PRINTING CONFLICT: INFLATIONARY MONETARY POLICY AND THE LIKELIHOOD OF WAR

by

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(Under the Direction of Maurits van der Veen)

ABSTRACT

The role of domestic economic activity as a motivator toward state conflict has long assumed a secondary position to the more tangible instruments of state power. Domestic manipulations of the money supply have rarely been discussed in conjunction with interstate behavior. The purpose of this paper is to bridge the gap between inflation and aggression. First, this paper will lay the theoretical framework connecting changes in the money supply to a state's propensity to initiate hostility. Secondly will follow a discussion of the mechanisms by which a state engages in this behavior. Finally, data collected from a thirty year period in the twentieth century will be tested to determine the explanatory power of inflation on the likelihood of a state to initiate conflict.

INDEX WORDS: International Conflict, Inflation, Monetary Policy, Democratic Peace, Diversionary War, Currency, Currency Union, Bretton Woods

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CHAPTER 1

INTRODUCTION

"I sincerely believe the banking institutions having the issuing power of money are more dangerous to liberty than standing armies."

– Thomas Jefferson

The effect of inflation on state behavior is a topic frequently overlooked in international relations. While much of the literature focuses on the causes of war, this potential explanatory variable remains neglected. Severe inflation may be one initiating force behind the mechanisms of political stability, protection of sovereignty, and domestic uncertainty often cited in the literature as the sources of hostile actions by states. High inflation brought about by domestic monetary manipulations may spur one of these causal mechanisms into action, driving a state to initiate a conflict, whether diplomatic or military.

States are driven to protect the value of their currencies. Regardless of which mechanism causes the hostility, the money supply is fundamental to the relationship between economic strength and military might. Guns and missiles are only acquired by payment, and so the foundation of military might is economic capability. At the core of any state's ability to finance their military is the medium of finance itself: the national monetary unit.

The central bank holds the chief responsibility in the protection of this monetary unit. Unlike militaries and foreign policy making apparatuses, central banks do not take action in order to defeat foreign enemies or coerce other states. They take action for domestic economic security. Manipulation of the money supply, as advocated by economists from Keynes to

Friedman, may stabilize a slowing economy, lower unemployment, or relieve pressure from domestic sub-sectors. However, these money supply increases can have the unfortunate effect of inflating prices.

As is so often the case with political policies, foreign or domestic, unexpected consequences are inevitable. As the process of globalization expands, a domestically unintended consequence of a political policy is increasingly likely to have international effects. The trauma caused by a domestic monetary crisis reverberates throughout the international system. The purpose of this paper is to capture this reverberation as the inflating state struggles to gain control over its domestic currency crisis, increasing its probability of initiating hostility as it seeks to drive attention away from itself as the true source of the problem.

CHAPTER 2

INFLATION: THE INADVERTENT PATH TO WAR

States create situations of increased hostility by inflating currency for domestic economic reasons. As indicated by Hayek, Mises, Rothbard and Greenspan, governments pursue inflationary policies as a means of paying existing debts and feeding government sector growth. States are pressured by two competing factors in policies dealing with their currency supplies. A strong national currency is useful tool in maintaining of sovereignty. Competition in the world, whether economic or military, is reliant upon a strong currency. When this attempt to manipulate the domestic currency surpasses the point where the economy can absorb the increased financial capital, it has the potential to heighten the aggression levels of the state.

States pursue inflationary monetary policy intentionally. However, inflation is the symptom, not the end goal, of this central bank policy. States will inflate their currencies for a myriad of reasons, including domestic economic instability, the expansion and centralization of government, or to protect domestic interests against foreign competition. The more extreme the domestic concern, the more severe the potential inflationary pressure. Not all inflation is necessarily destructive. Some economists have argued that low levels of inflation are not only a side effect of economic growth but can also have a stabilizing effect on a domestic economy, preventing dramatic swings in the business cycle. The monetarist approach advocated by Milton Friedman, and dominant in the modern United States, prescribes inflation of approximately 2% per annum in order to maintain low unemployment and stable growth. While such an approach is not immune from dispute, low levels of inflation are not the driving force behind conflict

initiation or the focus of this paper. Instead, it is at an unidentified "crisis point" that the value of inflation become interesting in determining state behavior (Corrigan 2008). As the inflation level increases, the addition of fiat currency to the domestic market creates a balloon of financial capital which does not exist in coordination with "pure" or physical capital (Hayek 1931; 1941). As a result, asset bubbles form due to the excess financial capital within the domestic economy. Whether the 1920's stock market or the current housing crisis, these financial asset bubbles will at some point burst. The bubble bursts because of economic fears regarding the higher prices.

As prices rise, due to inflation, wage rates also increase. At inflation levels below a doubling or tripling of prices, these increases go largely unnoticed, and may be subsumed by economic growth. While there exists some debate on the relative effects of double digit inflation, common throughout the world but deemed excessive in western terms, this paper will focus on triple digit inflation and beyond into hyperinflationary levels. At this crisis level, the increases cause a decrease in domestic production, thereby further increasing the costs of goods and services. As prices increase and wage rates struggle to keep up to the mounting inflationary problem, demand for goods and services lag behind, deteriorating consumption. In an economy subject to monetary expansion, the point at which people begin to conserve and not consume sets in motion the processes necessary to bring about the initiation of hostile actions. This point is never specifically identified in the literature and is likely dependent upon the nature of the affected economy. A well developed credit economy should be able to absorb the influx of financial capital created by a dramatic money supply increase more readily than that of a simple agrarian economy; the value may be both spatially and temporally dependent. By determining the point at which inflation has its most dramatic effect on hostility leves, while controlling for region, wealth, and trade interdependence, the average point of *over*-inflation should be apparent.

While this paper analyzes the potential statistical relationship between money supply manipulations and conflict initiation, there are a series of mechanisms by which inflation influences the domestic populace and the government in order to bring about such an outcome. Central banks inflate currency for the domestic reasons listed above, but the unintended consequence of the money supply increase is its effect on the foreign policy decision making apparatus. Inflating the money supply can create domestic uncertainty among the populace by undermining individual currency holdings or decreasing the domestic stability of the government. Both results of currency manipulation may increase the propensity of government to initiate conflict in order to divert attention from domestic economic trouble toward an international military struggle (BDM 1990; BDM 1995; Fearon 1994; Morgan 1992). This diversionary act is an attempt by the inflating state to maintain legitimacy of government in the face of an economic crisis.

Another possible mechanism of inflation causing increasing aggression is concerns over sovereignty. Viewing their currency as the physical embodiment of national sovereignty, states may perceive inflation as a determined undermining by an external force. States choose to initiate conflict in order to protect their currency. In this mechanism of inflation causing conflict, no actual external currency manipulation takes place, but instead inflation occurs due to central bank policy. The domestic increase in the money supply causing inflation is misattributed to some external actor.

Figure 1 outlines the causal process whereby inflationary monetary policy is filtered through three potential mechanisms which lead government to initiate hostility against other states.

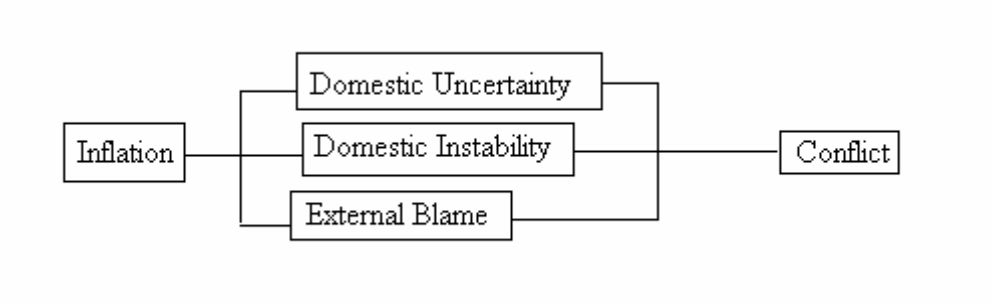

Figure 1: Causal Effect of Inflation on Conflict

As mentioned, states will inflate their currencies for a myriad of reasons, ranging from the domestic uncertainty and instability to economic growth and political maneuvering. This allows for the potential criticism of endogeneity or the prospect that inflation is spurious to the causal chain between domestic uncertainty or instability and conflict. This paper does not deny the possibility that inflation will occur as a result of domestic instability, but instead claims that inflation as a reaction to this instability will only exacerbate the domestic problem, further increasing the probability of aggressive international action by the inflating state.

No one mechanism is the exclusive explanatory process by which inflation leads a state to conflict. Multiple effects may occur in conjunction with one another. A discussion of each causal factor, as well as competing explanatory variables, follows.

CHAPTER 3

DOMESTIC UNCERTAINTY

Uncertainty is directly tied to the effects of inflationary policy on the propensity toward conflict initiation. There exists a nominal difference between sound fiscal policy, where money supply increases go unnoticed by citizens, and inflationary policies causing sudden devaluations and financial uncertainty (Friedman 1963). Depending on the size of the money supply increase, the corresponding inflation may be sufficiently large to cause citizens to feel uncertain in their financial futures. The citizens of a state with uncertainty concerning their economic well being will influence decisions made by the political institutions which govern them. Governments, in a drive for self-preservation, must diminish this uncertainty either by ending the inflation or directing the attention of the audience elsewhere. It is important to note that this type of psychological uncertainty pervading the domestic populace is not similar to the type of misperception that takes place in the external instability argument further in the thesis. The nature of uncertainty is particular to the individual, effecting individual behaviors which in aggregate affect the behavior of states.

As central banks operate above the oversight of the average citizen, either due to secrecy or the intellectual level of monetary economics, it leaves the citizen ignorant of activities until after policies are enacted. A sudden period of inflation therefore may occur without warning to the individual. This secrecy among central banks thereby increases insecurity among the populace (Kirshner 1995, 30l; Macesich 1992, 28).

Inflation will breed domestic uncertainty, as citizens experience a decline in the value of their currency holdings and an increase in their cost of living. Insecurity, met with uncertainty brought by sudden inflation, results in a psychology of fear prompting external aggression. As citizens become more uncertain and fearful, the likelihood of xenophobia and external hostility will increase and states will become more likely to initiate conflict (Kirshner 1995, 10).

