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# Globalization, Conflict, and the Effects of the Rate of Change of Globalization: An Empirical Analysis

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GLOBALIZATION, CONFLICT, AND THE EFFECTS OF THE RATE OF CHANGE OF GLOBALIZATION:

AN EMPIRICAL ANALYSIS


by


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**ABSTRACT**

The world is becoming increasingly more interconnected with technological advances leading to more and more globalization. It is important to see how globalization affects society, especially in the lesser developed post-conflict regions of Africa. The theories of liberalism, Marxism, and realism all offer plausible, yet strikingly different theories on the relationship between globalization and conflict. This paper conceptually examines the dominant theories of globalization and conflict, then uses open-source panel data on globalization and conflict in Africa to empirically test which theory is supported by the data, then tests if there is a correlation between the rate of globalization and conflict. The purpose of this paper is to offer an explanation for the lack of theoretical cohesiveness on the topic through analysis of panel data.  The study reports three main findings: globalization and conflict have a negative correlation, the rate of change of globalization and conflict have a positive correlation, and, while neither are statistically significant, the rate of change of globalization is overall more significant and more impactful than the level of globalization.

**INTRODUCTION**

Philippe Legrain says that, "The beauty of globalization is that it can free people from the tyranny of geography," (Legrain, 2003, p. 62) but it has also had adverse consequences on certain economies, sometimes being viewed as the "Western Curse" (Lechner & Boli, 2008). While some view globalization and the lowering of trade barriers as a step forward towards economic prosperity and peace, others view free trade as a threat to domestic industries and culture and instead choose to turn inward to more protectionist policies. Although economic theories favor free trade and globalization, not one country in the world has completely free trade. Milner described protectionism as, "one of the most visible theoretical gaps [in economic theory]."

It has been noted that globalization levels, particularly foreign aid, spikes in the immediate post-conflict phase of a nation, tapering off once the crisis is over. This phenomenon, known as frontloading, can actually damage the potential for economic growth and undermine the established peace (Suhrke & Buckmaster, 2005). However, there is very little research done on how changes in the rate of globalization affect a country going into conflict. The literature examining the relationship between conflict and globalization has been primarily theoretical, with fundamental differences in outcomes, and only addressing whether globalization levels increases or decreases the likelihood of conflict. The concept of frontloading, and more generally, the rate of change of globalization, could offer one explanation for these radically different globalization and conflict theories. It is hypothesized that globalization reduces the number of conflicts, but high rates of change of globalization will actually increase the number of conflicts.

An important  assumption of this paper is that conflict, while inevitable, is something that we want to avoid, primarily due to the multifaceted cost of conflict. Fearon and Laitin (2003) estimated that civil conflicts have led to 16.2 million deaths since the end of World War II. For example, during the conflict of the 1994 genocide in Rwanda, at least 10% of the population (800,000 people) died, and another 3 million people fled the country. The health effects were equally devastating. Infant mortality went up from 85 to 137 per thousand, and HIV/AIDS spread at a rapid rate. Ten years after this conflict, it was estimated that Rwanda's GDP was 30 percent lower than it would have been had this conflict never happened (Panić, 2007). This assumption influences the hypothesis that globalization and trade are inversely related. Because the world is becoming more interconnected and globalization has been increasing, and if we assume we want to avoid conflict, we would hope that increased globalization does not lead to increased conflict.

Additionally, this paper includes both internal civil conflict and international conflict when referring to conflict. Because this paper belongs in the small body of literature that examines the rate of change of globalization, it acts as a starting point, with room for further research that looks at these different types of conflict individually.

This paper contributes to the debate about the effects of globalization and conflict by investigating how the rate of change of globalization impacts conflict through panel data, this paper extends the literature on the topic. The greater implications of this research are that the results can be used to help determine how involved international businesses, governments, and NGO's should be in conflict-vulnerable countries. This could both decrease the likelihood of

countries going back into conflict, keep these entities from getting overly-involved, leading to a more efficient use of resources.

**THEORY**

The literature surrounding globalization and conflict is extensive; however, three arguments lead the debate: liberalism, Marxism, and realism. These theories dominate the conversation of the relationship between globalization and conflict and are described in further detail below.

Significantly less research has been done about the effect the rate of economic globalization has on conflict. UN agencies such as the UNRISD (1995) and UNCTAD (1996) argue that the effect of rapid integration can actually make conflict more likely. They argue that unemployment will increase due to firms attempting to recover competitiveness by shedding labor, and government reducing civil service jobs in order to repay debts. This makes firms more competitive by lowering their costs since they will be paying less wages.  Additionally, social services generally have been scaled back for marginal social groups and rural regions (Fitzgerald, 1999). According to Fitzgerald, privatization can exacerbate this as bureaucrats become private entrepreneurs. Income inequality then becomes greater, weakening the solidarity and peace within communities and neighborhoods.

**LIBERALISM**

The liberal view argues that globalization decreases the risk for conflict. This is backed by both neoclassical trade theory and modern theorists. In 1776, Adam Smith published his

book, *The Wealth of Nations,* which encouraged trade between nations. His theory of the

invisible hand states that everyone collectively benefits when they act in their own self-interest.

