecting. I hypothesized that Net ODA increased the likelihood for battle related deaths and it actually decreased it. The one result that was not surprising was that GNI per capita had a negative relationship because as a country moves out of poverty they are less likely to have battle related deaths because the disparity between the poor and rich may be more even. That's why I wanted to focus on GNI per capita because it took the monetary value that each person within the country had instead of focusing on the poverty gap. Though I would like to continue working on this study to find more concrete answers, one thing I would like to do is to find a comprehensive way to measure the wealth disparity within a country.

The results regarding the impact of the resource curse were interesting. Taking into consideration how talked about natural resources in countries are adding to that conflict one would expect one to impact the other. For example the Middle East has an abundant amount of oil and is also involved in many conflicts, based on what one reads in the news it would be logical to assume that the oil is the cause of the conflict. The results in this study suggest that natural resources have little impact on conflict.

The data gathered was from the World Bank and most poverty measuring variables were not accurately filled out for each country and limited my ability to use the indicators within this study. Though there are different theories behind what causes battle deaths within a developing country I think that there is still a lot to be researched.

In terms of Net ODA received it would be interesting to find a measurement of how the aid was being distributed. The corruption within a country may help to explain why there is a certain amount of death and that would be an interesting variable to add to

this research. For future studies I would recommend combining various datasets to get more inclusive data. It would be helpful to have a more accurate and universal way to measure the variables and if each country had to report their statistics one would be able to expand on this research. Until every country is more or less forced to report numbers to a specific organization it will be difficult to get a wholly comprehensive answer to any question similar to this.

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Appendix A

Angola
Albania
Algeria
Argentina
Armenia
Azerbaijan
Burundi
Benin
Burkina Faso
Bangladesh
Bolivia
Brazil
Bhutan
Botswana
Central African Republic
Chad
China
Congo Democratic Republic
Cote De Ivorie
Cameroon
Republic of Congo
Colombia
Costa Rica
Djibouti
Ecuador
Egypt
Ethiopia
Georgia
Ghana
Guinea
Guinea-Bissau
Croatia
Indonesia

India
Iran
Jordan
Kazakhstan
Kenya
Cambodia
Liberia
Sri Lanka
Lesotho
Moldova
Madagascar
Macedonia
Mali
Mauritania
Namibia
Niger
Nigeria
Nepal
Peru
Pakistan
Philippines
Papua New Guinea
Paraguay
Rwanda
Sudan
Senegal
Sierra Leone
South Africa
Swaziland
Thailand
Tanzania
Uganda
Vietnam
Yemen
Zambia