Beyond the logistical process by which tangible financial insecurity may drive a state toward conflict initiation, the psychology of money also plays a motivating role. The monetary unit is a physical representation of state power and economic prowess, as unique and important to national identity as history and political institutions (Stasavage 2003). Maintenance of the currency intertwines the well-beings of the individual, the nation, and the state into a single government issued bank note. The fiat currency, decorated with great monuments and leaders, provides the state with a nationalistic identity, no matter how artificial. If the currency becomes undermined, similar to undermining of religious or nationalist identity, individuals will reinforce their polarizing national identities in self-defense (Kinnvall 2004). Citizens will begin to classify non-citizens in "us vs. them" terminology, and through this polarization demand action against out-group members (Brewer 2001). As uncertainty can lead to ethnic or religious conflict, so an uncertainty in the currency, the physical embodiment of national identity, can lead to international conflict.

As the currency deteriorates, the people become driven into volatile nationalistic fervor in synchronization with a weakening of the domestic economy. As a result, citizens will demand action of their leaders for some solution. The resulting civil strife will pressure leaders into more risk acceptant positions, choosing to initiate an international conflict to relieve the domestic tensions and satisfy the demand by the populace to punish an "outgroup" for their "ingroup"

insecurities. Caught in this nationalist fervor, the true problem of inflation will remain ignored as focus shifts toward punishing others.

CHAPTER 4

DOMESTIC INSTABILITY

Regardless of regime type, governments seek the maintenance of domestic stability and the preservation of political power. When inflation causes a government's approval to deteriorate among the domestic group which maintains their legitimacy, a state may initiate hostility to divert attention away from the monetary problem and onto a diplomatic crisis. Every state, regardless of regime type has some minimum threshold of selectorate consent that must be maintained in order to exist (BDM 1999). If problems are decreasing that consent, initiating a conflict can cause a rally around the flag effect, shoring up support for the government.

The legitimacy of a government, and any policy produced by that government, is dependent upon the maintenance of some level of base support amongst the governed. So long as a minimum threshold of consent from a selectorate exists, the existing institutions will be maintained. This selectorate may range from a majority of the electorate in a democratic system to a small ruling coalition of elites in an authoritarian system. Regardless of the form, any policy, whether focused on liberty or tyranny, may exist with this threshold of passive consent. In a liberal democracy, transparency in government, combined with the check of popular elections, permits the citizens to prevent government policies beyond a majority's preferences. Central banks are an exception to this assumption, conducting and implementing policy shrouded in secrecy and independent of political institutions. From a practical standpoint, democracies seek to prevent popular or political interests from manipulating monetary policy in hopes that an unbiased central bank will pursue a policy of greatest good for the majority of citizens

(Cukierman 2003). However, central banks will have some constituent interests if not among citizens, then among the domestic banks which assist in the implementation of monetary manipulation. Democracies look toward their central banks as benevolent institutions with an almost authoritarian control over the value of currency. Given this important classification, regime type alone does not subsume central bank policy in its explanatory capability in predicting hostility levels.

Democracies have higher audience costs yet leave central banks as monetary dictators. The central bank operates free of consequence and political pressure to coerce their behavior. If a central bank does enact a disastrous policy, the popularly elected government is more likely to suffer the consequences than the central bankers. Governments thereby must do what is in their power to try and counter these negative policies, even if monetary policy is beyond their purview. With an inability to directly interfere in the monetary arena, they are left with two options when faced with inflation: increase government interference in society to maintain stability or use foreign policy to distract and unite the populace.

Faced with the potential for domestic conflict, the state will look beyond its borders for a means of solving its domestic unrest. Regardless of whether democratic or authoritarian, the inflationary action of a central bank will be viewed as a result of the ruling coalition in government, even if that central bank is independent. The degree of central bank's failure is integral in predicting how a government will respond to placate the populace. If government criticizes the central bank, it will appear juxtaposed to itself, heightening the level of domestic instability (Schultz 1998). Therefore, a strategy of aggression is preferable to mask the economic problems and rescue the state economy, committing the state to an unavoidable path toward war. This commitment, motivated by domestic instability, better explains state hostility

than alternative traditional explanations of military capabilities or shifts in relative power status (Maoz 1983).

Politically vulnerable states will engage in war to defend their domestic legitimacy (Leeds 1997; Mansfield 1995; BDM 1999; Fearon 1994). The core of such legitimacy is the production and maintenance of money (Kirshner 1995), and any actions of the central bank to inflate the currency will dramatically increase the propensity of the state to initiate conflict. Leaders will be prompted by the domestic instability caused by inflation to pursue aggressive foreign policies to create rally around the flag effects, minimizing domestic unrest (Mabe 1999). As long as this domestic unrest exists, the leader will continue to perpetuate the conflict, and the existence of domestic opposition, in this case motivated by financial crisis, will serve to minimize the likelihood of a resolution (BDM 1990).

The move to conflict initiation may also result from a series of logrolling actions by domestic groups. Domestic interests will jockey for power positions and the achievement of policy goals that in aggregate lead to a state's behavior in the international system. States using central banking as a means of affecting the economy act to achieve a preferred outcome in conjunction with this log-rolled interest. Therefore, simultaneously a state will be pressured to inflate the money supply for the defense of certain domestic industrial sectors, while pushed toward potential conflict by producers seeking to open foreign markets or gain access to resources. The differing groups will exchange support causing a money supply increase to continue while blaming the resulting inflation on some external target. The foreign policy apparatus of government then is included within the log-rolled interest, exchanging an act of conflict initiation for domestic stability and maximization of power (Snyder 1991, Hayek 1944).

Institutional constraints may combat the conflict initiation caused by this logrolling propensity. However, monetary manipulations remove restraints on decision makers by decreasing the ability of domestic opposition to oppose the government imposed inflation. Governments on the brink of destruction can pursue a successful policy of self-preservation by using conflict initiation to maintain a selectorate of sufficient size in conjunction with severe inflation to impoverish domestic opposition.

CHAPTER 5

EXTERNAL INSECURITY

This section outlines the potential process through which a state will mistake an external actor for the cause of inflation. In reality the inflation occurs due to a domestic increase in the money supply. However, if a state is assuming a potentially hostile dyadic relationship with another state, their sensitivity toward turmoil instigated by that opponent will be heightened. A state already suspicious of another may interpret the inflationary turmoil caused by its central bank as instead an aggressive financial move by a competitor. This propensity toward misperception is driven by the distortion of information in the decision making apparatus (Jervis 1976). The effects of inflation will motivate decision-makers to immediately cast blame beyond their own areas of responsibility. Compounded with poor diplomatic relations with another state, the harmful domestic problem originating in government may easily be misinterpreted by that government as harmful acts by a foreign power.

As economic strength is the foundation for military power, the strength of a state's currency is of primary importance to power considerations. Monetary economics, diversionary war theory, and uncertainty in identity theory all indicate a state may initiate conflict to defend the status of their currencies. States refuse to recognize themselves as the source for the devaluation and respond by lashing out at a suspected external antagonist. In this final mechanism by which sever inflation causes conflict initiation, the state mistakes the inflation caused domestically by the central bank as an attempt by an external actor to undermine the national currency.

The national currency of a state is the physical embodiment of that state's sovereignty (Stasavage 2003). Just as a state will pursue any means necessary to preserve their sovereign independence and freedom from coercion, they will pursue similar means of protection over their monetary wellbeing. Wealth is power, and control over the value of a national currency is the ability to manipulate, preserve, and create wealth. Power, military strength, and international influence are unattainable beyond national currency.

The search for an external aggressor is not historically unjustified. Instances of currency manipulation for the purposes of harming your enemies occur as far back as the Persians attempting to flood Greek financial markets with currency in Thucydides' *Peloponnesian War*. Monetary manipulation has proven an effective tool as a coercive means of diplomacy throughout the twentieth century, so we may expect states to prepare to safeguard their economic well-being against such ancient strategic exploits.

The value of a state's currency may potentially overshadow any relative military capabilities it possesses. Kennedy quipped about the British during the low point of the pound's value, "Britain has nuclear weapons, but the pound is weak, so everyone pushes it around" (Schlesinger 1965, 654). Prior to Kennedy's statement, the United States had effectively manipulated its reserves of British currency to threaten the United Kingdom into withdrawal in the Suez Crisis and betrayal of their French and Israeli collaborators. The humiliation in face of an international crisis paled in comparison to a potential undermining of the national currency (Kirshner 1995, 3).

Manipulations of the money supply made to protect the domestic economy from such external threats will negatively impact the value of citizen's currency holdings. Governments reliant upon such exporting business interests could result in an undermining of their legitimacy

by practicing currency manipulation (Kirshner 1995). Even if a state is not mistaken and their currency is under threat from an external actor, the printing of fiat currency as response will inflate the currency, undermining itself anyway, making conflict unavoidable.

CHAPTER 6

INDIA AND INDIRA GHANDI

India's sudden involvement and eventual war with Pakistan in the early 1970's provides a ready instance of inflation's ability to exacerbate a state's aggressive behavior. Toward the end of the decade, India had experienced a brief period of relative tranquility in their diplomatic relations with Pakistan following the Indo-Pakistani war of 1965. Indira Ghandi had risen to prominence and the office of Prime Minister by a series of media intensive moves on the front lines of the conflict organizing local anti-Pakistani resistance. These lessons of manipulating a militarized dispute for domestic political gains would be used again by Ghandi throughout her political career.

Ghandi spent the early years as Prime Minister attempting to solidify her power within the Indian National Congress. The intra-party disputes forced Ghandi to rely upon leftist and socialist parties to maintain control. As a result, further government assistance was extracted for Green Revolution programs to cultivate India's agricultural autarky and net-exporting position (Farmer 1986). To accomplish these political ends, Indira Ghandi nationalized India's banking institutions, and served as Finance Minister of India from June 1970 to April 1971. The transition in fiscal policy, driven by Indira Ghandi's attempt to consolidate personal political power, is apparent in the shift of India's money supply growth during the period from 7% in 1969 to 139% in 1970. As a result, the economic tumult suddenly enacted by Ghandi's fiscal policy raised India's already dismal level of poverty, reversing many of the economic gains of the post-1965 period. These very gains assisted in the solidification of power by Ghandi who

approached the 1971 election with the *Garibi Hatao* platform of abolishing Indian poverty, honing the blame for India's economic troubles on external interference by the Pakistanis, Chinese, and Americans (Rath 1985).