This concept is the basis for his theory of absolute advantage. Economists have applied this to

the topic of globalization and trade policy. When countries are motivated by self-interest, the

resulting cooperative strategies and alliances result in greater peace. Forty-one years later, in

1817, David Ricardo posited a new theory, comparative advantage, that further supported free

trade and globalization among nations. Although these two theories differ regarding what

countries should produce for trading, they both agree that everyone is better off with trade.

Around the same time, Kant was writing in support that trade promotes peace. Kant argued

that international trade provides connections between people and creates a perceived "global

community" that works to pacify any disputes.

A more recent trade conflict theory using utility functions and cost benefit analysis to

support the liberal stance comes from Polachek (1980). He argues that the cost of conflict is

equal to the lost welfare gains associated with potential trade losses. Even if conflict does not

lead to total embargos, the terms of trade will be inferior, resulting in welfare losses. These

potential losses deter leaders from initiating conflict with their trading partners. He found that

countries with the most mutual trade get in the least conflict and that the stronger the

dependence two countries had on each other, the more they are deterred from conflict.

When we look at the very basics of trade, simply put, we see nations trying to acquire

resources from other nations. If resource acquisition is the goal, a nation can either choose to

amicably trade, or use armed forces to conquer. Liberman looks at this very topic in his book,

*Does Conquest Pay,* and concludes cooperation is a significantly more efficient means for

achieving this goal. Historically, we see this across the globe, where conquest through

colonization brought in vast amounts of resources, but at high costs to the original inhabitants

of the colony, resulting in decolonization, then later, cooperation through trade.

Economic interdependence encourages transparency among trading partners. A study

done on the Correlates of War  found that the number of wars and number of participants in

war between 1870 and 1980 remained relatively stable, but between 1980 and 2003, there was

a drastic decrease in both these numbers, correlated with the increase in trade activities and

globalization in this time. Trade provides a platform for governments to repeatedly interact

with each other, removing elements of mistrust and misperception (Hafner-Burton and

Montgomery, 2012).

Restricting imports from other countries often causes some sort of retaliation.  A prime

example of this is the Smoot-Hawley Tariff Act from during the Great Depression. In the 1920's,

after WWI, European farmers were beginning to recover and compete with farmers in the US.

This lowered prices, and, in 1929, prompted agricultural lobbyists to demand protection against

foreign agricultural goods; however, there was not enough support to impose tariffs

(Encyclopedia Britannica, 2016). The stock market crash of 1929 was able to push just enough

people to favor protectionism, and the Smoot-Hawley Tariff Act was signed into law on June 17,

1930 despite over one thousand economists advising President Hoover to veto the bill. It raised

the average tariff by 20%, prompting retaliation from other countries. Within two years, over

twenty countries adopted similar "beggar thy-neighbor" duties, causing the global economy to

spiral. Between 1929 and 1932, U.S trade with Europe fell by two-thirds, and in 1934, President

Franklin D. Roosevelt signed the Reciprocal Trade Agreements Act, which reduced tariff levels

and promoted freer trade in order to revamp the economy and deter potentially more violent

retaliations..

At the sociological level, increased contact from globalization can work to cure

prejudices. More contacts produce more understanding. Moreover, increased contact

necessitates the creation of certain laws to resolve conflicts of interest that might arise (Lamy,

2012). This has been manifested in the rise of global governance entities such as the World

Trade Organization, the United Nations, International Monetary Fund, and the World Bank.

At the business level, access to bigger markets encourages firms to be more pacifist and

antiwar. However, as seen during WWII, some industries such as rubber and steel actually see

increased profit from war due to increased demand (Barbieri and Levy, 1999). But for most

modern industries, militarized conflicts have major disruptive effects on economic activities,

and hinder long-term growth.


**REALISM**

Rather than being a foundation to build policy on, realism functions as an

epistemological tool for explaining history, and forecasting the future. Realists argue that

because there is no centralized global authority, nations rely on themselves to survive the

uncertain future of an ultimately anarchist world (Mazhid, 2015).In short, globalization in itself

does not affect conflict. The realist stance is a middle ground that argues that trade isn't

necessarily beneficial to all, nor is it necessarily harmful to all.

In classical realism, it is politics, rather than trade or globalization, that causes conflict.

British economist Norman Angell published *The Great Illusion* in 1910, and as summarized by

Barbara Tuchman, "Angell showed that in the present financial and economic interdependence

of nations, the victor would suffer equally with the vanquished; therefore war had become

unprofitable; therefore no nation would be so foolish as to start one." (Angell, 1962). As is

common knowledge, following this book's publication were WWI and WWII, along with

countless other wars and conflicts. The realist acknowledges that globalization can influence

conflict, but it is not the ultimate deciding factor, so even when globalization is at

unprecedented levels, countries can still experience conflict due to other political factors.

Mercantilism falls under the realism school of thought and was the governing doctrine

of the political economy of many states until the liberal revolution in Britain in the mid-

nineteenth century. During this time, a nation's well-being was measured by its gold and silver

reserves. The policy implications of mercantilism were to either go abroad and conquer, or

establish favorable trade balances. Spanish exploration of the Americas is a prime example of

the first policy. The thought process behind these policies is that there is a fixed amount of gold

and silver, which results in a zero-sum game with winners and losers. The more gold and silver

one nation acquires, the less other nations acquire. Similarly, if one nation has positive net

exports, meaning it is exporting more than it is importing, at least one other nation has

negative net exports. In both scenarios, gold and silver are being acquired through

globalization, but it is the policy difference that caused conflict.

Hegemonic Stability Theory is another application of realism that states international

stability is most likely when a single hegemon establishes the global economic rules, regimes,

and institutions (Webb & Krasner, 1989). Hegemons, such as the Roman Empire, sustain

economic openness and stability for its members as a means to an end: power. Similarly, after

WWII, the United States advocated for the creation of a global economic system based on free

trade and capital mobility, creating the WTO, IMF, and World Bank. The US also instituted the

Marshall Plan, keeping communism from taking over Europe. Whoever is the global hegemon is

able to design governing entities that promote its leadership, and having this structure

maintains stability.


**MARXISM**

Liberalism sees globalization as "good" for lessening conflict, but Marxism sees it as

"good" because it will create conflict that will eventually destroy the social classes and make

way for an open world economy. Even when absolute gains exist, relative gains may be

unequal, causing tensions to rise. Lenin provided the foundation for Marxism, arguing that

trade generates military conflict.

In his "Speech on the Question of Free Trade" delivered in Brussels, Marx argues that,

"...the Free Trade System works destructively. It breaks up old nationalities and carries

antagonism of proletariat and bourgeoisie to the uttermost point. In a word, the Free Trade

system hastens the Social Revolution. In this revolutionary sense alone, gentlemen, I am in

favor of Free Trade." (Marx,  1848).

One of the main manifestations of this is Dependency theory: a more open economy is

likely to experience conflicts as openness allows exploitative relationships to form, creating

unfair trading practices and furthering inequalities, which then propel armed conflicts (Gartzke

and Li, 2003). This dilemma is due to the neo-colonial trade agreements between more

developed dominant countries that are able to negotiate more advantageous agreements for

themselves with the lesser developed economies who have less to bargain with. While most

development work has been focused on poverty, we are more and more studying inequality

and how it contributes to the cycle of poverty, and how it can distort indicators of economic

development. Dependency theorists are concerned that with trade and comparative advantage,

developed countries will specialize in goods that are intensive in skilled labor and capital,

maintaining their comparative advantage, while lesser developed countries will specialize in

industries with unskilled workers and smaller profit margins. Neilsen and Alderson (1997) used

Kuznets curves in a study on inequality levels in transitioning economies and found that when

transitioning from agriculture to industrialization, inequality tended to increase, but as the

transition completes, there is actually less inequality than there was at the beginning.


**RECONCILING THEORIES**

According to Barbieri (2002), the key to reconciling such radically different views of

trade is to understand the core assumptions of each theory. Each of these three theories sees

state action as being driven by different things. The liberalist view sees social welfare driving

state-action. Trade is a vehicle for achieving this goal because it leads to cooperative strategies

between players, and peaceful relations. Globalization creates a positive sum game. The realists

see state-action as being driven by power maximization. Trade is an instrument used in the

pursuit of power, but agreements and cooperative arrangements are temporary and should be

broken when conditions make other means of securing national interests more useful. Marxists

see state-action as a structure driven by the interests of the dominant classes in society,

therefore benefitting that class. However, these theories are limited because they only address

whether trade works to increase or decrease the likelihood of entering into conflict. What this

paper examines, that none of these theories directly address, is that globalization can either be

beneficial or harmful depending on how fast or slow globalization levels are changing. The

following sections give a brief overview of the history of Africa, then test the impact

globalization and the rate of change of globalization have on conflict.

**HISTORY OF CONLICT IN AFRICA**

Africa's conflict history is marked by periods of colonization, decolonization, and ethnic

intrastate disputes. Cilliers and Schünemann (2013) describe African countries as being "born

into" conflicts. They fought with each other pre-independence, which continued post-

colonization. Africa has in fact surpassed Asia in the number of war related civilian casualties.

Between 1823 and 2003, Angola, Zimbabwe, South Sudan, and Ethiopia had at least 27 internal

conflicts. Africa has been the leading area for developmental efforts, but the desired outcomes

have yet to be realized.

The European Age of Discovery started in the mid 1500's when the Portuguese empire

looted and burned down cities in East Africa (Herbst, 1990). By the early 1900's, most of Africa

was colonized by European countries using similar methods of violence. By the 1950s,

decolonization had begun, fueled by the increased hostility towards colonialism, which often

turned things violent. The first successful instance of decolonization in Africa was the Tunisian

War of Independence from 1952-1956. One of the most famous anti-colonial struggles was the

Algerian War of Independence, which lasted from 1954-1962. Both of these instances were

against France. The Portuguese Colonial War alone led to the independence of Angola, Guinea-

Bissau, and Mozambique. Much of these liberation movements were influenced by the highly

violent, yet successful tactics of guerrilla warfare, exemplified by the Indonesian National

Revolution and the First Indochina War.