At this point in the approach to the 1971 conflict, the first two steps of the causal chain are apparent: inflation and domestic uncertainty. Ghandi's sudden 1970 inflation had not arisen out of domestic discontent or an attempt to mobilize military forces. Instead, the fiscal policy was enacted purely for political maneuvering purposes. Ghandi used the infusion of financial capital to "purchase" support among the lower classes, and was then able to manipulate the economic side effects of the currency infusion for political gain. This economic tumult contributed to the domestic uncertainty of financial futures, developing a rally around the Prime Minister effect and launching a tremendous poll victory. Simultaneously, in-group out-group divisions were underscored by the ensuing economic difficulties as external actors, particularly Pakistan and the United States, were blamed for the crisis.

As 1971 dawned, Indira Ghandi began looking for some external means of venting the domestic frustrations. The opportunity came with the rising violence in East Pakistan, in which India not only fully supported the Bangladeshi rebels, but completely opened India's borders to refugees and guerillas. At first glance this decision does not clearly fit within India's interest, as the costs of accumulating the sudden inflow of refuges was beyond the already overstretched government's ability to finance and defied the wishes of both China and the United States. In order to avoid the diplomatic crisis which ensued from India's overt support, Indira Ghandi went on a diplomatic tour of Europe and drew closer to the Soviet Union in order that the Chinese and Americans might be restrained in any direct military intervention against India's involvement. India's diplomatic aggression resulted in overt warfare with Pakistan by November of that year.

While India's engagement in armed conflict with Pakistan does not come as a surprise given its lengthy history of military disputes, the timing of the 1971 struggle between the two countries can be heavily contributed to Indira Ghandi's management of the rupee. Weary from the 1965 conflict, India was making efforts to further domestic economic growth and improve relations with the West. The 1971 conflict is a sudden reversal of this brief episode in the late sixties, fed by the inflationary policies of Indira Ghandi intended to solidify her own political power. The inevitable conflict between East and West Pakistan was certainly one that India could not have avoided, but instead of managing the situation toward India's benefit at minimal costs, Ghandi brazenly supported Bangladeshi rebels. This action forced her to spend much of the lead up to the autumn conflict repairing diplomatic damage and forcing closer ties with the Soviet Union. The rationale behind what appears a strategic blunder was the domestic instability and economic unrest caused directly by Indira Ghandi's financial mismanagement and dramatic inflation.

CHAPTER 7

ALTERNATIVE EXPLANATIONS

Democratic Peace

The relationship between government and money supply manipulations may operate as an extension of the development of democratic political institutions. The behavior of central banks may be subsumed by regime type. In a democratic society, private property requires the preservation of the market by political institutions. Included in this protection of property are individual financial holdings. Governments in liberalized societies may be constrained in their aggressive behavior by political institutions. Aggressive action by the state, including a central bank, may only be taken with popular consent. In these societies, any central bank manipulation will be limited to small currency infusions to affect interest rates and prolong economic growth. Such small infusions are unlikely to affect state behaviors.

Sound central bank policy may be considered an assumption of liberal democratic government. Stable democracy must first be preceded by a domestic dedication to economic liberalism (Zakaria 2003). Therefore, democratic states by their institutional nature may have a decreased propensity to inflate their currencies, in addition to a decreased propensity to initiate conflict (Morgan 1991; O'Neal 1997). If so, any significance to money supply increases will be rendered irrelevant in the face of a regime type control variable.

However, a central bank undermining a currency is contradictory to, and a harmful action against, the preservation of liberal democratic government. F.A. Hayek (1944) argues in *The Road to Serfdom* that regardless of the type of restrictions imposed by government, restrictive

institutions allow intervention over time to permeate every aspect of individual liberty. A central bank's inflation of the currency can be perceived by the domestic society as an example of such a restrictive institution. Fitting Hayek's theory, central banks intervene economically by inflating the currency forces political systems to increase levels of domestic regulation in the broader society. As regulation increases, society trends away from liberal democratic institutions. Despite this struggle between government stability and inflating the money supply, central banks will maintain unrestrained control over monetary policy, despite the potential for disaster, preventing any perceived future beyond their own self-preservation (Przeworski 1999, 66).

The addition of a control for regime type subsumes other forms of institutional effects on monetary policy or conflict, including the potential for endogeneity within the model. As discussed previously, inflation may take place to feed government sector growth. The manipulation of that currency through inflation enables short term domestic gains or the immediate financing of military mobilization (Kirshner 1995, 12). Furthermore, even if diversionary war is the motivating factor, it may permit the central bank to continue inflationary policy in order to fund the undertaken military operation. However, inflation directly driven by a desire to initiate conflict is dependent upon the ruling government's ability to control the central bank. The more independent the central bank, the decreased ability of the government to coerce central bankers to provide financial capital to ease the costs of military mobilization. This institutional constraint is closely correlated with the level of democracy within a country. More democratic states also have more independent central banks (Lohmann 1998; Berman 1999), and are thereby less able to inflate their currencies for mobilization purposes.

Two terms are therefore included in the statistical model to control for the competing explanations of democratic peace and institutional type. First, polity scores are included to account for the effects of regime type on conflict initiation. Secondly an interaction term between regime type and increases in the money supply is included to determine whether authoritarian states capable of causing inflation to fund conflict increase or provide significance to the inflation variable.

Currency Unions

There are two competing explanations for the intended control of currency unions in our model, dependent upon whether states seek absolute or relative gains. States seeking absolute gains will choose strategies of cooperation (Moravcsik 1997). States in a free market system, even one of anarchy, are prone toward cooperation in order to maximize gains. Cooperation becomes the dominant strategy as a means for maximizing gains, and non-cooperative states will eventually lose and be eliminated from the system (Axelrod 1985). The international monetary system is a byproduct of this strategic cooperation incentive, painting a portrait of countries forming monetary blocks relying upon the economic well-being of currency union members for the success of their own economies.

Integration into a highly structured currency union may be an institutional constraint on the ability of the state to enact policy independent of other currency union members. As a result, currency union members are encouraged to engage in consensus level monetary policy, shifting monetary manipulation toward international action. With greater interdependence, the policies controlling the printing of money extend internationally to a large grouping of states. Therefore, with multiple audiences to satisfy in multiple states, the propensity of state to engage in dramatic inflation will be markedly reduced.

Alternatively, the relative power perspective may shed light on why states in currency unions may be restrained in their ability to manipulate their currencies and initiate conflict. In this relative power perspective, the force of the currency union goes beyond any absolute gains acquired by all states to the power of the dominant state exercised over the lesser currency union members. A state may be constrained in monetary entrapment by the dominant state in the system. By not abiding by the currency union rules or engaging in foreign policy practices beyond will of the currency hegemon, the state may be punished with expulsion, economic destruction, or even military violence (Kirshner 1995). In currency unions, sponsoring governments offer high levels of economic incentives to entice states to lobby for membership, making the cost of not joining so large that cooperation becomes irresistible. Consequently, the currency union can hold the threat of expulsion from the organization over other states as a means to coerce their behavior. Even within the confines of a currency union, states alter their behaviors in order to gain admission and maintain membership. States are coerced by the dominant state to behave as the currency hegemon demands, both fiscally and militarily, or face expulsion. Expulsion from currency union benefits declines the pariah state's relative power status relative to the remaining currency union members.

As with democratic peace, controlling for currency union existence and size safeguards against significance from inflation causing conflict being an artifact of the integration of a currency with those of other states. Any effect of the money supply on conflict may not only be subsumed by the currency union, but also union membership encourages peaceful cooperation and an inability to initiate conflict without broad based consent by the currency union members. Under similar institutional processes as the democratic peace theory, it is expected that the

increased audience costs acquired by currency union membership will further constrain states in the initiation of conflict.

Wealth

In order to accumulate wealth, individuals must be permitted to operate unrestrained by the arbitrary coercion of government (Hayek 1960, 11). Subsumed within the freedom from coercion is the individual's ability to manage economic affairs in the form of private property. Private property and political liberty develop in conjunction, for as free markets become more pervasive, so does productivity, social cohesion, and democratic political institutions (Friedman 1962; Glaeser 2004). The side effect of this increased liberty, institutions, and resulting wealth is the expectation of stability in the means of exchange. A disastrous monetary policy will be less tolerated by the wealthy society than it will the poor.

Wealth does not operate independent of the processes outlined in the above theoretical discussion, but instead replaces inflation as the primary explanatory variable. States accumulate wealth through the enforcement of property rights and a reduction in transaction costs among producers and consumers (Wittman 2000). The enforcement of property rights and reduction of transaction costs cultivate financial security and domestic stability among the populace. The byproduct of this process is high levels of per capita GDP. Wealthy states with content populaces will be less likely to initiate the financial hardships associated with conflict both in terms of military mobilization and the disruption of commerce. However, in low per capita GDP states, the stakes are lower uncertainty regarding financial futures is more expansive. As individuals struggle to maintain the basic necessities of existence they are unable to easily engage in commercial activity to improve their quality of life due to heavy transaction costs

placed upon them by governments. These governments exist in more precarious positions and are thereby more risk acceptant in their behaviors.

The international reserve position of a state is a direct reflection of that state's relative wealth through trade (Heller 1970). By engaging in trade, states develop interdependence, increasing the relative costs of engaging in conflict. This dependency then decreases the likelihood of a conflict initiation as the state security becomes integrated with its trading partners. A state heavily dependent on trade will be unlikely to engage in conflict as it will debilitate its own ability to remain secure in isolation (O'Neal 1997). However, the nature of the trading relationship has also been demonstrated to be an important factor, and may even increase the likelihood a state engages in conflict. Extremely high reserve positions relative to the size of the domestic economy represent high levels of interdependence, which will have the effect of increasing the probability of conflict between states (Barbieri 1996). Both GDP and the proportion of reserve holdings relative to GDP must be included to control for the effects of wealth and trade on the probability of a state to initiate conflict.

Bretton Woods

We may expect this phenomenon of conflict to change following the official departure from the gold standard in 1971. Prior to the Bretton Woods System of 1946-1971, currencies remained redeemable in precious metals, typically gold and silver at a fixed exchange rate. Currency manipulation required altering the pegged value of the currency relative to gold. Typically the tool was used by states in order to maintain reserve liquidity by encouraging citizens to hold currency notes in place of precious metals. Contradictory to the current system, the exchange of precious metals was the only means of international currency manipulation, thereby lacking the flexibility of the foreign currency reserves held today. Fixed exchange rates

with hard currency presented the possibility of depleting reserves. Such a traumatic financial crisis would eventually extinguish reserves and eliminate financial liquidity, and with it the state's ability to finance, and thereby conduct, offensive or defensive warfare (Kirshner 1995).