Conflict after decolonization in Africa has primarily been within the state over changing

the borders. Rwanda, Sudan, Angola, Sierra Leone, Congo, Liberia, Ethiopia, and Somalia have

all experienced conflict of this nature (Saheed, 2006). From this, South Sudan has been

separated from Sudan, Eritrea has been separated from Ethiopia, and Congo was divided into

seven different states. Due to globalization, these conflicts have not been entirely internal. For

example, Cuba, the United States, and China were all involved in Angola's Civil War.

World market factors at the time further inhibited economic growth and conflict

resolution, with the collapse of the Bretton Woods system, oil shocks, and the interest rate hike

in the 1980's (Stanley, 2007). While the vast majority of conflict in Africa has been within states,

interstate war happened in the 1990's in "Africa's World War" with six participants, but overall,

intrastate conflicts have been rampant.


**INPUT DATA**

The following analysis is based on economic, social, and political factors that influence

conflict. The data used was chosen from three publically available data sets: The Global Conflict

Risk Index, The KOF Index of Globalization, and the Quality of Governance Dataset. Table 1

contains summative information about each dataset, including the number of variables,

number of observations, number of countries, time frame, and a url to the indices.

| Table 1: Summative Information of Datasets | | | | | |
|---|---|---|---|---|---|
| Index | Variables | Observations | Countries | Time Frame | URL |
| GCRI | 32 | 3493 | 138 | 1989-2014 | conflictrisk.jrc.ec.europa.eu/ |
| KOF | 25 | 10,177 | 221 | 1970-2015 | www.kof.ethz.ch/en |
| QOG | 622 | 13,455 | 207 | 1946-2010 | qog.pol.gu.se |

The KOF Index of Globalization was chosen as a data source because of its accessibility and comprehensibility. The index includes information since 1970 for more than two hundred countries, and is updated yearly to add more data and to revise the model in order to reflect the literature and evolving theories and definitions of globalization. The index includes three dimensions of globalization: economic, social, and political. Because this paper is focused on economic globalization, only the economic dimension is used. Economic globalization is measured by both the *de facto* and *de jure* measurements of trade globalization and financial globalization. Table 2 illustrates how each measure is included in the overall economic globalization dimension.

| Table 2- Economic Globalization in the KOF Index | |
|---|---|
| Variable | Source |
| **Economic Globalization** | |
| ***Economic Globalization, de facto*** | |
| *Trade Globalization, de facto* | |
| Trade in goods | World Bank WdI (2017) |
| Trade in services | World Bank WdI (2017) |
| Trade partner diversification | calculation based on IMF DOTS (2017) |
| *Financial Globalization, de facto* | |
| Foreign direct investment | IMF IIP (2017) |
| Portfolio investment | IMF IIP (2017) |
| International debt | IMF IIP (2017) |
| International reserves | IMF IIP (2017) |
| International income payments | IMF IIP (2017) |

| | |
|---|---|
| ***Economic Globalization, de jure*** | |
| *Trade Globalization, de jure* | |
|     Trade regulations | Gwarney et al. 2017 |
|     Trade taxes | World Bank WdI (2017) |
|     Tariffs | Gwarney et al. 2017 |
| *Financial Globalization, de jure* | |
|     Investment restrictions | Gwarney et al. 2017 |
|     Capital account openness 1 | Chinn-Ito Index of Financial Openness (2017) |
|     Capital account openness 2 | Jahan-Wang Index of Openness (2016) |

The Global Conflict Risk Index (GCRI) was developed "to enhance the EU's conflict prevention capacities" by contributing to their Early Warning System (EWS). This index sorts 24 variables into five dimensions to assess the likelihood and intensity of conflict. It is from this index that the data for the controls of the model were chosen. Table 3 lists out the variables used from the GCRI and the original sources of the data.

| **Table 3-** Variables from GCRI | |
|---|---|
| **Variable** | **Source** |
| GDP per Capita | World Bank (2017) |
| Population | UN DESA (2017) |
| Regime Type | Center for Systemic Peace (2017) |
| Repression | Political Terror Scale Project (2017) |
| Structural Constraints | BTI: The Bertelsmann Stiftung (2017) |
| Unemployment | World Bank (2017) |
| Water Stress | World Resources Institute (2017) |
| Youth Bulge | UN DESA (2017) |
| Income Inequality | Harvard Dataverse Network (2017) |

The data for the dependent variable, conflict, was taken from the Quality of Governance Dataset. Their research focuses on how to create and maintain "high quality government institutions" (Johannson, 2018). Figure 1 below maps out the total number of conflicts from the QOG dataset and the average rate of change of globalization, calculated from the KOF Index.

**Figure 1-** Conflict and Rate of change of Globalization in Africa 1989-2010

Total Number of Conflicts
1989-2010

Average Rate of Change of Globalization
1989-2010
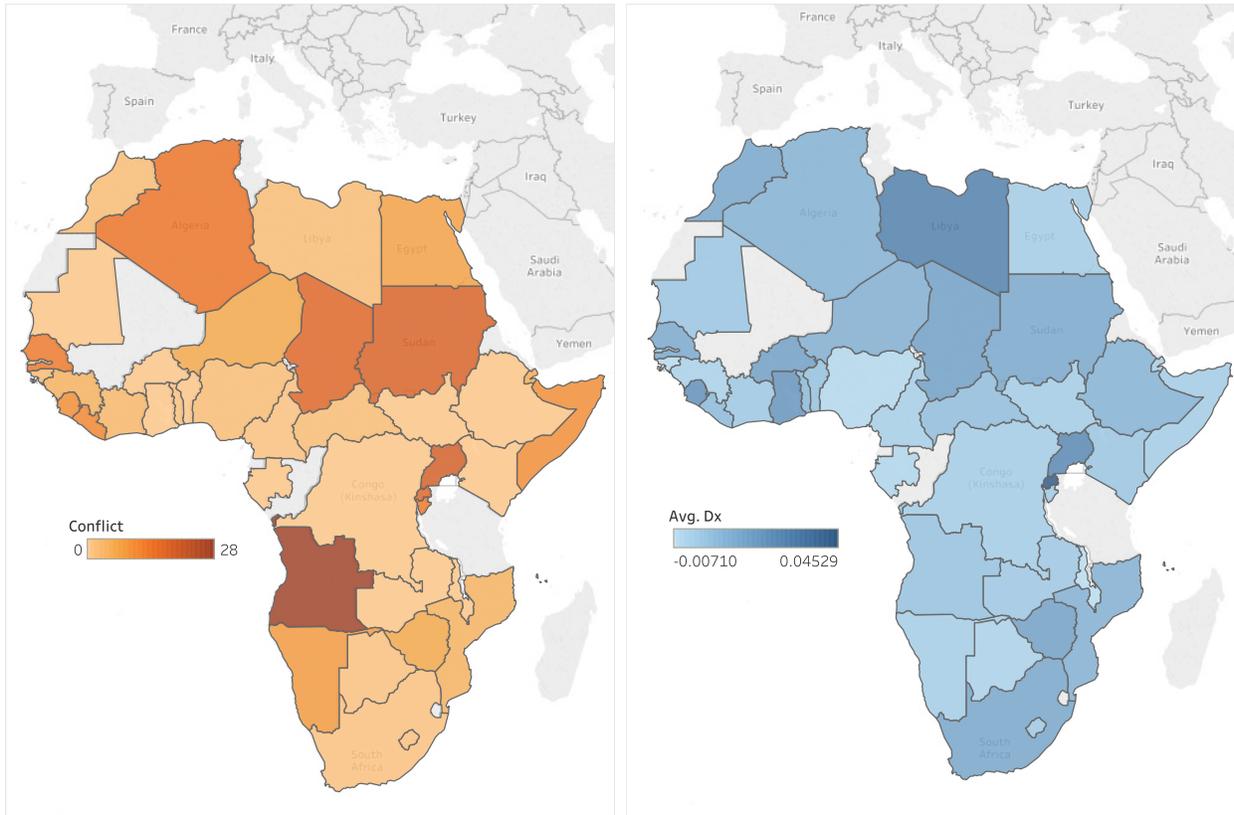


**CONTROLS**

From the GCRI dataset, eight controls were chosen that were significant and backed by theory. Studies done by the UN have found that poor economic conditions increase the likelihood for conflict. Of the 48 least developed countries (LDC's) as defined by the UN, 24 have been in serious conflicts in a span of thirty years. The World Bank's low-income countries (LIC) group (defined as having GNP per capita less than $725 in 1994) includes 64 countries, of which over one-third experienced conflict.

Even in developed countries, output has historically been correlated with conflict. GDP is the most basic measure of an economy. In 1919, John Maynard Keynes wrote his response to

The Treaty of Versailles being signed in *The Economic Consequences of the Peace.* He stressed that forcing Germany to make payments to the allies, rather than Germany getting a loan to rebuild its economy, would give rise to conflict all over again-

> "If we aim at the impoverishment of Central Europe, vengeance, I dare say, will not limp. Nothing can then delay for very long the forces of Reaction and the despairing convulsions of Revolution, before which the horrors of the later German war will fade into nothing, and which will destroy, whoever is victor, the civilization and the progress of our generation."

The Treaty of Versailles was signed, but Germany fell behind on its payments. Unemployment and inflation skyrocketed, leading to an economic crash in 1923 (Cline, 1988). That same month, Hitler led the Nazi Party in a failed coup against the German government. The Nazi party continued building off the resentment felt by many Germans, and in 1939, WWII broke out.

Economic vulnerability is not just an issue of unemployment, low per-capita income, or high debt-to-GDP ratios, but it is largely influenced by the degree of perceived inequality between groups. Reflecting Marxism, inequality is also controlled for. Inequality creates tensions within society, and, if Marx's predictions are correct, the lower class will eventually rebel. While other measures such as GDP are used to indicate economic well-being, the data can be misleading if there are high levels of inequality. For example, if the top 1% earn more, but the bottom 50% earn a little less, GDP can increase, but in reality, the majority of people are not in a better economic position.