With the removal of gold as the means of exchange by Bretton Woods, states began to hold bank notes of currency as reserves. Bretton Woods maintained gold as the primary reserve asset, but because dollars were convertible into gold and the U.S. economy was relatively stable, states began holding dollars reserves. However, as the dollar began to grow as a reserve currency, the volume of dollars continued to increase, decreasing value, and making inconvertibility inevitable (Cooper 1975, 88). Following a series of moves by the French government to purchase gold in exchange for their dollar reserves, the inconvertibility of dollars into gold was made official in 1971 and so ended the last vestiges of the gold system.

Following 1971, states resorted to a debt based system of finance wholly dependent upon a credit economy. In order to maintain such a debt centric system, continual credit, as a means of currency in and of itself, must be generated. Once a populace chooses or is no longer capable of acquiring further debt, the debt bubble must burst in order for the market to clear pre-existing malinvestment (Bastiat 1996). Once debtor nations can no longer accumulate credit vis-à-vis the creation of continued debt, the economy will enter a recession (Hutchinson 2002, 214). At this point in the financial cycle, states will use their currency reserves to alleviate the economic downswing, flooding the market with new currency in order to fill the void left by the failure of the economy to accumulate increased credit. This replacement effort by central banks will seek to prop up malinvestment caused by credit lending, but it will simultaneously inflate the currency, decreasing the values of individual financial holdings and artificially lowering interest rates. Eventually, however, the business cycle must adjust in order to reach the equilibrium

interest rate, causing not only a bust in the credit industry, but continued devaluation of the inflated currency (Rothbard 1963; Hayek 1979; Friedman 1963).

By holding reserves in dollars, states are assuming the United States will not undertake excessive inflationary policy. Weakening faith in the strength of the dollar as a stable reserve currency prompts states to exchange dollars for alternative currencies, cut losses, and prevent further devaluation. This cut and run strategy then causes further inflation both in the United States and in large dollar holding countries. The international money market will be flooded with dollars, resulting in hyperinflation and a downward spiral toward deterioration of the U.S. currency. As the currency declines, so too will monetary hegemony and the prominence of the U.S. economy. The prospect of such an outcome essentially holds the monetary hegemon hostage to the holders of the hegemonic currency, leading to a greater instability in the international system and increased likelihood of conflict (Eichengreen 1989; Kelly 1977). Under such circumstances, policymakers who produce dollars and hold dollars will be compelled to prevent such an economic crash by whatever means necessary, including violent conflict.

CHAPTER 8

RESEARCH DESIGN

Whether inflation causes uncertainty, institutional instability, or prompts misallocation of blame to an international actor, I expect it to lead the state toward initiating a conflict as a means of mitigating the domestically created inflation problem. To test this theory, data collected from a thirty year period from 1954-1984, straddling the demise of Bretton Woods, will be included to determine the predicative capability of inflation on conflict initiation. Using an ordered probit model, the dependent variable of conflict initiation is extracted from the Correlates of War dataset measure of hostility levels, coded ordinally from 1 to 5. A 1 is no conflict, 2 is verbal threat to use force, 3 is mobilization of military capabilities but no force, a 4 is the use of force under 1,000 battle deaths, and a 5 represents war. By using this nuanced measure of conflict beyond a bivariate war and peace measure, the effects of inflation on low levels of conflict or non-violent disputes may be attained. Note that only the highest level of conflict reached by a country in a year is given, so the use of force (4) or war (5) may be much larger in this sample than one that includes all conflicts, wherein a state who goes to war, also has multiple instances of level 2, 3, and 4 conflict in the same year. The relative scarcity of level 2's and 3's as the highest level of conflict for a country in a year indicates that states who engage in such behavior may escalate within the period to a level 4 or 5 value. When a state makes a threat of force (2) or mobilizes (3), they are committing themselves to a use of force (4) or war (5) if their opponent does not concede the conflict (Maoz 1983).

While level 1 is the broadest category, capturing all instances of a state per year where there is no conflict, level four is also broad, capturing any use of military force the falls short of war. This large grouping includes any conflict where an element of force is used. On the low end, a situation such as the Cod Wars of 1972 between Iceland and Britain over territorial fishing waters is coded a 4. While no definable "battle deaths" took place, a use of force was initiated by Iceland in the forcible removal of British and German fishing vessels from the claimed waters and intentional ramming of military and civilian ships. On the high end of the 4 coding are more serious conflicts which fall just short of war, such as Cuba's use of troops in the Angolan Civil War. With the exception of peace, no outcome is sustained by any one country for lengthy periods of time with only a few notable exceptions: Laos, Israel, Jordan, North Korea, and South Korea maintain lengthy periods of low level conflict (4), while the United States and Vietnam maintain a lengthy series of high level conflict (5) during the Vietnam War. In the following analysis illustrating the relationship between each of our independent variables and conflict, a graph of predicted probabilities is generated showing the likelihoods of outcome 1 (peace), 4 (force <1000 deaths), and 5 (war). All countries with available data are included, a list of which is contained in Appendix A. Further information on the data can be found in Appendix C.

The previous theoretical discussion lends itself to a series of testable hypotheses to gauge the substantive significance of each competing explanation of conflict initiation:

Hypothesis 1: A money supply increase which surpasses an economy's ability to absorb the resulting increase in financial capital will result in an increased probability a state will initiate conflict.

Domestic money supply infusions are the basic tools of central banks to manipulate the economy of a country. The side effect of these fiat currency infusions is inflation of prices for

consumers, which may create domestic uncertainty, initiate a loss of political stability, and/or cause external insecurity, each leading to an initiation of conflict. For purposes of this design, a domestic money supply increase is the preferred proxy for inflation over such other measures as consumer prices or relative currency values. Other measures have the possibility of including effects of international trade and economy. By focusing purely upon the money supply, domestic, intentionally created inflation by a central bank is measured in its effect on conflict initiation.

This initial hypothesis and focal point to the intention of this paper is a theoretical extraction from the business cycle theory of Ludwig von Mises and Friedrich Hayek. At the crux of Austrian economics is the thesis of monetary manipulations affecting value and price within an economy. A money supply manipulation according to business cycle theory will result in a long term rise in prices. Furthermore, currency infusions according to Hayek will create malinvestment within the domestic economy. This malinvestment takes the form of asset bubbles which expand with the currency infusion disproportionately to their size in an unaltered market. Because of the misallocation of investment resulting from the currency infusion, these asset bubbles burst as the malinvested industry clears back to its market level. According to Hayek, a monetary infusion will provide the artificial perpetuation of growth within certain sectors of the economy, but that perpetuation of artificial growth will be short lived as the demand within the market economy will drive sector size back toward the equilibrium quantity. When this occurs not only does the economy recess, but the increased money supply value remains despite the discontinuation of the invested assets. The excess money within the domestic economy causes the devaluation of the currency leading to price inflation. This paper

expands the business cycle theory of Friedrich Hayek to its international conclusions, shedding light on the effect of this monetary side of business cycle theory on state behavior.

The variable is coded in terms of annual proportional increases in the money supply, ranging from and lagged by one year. The money supply variable is lagged as we cannot expect an increase to immediately cause inflation and thereby prompt a move toward conflict initiation. A currency infusion will require some amount of time to affect the business cycle of a state; thereby inflation of prices is not immediately felt by citizens (Hayek 1979). Lagging one year captures the time necessary for a money supply increase to become price inflation.

On the basis of our theory, a small inflation is unlikely to have any effect, and the average inflation value is 116%, though the value hits a maximum level of 5,400%. The low average indicates that most states do not have inflation levels necessary to initiate a strategy of diversionary war. While the 116% level is a significant money supply increase, it is well below the threshold of hyperinflation (50% increase in prices monthly) and the likely crisis inflation point somewhere between the two levels of inflation. Just as the majority of states remain at peace throughout the time period, so too the vast majority of states do not engage in inflationary policy that would instigate a crisis. Average values of inflation are larger in Africa and East Asia throughout the period, with European states holding the lowest values. Prior to the collapse of Bretton Woods, the average inflation level is 110%, while afterward it increases to 122%. Tables detailing regional averages are found in Appendix C.

Hypothesis 2: As a state's wealth increases, the costs of conflict initiation which disrupts commerce also increase, decreasing the probability of conflict initiation..

Hypothesis two captures the effect of wealth on conflict and is represented in the model using GDP per capita. As wealth increases, the financial stability of the populace is increased

due to the protection of private property and a reduction in the costs associated with commerce. Wealth both increases domestic stability and increases the prospective gains necessary to merit conflict initiation (BDM 1999).

GDP per capita in the model ranges from $37 in 1957 Ethiopia, to $25,923 in 1981 Qatar. The average across the period for all countries is $1,810. More so than money supply increases, GDP per capita is more dependent on region, ranging from very high levels well above $2,000 on average in Europe and North America, to below $500 in East Asia and Africa. Prior to 1972, the average GDP per capita is $1,072, while afterwards it increases markedly to $2,911. This shift in averages across region and time indicates a strong correlation of the temporal and spatial parameters with GDP, while the relation of these same parameters to money supply increases is minimal.

Hypothesis 3: A high international reserve relative to the size of the state's economy represents over-dependence upon trade and will thereby increase the probability of conflict initiation.

While trade generally may inhibit states from conflict initiation, at its extremes states will be more likely to initiate conflict due to an increased probability of dispute occurrence (Barbieri 1996). Overly dependent states suffer a reduction in their ability to control their own futures leading to a greater likelihood of conflict initiation for the preservation of their sovereignty. Hypothesis three is tested using international reserve position in relation to GDP.

Alternatively, reserve holdings may also possess some effect on domestic currency values, and thereby may be measuring a similar process to that in the testing of Hypothesis one. High reserve positions are a byproduct of the accumulation of foreign currency through trade. When producers sell goods to other countries, they in turn accumulate foreign currency in return.

They then exchange this foreign currency with government for the domestic currency, causing government to accumulate foreign reserves and releasing greater domestic currency into the market. Trade thereby increases the financial capital available to the state. At high levels of reserve accumulation in relation to GDP, the absorption of this renewed financial capital may become a destabilizing force in the domestic economy. Similar to the increase in financial capital made by expansions of the domestic money supply by central banks, if the domestic economy is unable to absorb the financial capital made available through trade, malinvesetment and inflation will result.