Population has become a common control in conflict analysis. Malthus most famously advocated for population control in order to avoid famine and war in his book titled, *Essay on the Principle of Population.* His main argument was that the population grows at an exponential rate*,* whereas food output grows much slower. This leads to an extreme food shortage, which leads to unrest, conflict, and ultimately, famine. While Malthus' predictions may not have come to fruition, resource scarcity is still an issue states must face, and larger populations lead to demand-induced scarcity (Urdal, 2005). At the global level, resources are much less scarce, so states with higher populations will experience this demand-induced scarcity, then look outward to meet the demand, be it through force or diplomacy.

Regime type is also being controlled for. According to Vreeland (2008), anocracies are more likely to experience civil war compared to pure democracies or pure dictatorships. He argues that pure democracy avoids conflict best because it, "presents the possibility for peaceful collective action." (p. 401).  Ray (1995) says that public opinion has a greater impact on policymakers, making the approval to engage in conflict slower and therefore less likely in democratic states. The regime type variable in the GCRI dataset generates scores from 0-10 for each country, with 10 being pure democracy, and 0 being anocracy. If Vreeland's theory is supported by data, a higher score for regime type should lower the number of conflicts.

Level of repression has both a positive and negative correlation with conflict. Besley and Persson define repression as the, "use of violence by the incumbent government to stay in office, effectively repressing any laten insurgency by the opposition." (Besley and Persson, 2009, p. 292). Moore (1998) studied the outcomes of violent and nonviolent dissidence met with violent and nonviolent state action. The study found an increase in violence when the

state reacts violently to nonviolent dissidence, and a decrease in violence when the state reacts

violently to violent dissidence. Because repression can spur and deter conflict, it is controlled in

this model.

The structural constraints variable addresses structural transformation using

Bertelsmann Stiftung's Transformation Index, which provides, "a knowledge base of factors

leading to success or failure in development and transformation," (BTI, 2018) Essentially, it

looks at how well states are transitioning towards democracy and an open market economy in

hopes of using the data to inform political strategy. In the GCRI model for predicting the

probability of highly violent conflict, this structural variable had one of the highest coefficients,

indicating its effectiveness (Stamatia et. Al, 2017).

Unemployment was chosen as a control because it contributes to economic well-being

as well as discontent. Theoretically, the unemployed have a lower opportunity cost of engaging

in violence. Collier (2007) argues that economic growth is most influential when it comes to a

country maintaining peace post-conflict. While there are challenges in accurately measuring

unemployment in developing countries, Collier argues that employment is, "the likely route

through which growth might affect the risk of violence."

Geographical factors have also been researched and found to be significant in explaining

the behaviors of certain countries. As a resource, water is crucial for growing crops,

industrialization, and basic human health, but as a cause of conflict, the only war over water

was 4,500 years ago in Mesopotamia. However, between 805 and 1984, over 3,600 treaties

concerning water have been signed, but a quarter of these have been under less than peaceful

terms. According to Postel, water disputes "have fueled decades of regional tensions, thwarted

economic development, and risked provoking larger conflicts before eventually giving way to

cooperation." (Postel, 2001, p. 61). Postel argues that water stress is at an all-time high,

creating zero-sum games both between and within countries where one party "wins" and one

party "loses." While the history of water stress has mostly led to cooperation between

countries, the path towards cooperation is often tense, and puts a higher risk on the outbreak

of conflict.

The last variable controlled for is what is called the "youth bulge."  A youth bulge is seen

in population pyramids, "when young adults, aged 15 to 29 years, comprise more than 40 per-

cent of all adults (those 15 and older)." (Cincotta, et al., 2003, p. 43). Similar to the

unemployed, young people are theoretically easier for rebel groups to recruit because their

opportunity costs are lower. Studies have found that military action has tended to coincide with

periods where there is a large portion of youth. For example, dating back to the Ottoman

empire, a large portion of the population were men of the ruling class who were reaching

adulthood. The government could not afford to give them all a high salary, land, or bureaucratic

position. Instead, they were given armies to control so they could venture outward. In more

recent history, political scientists at Canada's University of York have shown that countries with

a large youth population in places like Central Asia are more likely to experience highly intense

conflicts (measured in battle-related deaths per thousand people) than older populations.

(Cincotta, et al., 2003).

**HYPOTHESIS**

The hypothesis of a negative relationship between conflict and globalization and a

positive relationship between the rate of change of globalization and conflict is tested using

panel data from 47 countries between 1989-2010. Table 4 contains summary statistics for key

variables.