Under a free market currency exchange system this malinvestment and inflation should not take place, as the financial capital received into the economy will be exchanged for foreign currency at the market price. The domestic economy will acquire financial capital in proportion to the production of goods exchanged on the international market. A reserve positions at the extreme occurs in situations where the central bank of the domestic economy is attempting to manipulate the value of their currency on the international exchange market. Under a fixed exchange rate, receipt of domestic currency for foreign currency generally occurs either below or above the market rate. If the value of the domestic currency is held above the market rate, domestic producers exchanging currency will acquire an amount of domestic currency beyond the market value, resulting in a disproportionate increase of financial capital due to trade. Alternatively, central banks with floating exchange rates can manipulate exchange rate values by releasing greater or lesser amounts of domestic currency in exchange for foreign. If they release greater amounts, to cheapen the currency relative to others in order to keep the costs of domestically produced goods low, it may also result in disproportionate accumulation in financial capital, leading to inflation, uncertainty, and then conflict. Reserves are measured in

relation to the wealth of the state, specifically, reverses (in millions) as proportion of GDP per capita.

While Hypotheses 1 and 2 deal with the occurrence of domestic instability and uncertainty, Hypothesis 3 focuses on external insecurity. States may feel externally insecure not due to inflationary policy, but instead an overdependence upon trade. Overdependence forces the state to rely upon the actions of another, thereby diminishing sovereignty and increasing the probability of conflict initiation.

Hypothesis 4: Due to their institutional constraints, democratic states are less likely to initiate conflict than autocracies.

This variable addresses the competing explanation of democratic peace. Given it's prevalence in the international relations literature, I expect this variable to be significant. Important, however, will be relating it's relative significance in determining the *initiation* of conflict to our monetary manipulation variables. The institutional type variable is included in order to test the validity of any findings of our first three hypotheses. It is possible that any monetary explanatory variables are subsumed by regime type.

The democratic peace variable is extracted from the Polity IV dataset coded ordinally from -10 for autocracy to 10 for democracy. Opposed to perhaps a bivariate independent variable, the full polity spectrum is used to capture the hybrid states, frequently transitioning governments that lay between the democratic and autocratic measures.

Hypothesis 5: Currency unions restrain states in their foreign policy decision making, decreasing the propensity of a state to initiate a conflict.

This hypothesis captures both potential alternative explanations of the currency union literature. While Kirshner (1995) indicates currency regimes do have coercive aspects both in

entry requirements and maintenance of membership, we can also expect they will coerce states into behaving in certain ways regarding conflict. In a currency union, states will be less likely to engage in conflict as they will be constrained in their actions by the currency union members. Whether by coercion or interdependence, states will be restrained in initiating conflict for both economic and political reasons. Currency unions are measured from 0 for no currency union membership, and then coded by the number of members in the observed state's currency bloc. The more states involved in the currency union, the greater the potential costs of conflict initiation. All currencies with dyadic 1:1 exchanges in a currency are included based on the list used by Rose (2001). Coding of currency unions follows a transitive property whereby a state in a currency union with two separate states results in those two states also in currency union with one another even if they lack a formal agreement. A list of included currency unions along with dates of dissolution is included in Appendix B.

Hypothesis 6: If a state is in a currency union, inflating policy will be more likely to cause conflict initiation than in a non-currency union state.

This interaction term between money supply increases and currency union targets specifically the effect of monetary increases on the behavior of currency union members. Currency union membership frequently involves the surrendering of certain sovereign control over domestic monetary manipulations. Furthermore, due to the nature of a currency union, a sudden inflation of a domestic currency by a central bank not only affects the target economy, but also those of currency union members. I expect the potential for conflict initiation to be higher for severe monetary increases of currency union states than non-currency members, given the far reaching international repercussions of their central bank actions.

Hypothesis 7: Central bank independence is based upon regime type. Therefore autocratic states are able to inflate currency to finance military mobilization for the purposes of initiating conflict.

Testing of hypothesis 7 will be undertaken using an interaction term between inflation and polity score. In order for conflict to be a driving force behind the initiation of inflation, the state must first have a negative polity score coding as a proxy for the ability of the government to control the central bank and thereby pressure it to finance a military mobilization. If this process is a significant occurrence, autocratic states in conjunction with money supply increases will have a greater probability of conflict initiation than democratic states, due to their desire to inflate the currency to finance their aggression. Approximately 55% of all observations in the data are coded as autocracies.

Hypothesis 8: The collapse of the gold standard with Bretton Woods in 1972 increased volatility in the international financial market, and thereby increases the probability of war.

Hypothesis 8 accounts for temporal effects in the model. Approximately half of the observations occur during Bretton Woods, and half after. This sample allows observation of any effects of the monetary system over state behavior. If the probability of conflict initiation is significantly greater in the second period, it may lead us to consider Bretton Woods collapse as a destabilizing force or perhaps other coinciding shocks to the system during the 1970's as an explanation of conflict to supersede inflation.

A regional control variable is included to control for cultural or systemic factors (ethnicity, religion, decolonization) particular to a certain grouping of states which may drive conflict initiation beyond the economic variables included in this study. Each control is

bivariate, coded one if that country is a member of that region, with all others coded 0. The base for the region dummy variable is North America.

CHAPTER 9

FINDINGS

Using ordered probit to determine the significance of each variable garnered from our testable hypotheses the results are listed in Table 1. Across 2,591 observations in 134 countries from 1954-1984, nine of the fourteen independent variables included are statistically significant at the 95% confidence level. 69% of all observations in the sample are coded 1 for peace, 1% coded 2 for a threat of force, 5% coded three for a demonstration of force, 23% coded 4 for a use of force with less than one thousand battle deaths, and 2% coded 5 for war. Holding all variables at their mean, or median for non-continuous variables, the probability of peace is 80%, of threat is 1%, of mobilization is 4%, of use 14%, and of war 1%. Additionally, the model correctly predicts 7% more cases correctly then a prediction using the modal category (peace) alone. This reduction of error may seem small to the casual observer, but is small in absolute terms not due to the effectiveness of the model, but the large percentage of observations which fall within the modal category (1 for peace).

The change in the money supply variable, the centerpiece of this paper, is statistically significant at the .95 level and positive. Measured in the proportional increase in the money supply per year, this variable demonstrates a dramatic money supply increase will result in a greater likelihood for states to initiate conflict. Based upon the predicted probabilities while holding each variable at its average, the point of inflationary crisis occurs at approximately 1,400%, or where the probability of force surpasses the probability of peace. At that level of inflation, it is almost certain that some degree of hyperinflation is taking place within the yearly

period. This finding demonstrates the claim of hypothesis one that large amounts of inflation increase conflict initiation at the point where a domestic economy can no longer absorb the increased financial capital. Figure 2 illustrates the predicted probabilities across values of the monetary reserves holding all other variables at their mean.

Table 1: Findings from Ordered Probit Model

Variable	**Coefficient**	**Z Score**	**Confidence Interval**
Reserve Position	.78**	4.17	.414, 1.146
Currency Union	-.018**	-2.91	-.03, -.006
Polity	-.013**	2.92	.004, .021
Change in Money Supply	.035*	2.18	.004, .066
Currency Union x Change in Money Supply	.05*	1.96	.00009, .1
Democracy x Char Money Supply	-.071	-1.95	-.142, .0002
Bretton Woods	.071	1.18	-.047, .189
GDP	-.00005**	-4.22	-.00007, -.00002
Africa	.011	.09	-.224, .247
Latin America	-.16	-1.38	-.388, .067
Europe	-.36**	-3.30	-.57,-.145
Middle East	.78**	7.02	.561, .995
East Asia	.43**	3.68	.2, .656
Oceania	-.46**	-2.71	-.791, -.127

***** significant at .95 level** significant at .99 level

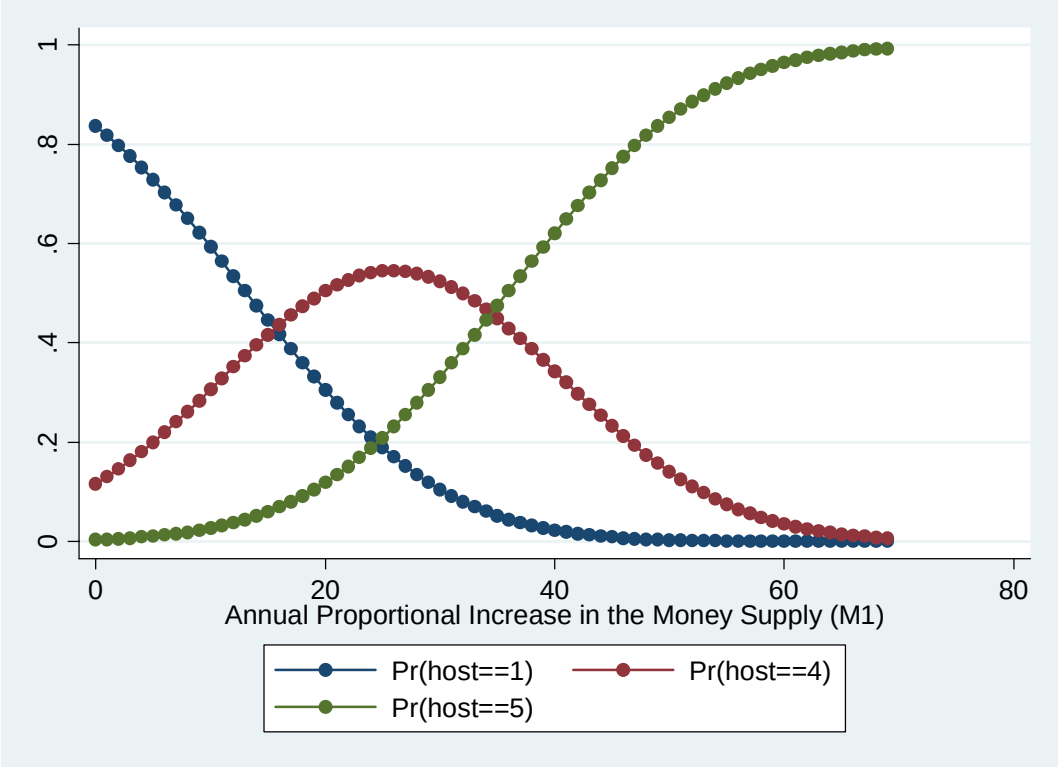

Figure 2: Effect of Money Supply on the Probability of Conflict Initiation

The effect of GDP per capita on conflict is statistically significant at the .99 level and has a negative effect on the conflict initiation. This finding demonstrates that generally wealth decreases the probability of conflict initiation confirming hypothesis 2. Substantively, wealth has very little effect on the probability of a war outcome as indicated in Figure 3. However, it does have some substantive significance on the effects of a level 4 outcome from around 19%, to a probability of approaching 0% toward the top end of the GDP per capita measure.

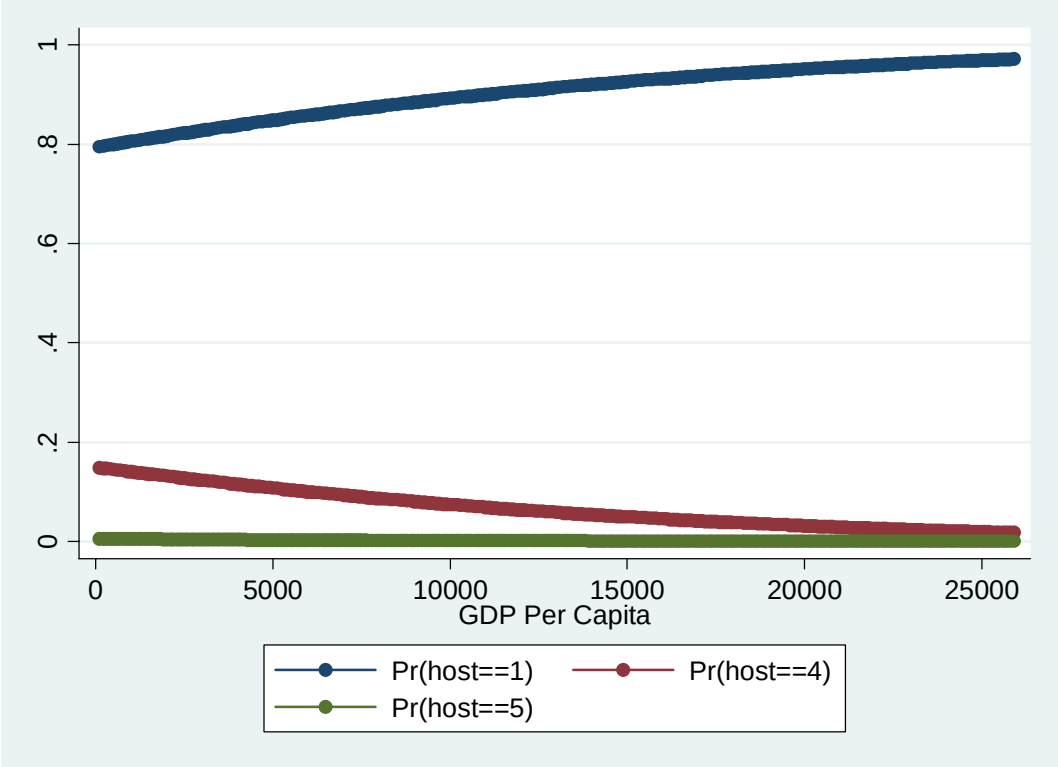

Figure 3: Effect of GDP Per Capita on the Probability of Conflict Initiation

All else held constant, a reserve position variable measured in millions of U.S. dollars divided by GDP is statistically significant at the .99 level and has a positive effect on the propensity of a state to initiate conflict. This initial finding proves accurate hypothesis three, confirming that generally trade maintains peace. The probability of war is relatively small across all levels of reserves/gdp, with the slope increasing as the reserves per gdp approach the level of over-dependence upon trade. The probability of force (4) passes the probability of peace at approximately 1.4 millions in reserves/gdp per capita, indicating the threshold point of overdependence. Substantively the reserves/gdp variable is substantively significant, further confirming Barbieri's (1996) overdependence hypothesis, but does not possess the same level substantive capability as domestic monetary manipulation.

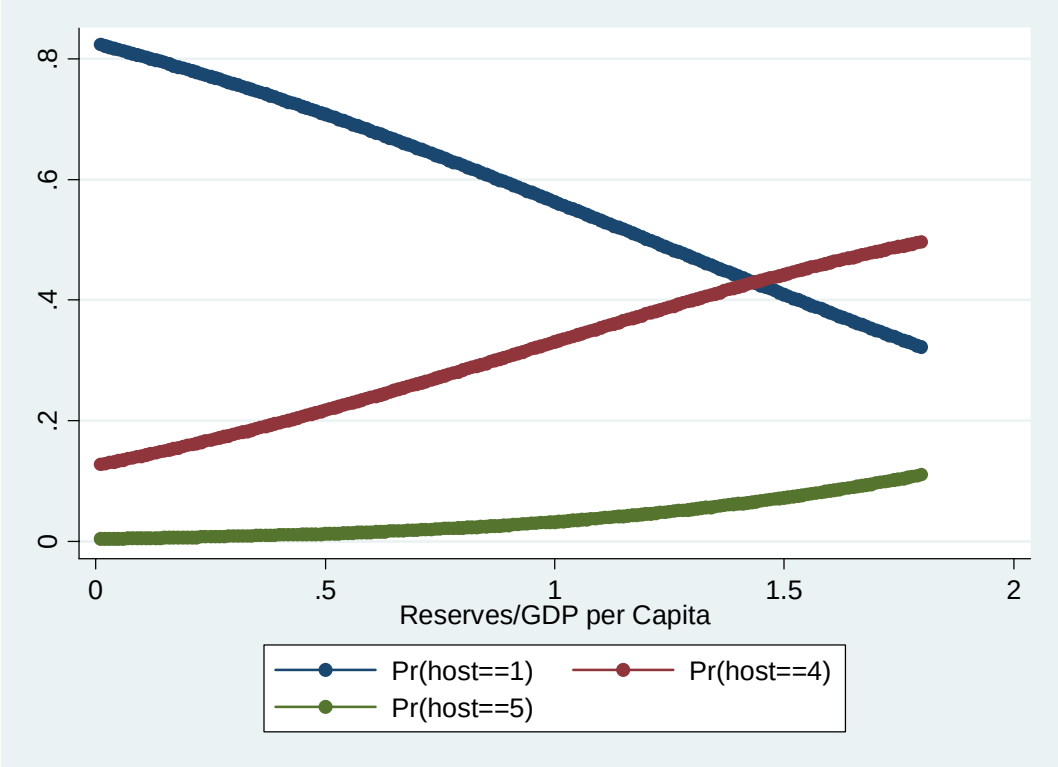

Figure 4: Effect of International Reserve Position Per GDP on Probability of conflict initiation

The regime type of a country is statistically significant at .99 level and also has negative effect on the propensity of a state to initiate conflict. All else constant, democratic states are less likely to initiate conflict than autocracies. Greater democracy scores result in a decrease in the likelihood of a state to initiate conflict, while an increase in the autocracy score (a negative value) increases the likelihood of a state to initiate conflict. Findings are consistent with expectations in hypothesis four.

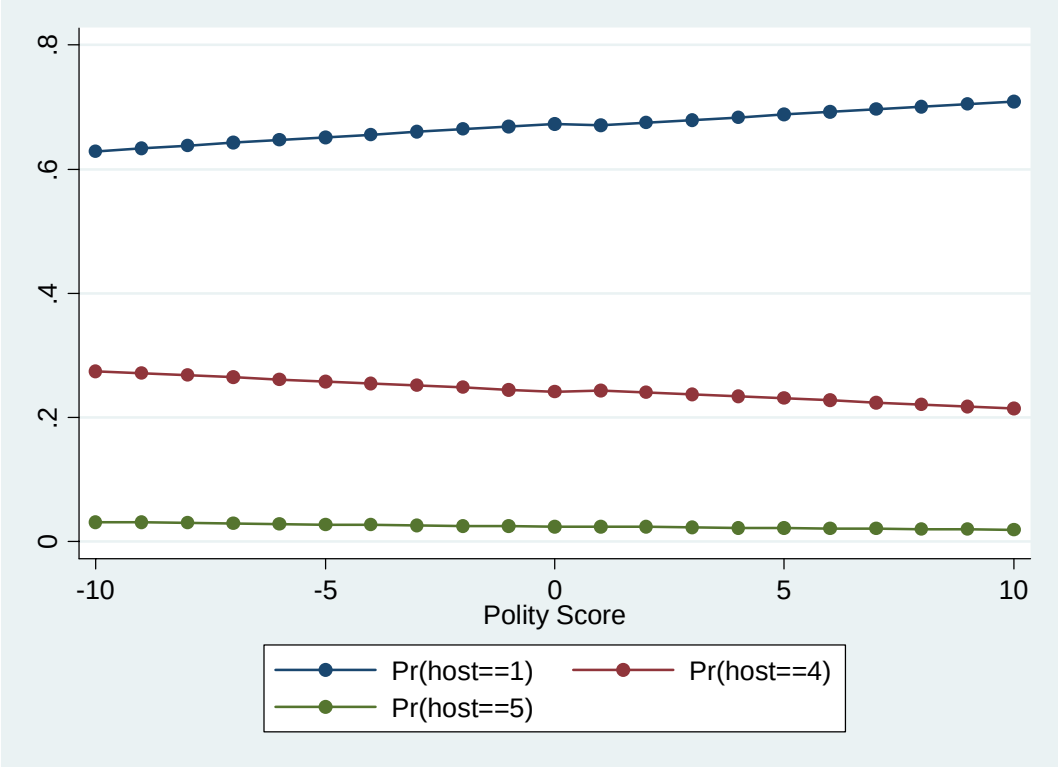

Figure 5: Effect of Regime Type on the Probability of Conflict Initiation

Currency unions are statistically significant at the .95 level and have a negative effect on the propensity of a state to initiate conflict consistent with hypothesis 5. The more inclusive the currency agreement of more countries, the lesser the likelihood of conflict initiation.

Focusing now on the two interaction terms, only the interaction between currency union membership and money supply increases is statistically significant at the .95 level. The currency union/money supply interaction term indicates, consistent with hypothesis six, inflation conditional upon currency union membership has a stronger relationship to the probability of conflict initiation than states without currency union members.