## Table 4: Summary Statistics

| Label | Variable | Obs | Mean | Std. Dev | Min | Max |
|---|---|---|---|---|---|---|
| Economic Globalization | glob | 1,039 | 42.58564 | 12.193 | 16.78734 | 82.37633 |
| Rate of Change of Globalization | dx | 1,000 | 0.0085959 | 0.0757626 | -0.2626225 | 0.5049728 |
| Unemployment | unemp | 1,026 | 5.515189 | 2.18873 | 0 | 10 |
| Youth Bulge | youth | 1,026 | 7.985712 | 1.223571 | 2.194406 | 10 |
| GDP per Capita | gdp_cap | 1,026 | 6.517139 | 1.523765 | 2.468641 | 10 |
| Population | pop | 1,026 | 3.863515 | 1.514114 | 0.3379074 | 7.571908 |
| Structural Constraints | struct | 1,026 | 7.718368 | 1.661948 | 3 | 10 |
| Water Stress | water | 1,026 | 4.110889 | 1.796396 | 1.710004 | 10 |
| Regime Type | reg | 1,026 | 4.715751 | 2.750099 | 1 | 10 |
| Income Inequality | inequ | 1,026 | 4.844661 | 1.693279 | 2.028978 | 10 |
| Repression | repress | 1,026 | 5.41423 | 2.624733 | 0 | 10 |

This hypothesis reflects the liberalist view that the correlation between conflict and

globalization is negative, as well as reflects the influence of the above controls, and predicts

that the correlation between the rate of change of globalization and conflict is positive:

$$conflict = \alpha - \beta_1(\text{glob}) + \beta_2(dx) + \beta_3(unemp) + \beta_4(youth) - \beta_5(gdp_{cap}) + \beta_6(pop)$$

$$+ \beta_7(struct) + \beta_8(water) - \beta_9(reg) + \beta_{10}(inequ) + \beta_{11}(repress)$$

**REGRESSION MODEL**

To analyze the effects of globalization and the rate of change of globalization, seven

regressions were built. Table 5 contains the output for each of these regressions. The

dependent variable is the number of conflicts, with the independent variables being

globalization and the rate of change of globalization, while controlling for the variables

discussed above. The rate of change of globalization was calculated with the following

equation: (glob-glob[_n-1])/glob[_n-1].

The first regression just looks at globalization and the rate of change of globalization

without controlling for anything. The negative coefficient on globalization indicates that higher

levels of globalization are correlated with lower levels of conflict. On the other hand, the

positive coefficient on the rate of change of globalization indicates that higher rates of change

in globalization levels is correlated with more conflicts. Although globalization is more

statistically significant in this regression, the coefficient on the rate of change of globalization is

over 90 times greater than the coefficient on the globalization variable, indicating that the rate

of change of globalization has a significantly higher impact on conflict.

$$conflict = \alpha - 0.0152(\text{glob}) + 1.377(dx)$$

## Table 5: Regression Results

| | (1) Number of Conflicts | (2) Number of Conflicts | (3) Number of Conflicts | (4) Number of Conflicts | (5) Number of Conflicts | (6) Number of Conflicts | (7) Number of Conflicts |
|---|---|---|---|---|---|---|---|
| Globalization | -0.0152** | -0.00529 | -0.00431 | -0.00337 | -0.00317 | -0.000267 | 0.00214 |
| | (0.018) | (0.450) | (0.512) | (0.609) | (0.640) | (0.970) | (0.744) |
| Rate of Change of Globalization | 1.377* | 1.094 | 1.086 | 1.075 | 1.069 | 0.970 | 0.369 |
| | (0.074) | (0.174) | (0.171) | (0.177) | (0.180) | (0.228) | (0.640) |
| Unemployment | | -0.0570 | -0.0486 | -0.0647 | -0.0641 | -0.0638 | -0.0557 |
| | | (0.129) | (0.199) | (0.106) | (0.112) | (0.112) | (0.203) |
| Youth Bulge | | 0.324*** | 0.390*** | 0.392*** | 0.391*** | 0.411*** | 0.291*** |
| | | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.003) |
| GDP per Capita | | 0.0228 | -0.254*** | -0.245*** | -0.243*** | -0.254*** | -0.197** |
| | | (0.738) | (0.003) | (0.005) | (0.006) | (0.005) | (0.040) |
| Population | | 0.135** | 0.0499 | 0.0478 | 0.0463 | 0.0422 | -0.103 |
| | | (0.019) | (0.395) | (0.416) | (0.441) | (0.482) | (0.125) |
| Structural Constraints | | | 0.395*** | 0.403*** | 0.404*** | 0.407*** | 0.141* |
| | | | (0.000) | (0.000) | (0.000) | (0.000) | (0.052) |
| Water Stress | | | | 0.0721 | 0.0710 | 0.0537 | -0.00317 |
| | | | | (0.260) | (0.272) | (0.410) | (0.967) |
| Regime Type | | | | | -0.00373 | 0.00256 | -0.0220 |
| | | | | | (0.907) | (0.937) | (0.480) |
| Income Inequality | | | | | | -0.0745 | 0.0162 |
| | | | | | | (0.165) | (0.757) |
| Repression | | | | | | | 0.336*** |
| | | | | | | | (0.000) |
| Constant | -0.408 | -3.879*** | -5.524*** | -5.893*** | -5.882*** | -5.700*** | -4.866*** |
| | (0.122) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) | (0.000) |
| Observations | 556 | 556 | 556 | 556 | 556 | 556 | 556 |
| Pseudo $R^2$ | 0.010 | 0.050 | 0.091 | 0.093 | 0.093 | 0.095 | 0.221 |