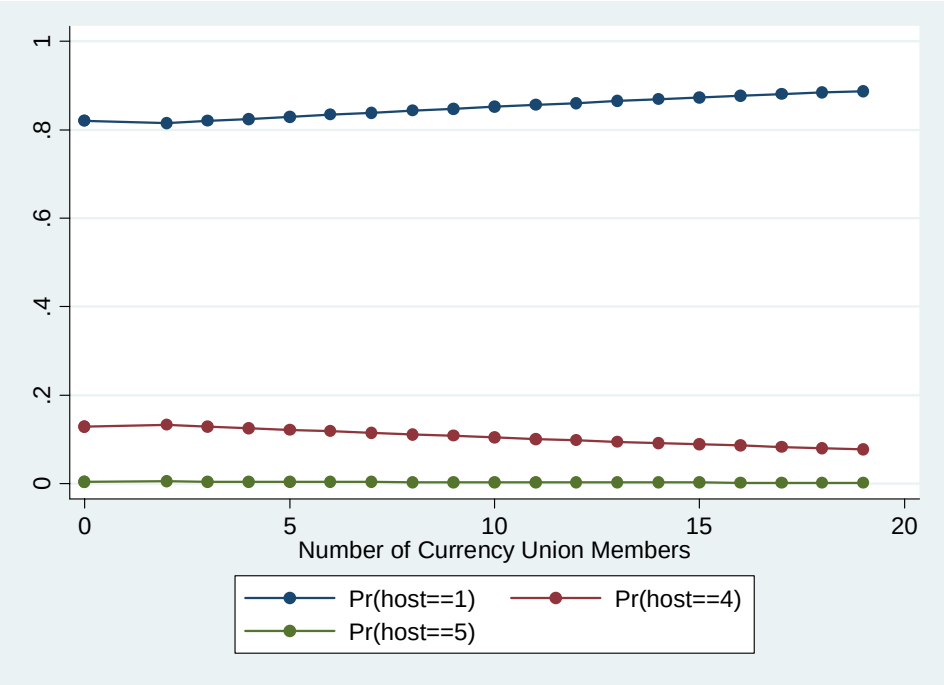

Figure 6: Effect of Currency Union Size on the Probability of Conflict Initiation

The currency union variable alone has already indicated that currency union membership has a mitigating effect on the propensity of a state to initiate conflict. The interaction term further indicates the policing and coercing aspects of the intra-currency union politics. States bound to one another in their currency values will have incentives to not inflate their domestic currencies, as such as an action would further inflate all currency union members' currencies. However, when states abandon the incentive not to inflate, disregarding the economic well-being of their currency union partners, the effect of the inflated currency on potential conflict initiation becomes more dramatic than those of non-currency union members. Figure 6 shows the decreased, though still significant, effects of inflation on non-currency union members' propensity toward conflict. Figure 7 illustrates that the alternative relation of inflation to the probability of currency union member to engage in conflict. The two illustrations demonstrate the more dramatic effect of inflation on state behavior for fiscally integrated states. Both types

of countries begin at similar probabilities of conflict with low inflation values, but as inflationary monetary policy becomes more severe, the rate at which the probability of conflict initiation increases rises rapidly. As the state approaches the end values for data accumulated in this sample of a 5,400% increase in the annual money supply, the increased likelihood of conflict is almost twice as great when conditional on currency union membership, with the probability of war burgeoning to 6 times as likely as that in non-currency union states. Currency Unions therefore have both pacifying and antagonizing effects on member states. They serve to prevent dramatic inflation which could lead toward conflict, but when that inflation does occur, the consequences are potentially more severe.

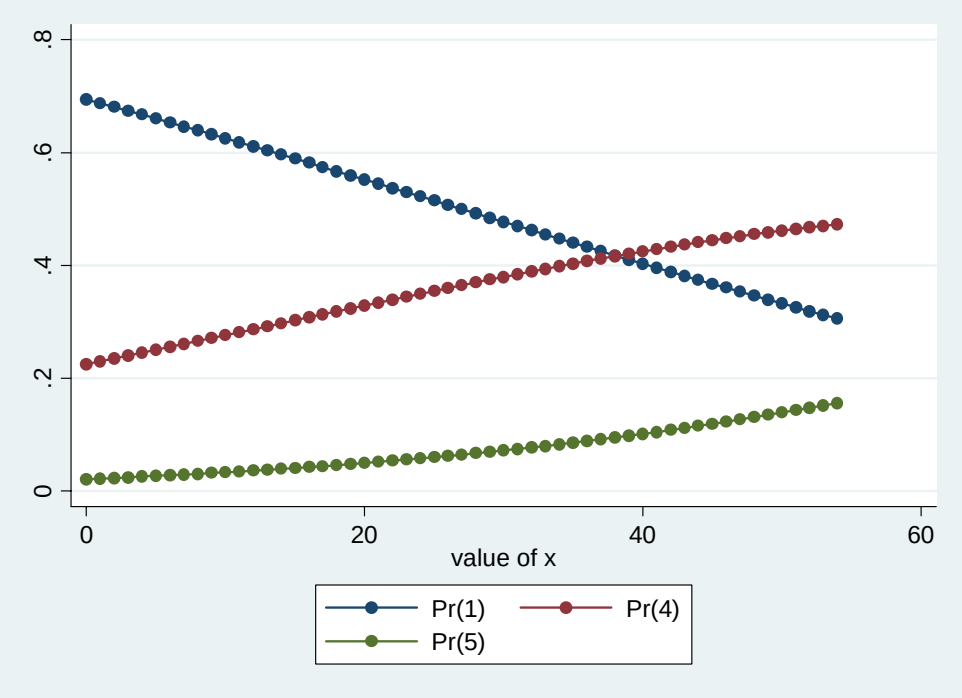

Figure 7: Probability of Conflict Initiation from Inflation by Non-Currency Union Members

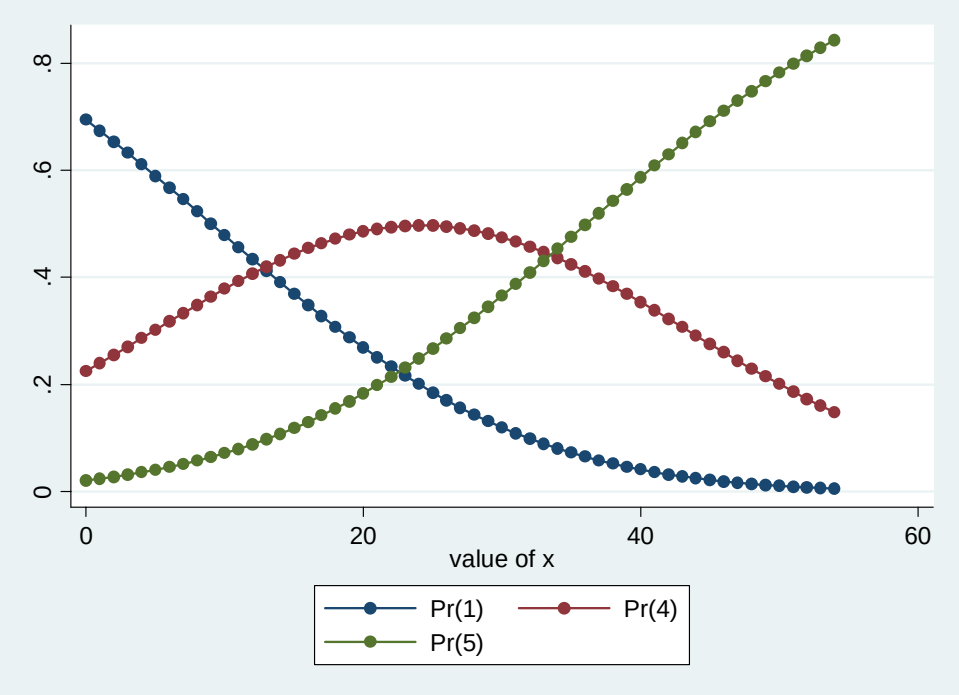

Figure 8: Probability of Conflict from Inflation for Currency Union Members

Neither Hypothesis 7 nor 8 are proved by the model, as the interaction between regime type and inflation is not significant nor is the Bretton Woods dummy variable. The proxy for the potential endogeneity of our model lacks significance, and the demonstrates the pre-eminence of the money supply increases apart from regime type in the determination of state conflict initiation. However, a graph of the predicted probabilities of the regime type inflation interaction term does demonstrate a steady shifting outward of the probability of conflict curve as the states become more democratic, that indicating that the effect of inflation may be mitigated conditional upon the regime type.

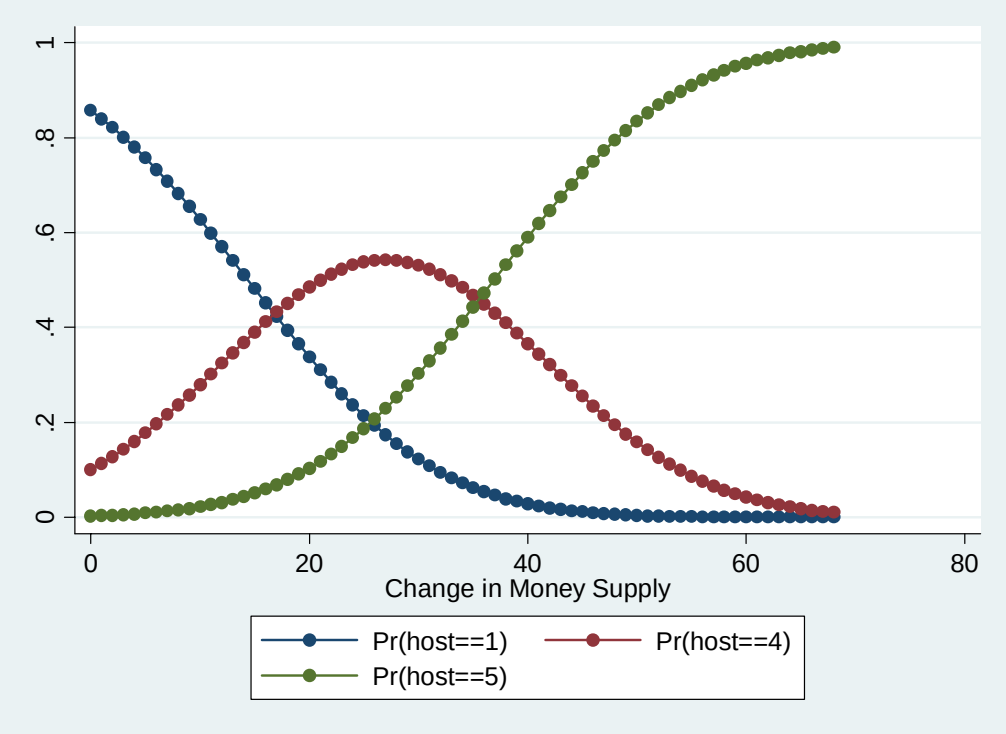

Figure 9: Effect of Change in Money Supply on Conflict Conditional on Authoritarian Regime Type (Polity = -10)