Regressions 2-6 slowly add more controls to the model. The output of Regression 2 is

below. Once controls are added, neither globalization nor the rate of change of globalization

are significant. However, the p-values for globalization increase dramatically from 0.018 in the

first regression to 0.970 in the sixth regression, whereas the p-values for the rate of change of

globalization only increase from 0.074 to .228. This indicates that the rate of change of

globalization, while not being the most significant explanation for conflict, is more correlated

than just the level of globalization.

$$conflict = \alpha - 0.00529(\text{glob}) + 1.094(dx) - 0.0570(unemp) + 0.324(youth)$$
$$- 0.0228(gdp_{cap}) + 0.135(pop)$$

Controlling for repression in Regression 7 had a major impact on the model. Both

globalization and the rate of change of globalization are significant for only about 30% of the

data, and, most notably, the coefficient on globalization became positive. While further

research must be done to explain this, I hypothesize that highly repressive nations, like North

Korea, are more secluded, participating less in the global market, and experience less

globalization.

$$conflict = \alpha + 0.00214(\text{glob}) + 0.369(dx) - 0.0557(unemp) + 0.291(youth)$$
$$- 0.197(gdp_{cap}) - 0.103(pop) + 0.141(struct) - 0.00317(water)$$
$$- 0.022(reg) + 0.0162(inequ) + 0.336(repress)$$

**IMPLICATIONS**

Based on economic, social, and political factors, the regression model gives insight into the significance and scope of the effect globalization and the rate of globalization have on conflict. While no causal claims can be made, we can make observations based on the results. Looking at the big picture, this paper shows why there is a dialogue with competing theories regarding the relationship between globalization and conflict. First, the data officially supports the realist theory that factors other than globalization are what influence conflict since both globalization variables lost significance once controls were added. However, despite not being significant, the data does support the liberalist theory that globalization and conflict are inversely related. This means that, holding the rate of change constant, a more economically integrated nation experiences less conflict. Lastly, the data shows that the rate of change of globalization is positively correlated with conflict, which would support Marxism. This means that when businesses, governments, and NGO's make a big change in factors such as FDI and trade, they could be having a negative impact.

This paper also leaves room for further research. As mentioned before, distinguishing between interstate and intrastate conflict could add to our knowledge. Furthermore, controlling for endogeneity and reverse causality could provide keen insights on how the rate of globalization impacts conflict since factors that influence globalization and conflict are closely tied. By delving deeper into this research, one of the three theories could prove to be correct, which would further inform the way countries interact through globalization.

Combining these findings, organizations can justify their global integration since increased globalization lessens conflict, and also strategize how many resources they will devote in a year, favoring a slower integration in order to not dramatically increase the

likelihood for conflict. However, to have the greatest impact on lessening conflict, organizations should target some of the factors that were controlled for that were the most significant such as the youth bulge, GDP per capita, and structural constraints.

The last major implication is that countries must address their internal repression to prevent conflict before turning towards globalization as a source of peacekeeping. Repression was found to be the most significant variable in the model, meaning that of all the variables, repression is most correlated with conflict. In countries with repression, all of the other variables, including globalization and the rate of globalization matter much less. In countries with no repression, more factors have a significant impact on conflict, and the rate of change of globalization becomes much more significant than the level of globalization.

These findings further the dialogue of the relationship between globalization and conflict. The paper finds that the theories of liberalism, realism, and Marxism aren't necessarily in direct opposition. Rather, while other factors are more important in addressing conflict, globalization acts to lessen conflict, while high rates of change of globalization have the opposite effect. In an increasingly globalized world, policy makers and business leaders can use these findings to better address conflict and work towards a more peaceful world.

**FAITH ADDENDUM**

Since I started taking economics classes at SPU, I have been fascinated by trade and globalization. Moving from a small town of 200 people to a city like Seattle showed me how big and populous, yet how small and interconnected the world is. In my research paper on trade, I noticed a gap between theory and practice in trade policy. Trade theory says that trade makes everyone better off, but as we see today, there are pushes for inward-facing protectionist policies. Through this research and related classes, I learned how critical trade is for development and growth, both in terms of GDP, but also for human capital. In short, trade increases capacity.

From a development perspective, my studies have touched on conflict hindering development. An increasing number of the poor live in fragile and conflict-affected countries. My interest in development primarily came from my religious background. The church I grew up attending was very evangelical, so serving others was always held in high esteem. Although I am no longer religious, I am still passionate about service in the international community, and about finding ways to improve the lives of those living in lesser developed regions. Finding ways to reduce conflict is one means of doing this. This is why I chose to study development economics. It is essentially the secular, academic version of being a missionary. Truth in economics is found in time and experience. Unlike natural sciences, we cannot conduct economic experiments in a lab. The world is the lab of economists. Economic truths then, can only be discovered with time.

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