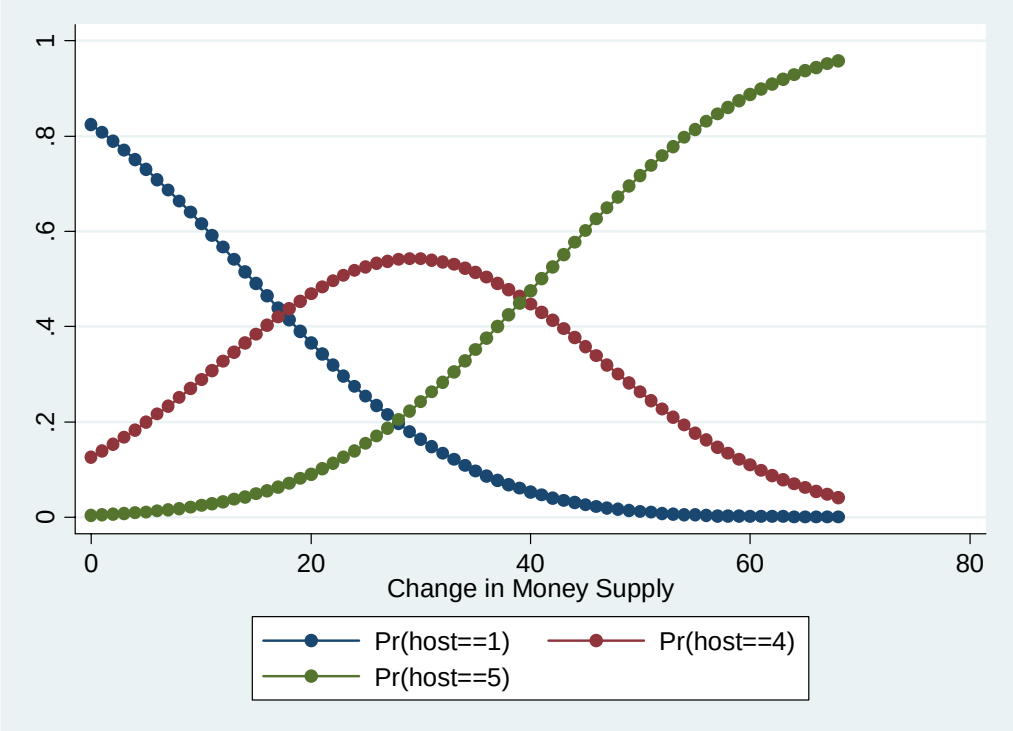

Figure 10: Effect of Change in Money Supply on Conflict Conditional on Neutral or Hybrid Regime Type (Polity = 0)

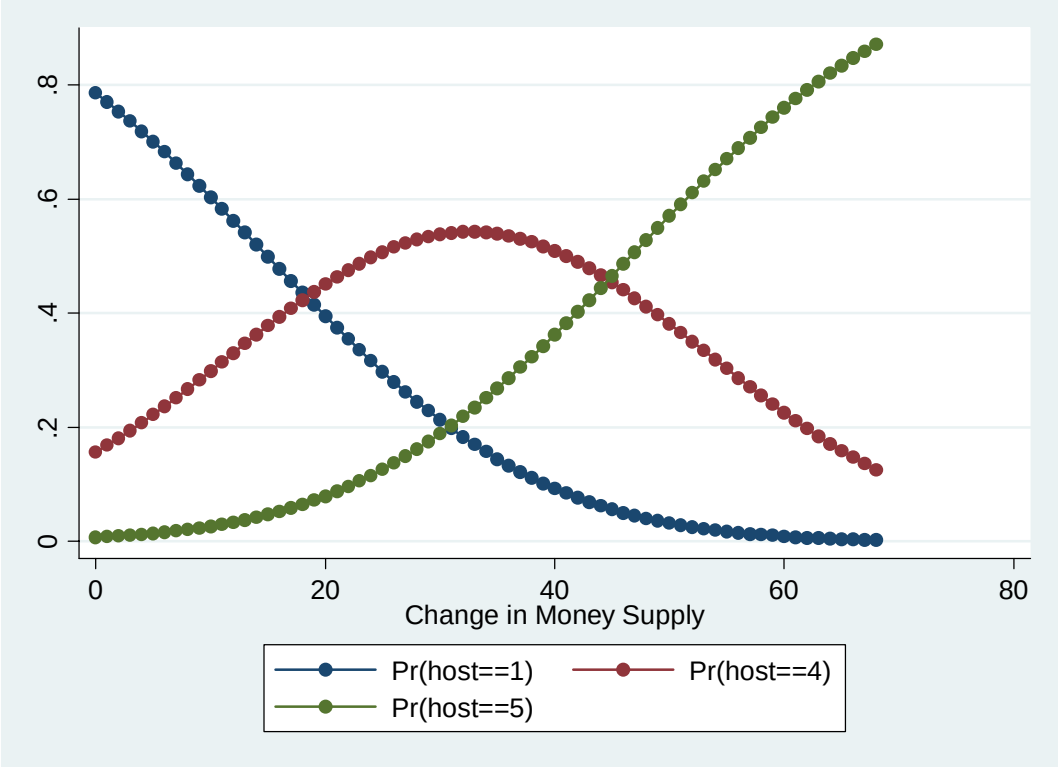

Figure 11: Effect of Change in Money Supply on Conflict Conditional on Democratic States (Polity = 10)

Control variables for region do indicate that there is some regional effect on the probability of conflict initiation. Using the base of North America, African and Latin American states are no more or less likely to initiate conflict. European and Oceanic states are less likely to initiate conflict, while Middle Eastern and East Asian states are more likely to initiate conflict. The most likely explanation for this added significant effect is the decolonization process which occurred throughout both the Middle East and East Asia during the time period. While not statistically different from the North American base, Africa has a greater probability of conflict than that of Europe for similar reasons. The inability to differentiate between what we may expect to be a peaceful region (North America) and a tumultuous one (Africa), is likely due to

the presence of the United States in the North American regional group, which has consistently high level of conflict across the sampling period (never dropping below a 3, with a mode of 4). Substantively, the model indicates that while regime type, currency union size, and GDP per capita are statistically significant and decrease the likelihood of conflict initiation, their substantive significance is minimal. Money supply increases and dependence upon trade are both highly substantively significant, with domestic money supply increases having the greatest substantive effect on the probability of a state to initiate conflict.

These findings may hint at the inability of institutions to properly predict state behavior, and perhaps is indicative that institutional variables are statistical artifacts of other domestic level variables that may or may not be consistent across regime types. Monetary policy by central banks may be one variable that makes the general accuracy of democratic peace a possibility. Consistent with Glaeser et al's (2004) findings on the precedence of liberalized economic policy prior to sustained democratic transition, sound fiscal policy may be a facet of a liberalized economic policy required for the institutional effectiveness of democracy.

Furthermore, the monetary policy variable may shed light on the conflict initiation behavior of non-democracies. Typically in the liberal democratic peace literature, democracies and autocracies are treated in bivariate terms, and the behavioral focus is on democracies. Autocracies are left in the unobserved category of *non*-democratic states. Few attempts at identifying patterns in autocratic behavior have hinted at the inability of achieving a general theory of autocratic behavior due to the dramatic variance of institutional structures within these states (Geddes 1999). By focusing domestically on economic factors beyond institutional type, the focus of state behavior shifts away from the bivariate assumption of democratic peace, to a more nuanced and interesting theory based on the progression of liberalized economic practices.

Substantively, explanations of state behavior in economically liberal authoritarian states such as Singapore and South Korea may closely identify with economically liberal democratic states such as Norway or Canada. Polity type, while having some small effect on state behavior, becomes subsumed by the heavy lifting performed by variables capturing degrees of economic liberalization.

As tested by Glaeser et al. (2004), economic liberalization does not occur as a function of regime type. In their model testing the relationship between economic and political liberalization processes, political liberalization preceding economic liberalization is not statistically meaningful across the range observations. However, economic liberalization properly predicts regime type. The findings of this model help demonstrate the validity of the Glaeser thesis by removing significant predictive capability from institutional type in determining state behaviors. Furthermore, it ties into the Glaeser model the behavior of states in the international system. Instead of states engaging in a direct causal chain of regime type predicting conflict (Figure 8), economic liberalization is the actual causal variable of both regime type and conflict behavior (Figure 9), explaining their correlation in simplistic democratic peace models, but the ineffectively of regime type to properly predict conflict initiation in a model that includes economic liberalization variables.

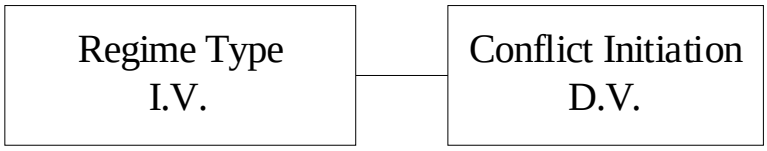

Figure 12: Democratic Peace

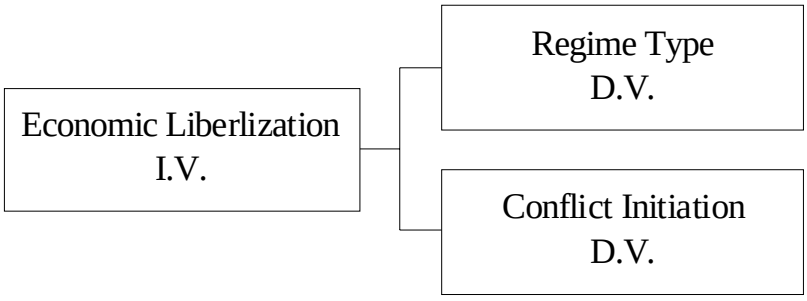

Figure 13: Liberalization Peace

Using the economic liberalization thesis a more immediate effect of liberalization on conflict can be garnered. The process of political liberalization from economic liberalization takes time, whereas the effects of economic liberalization on behavior are more immediate.

On the basis of our model we can garner a series of marginal effects for points of interest capturing levels of money supply increases, reserve positions, and institutional frameworks. Table 2 illustrates a few points of interest, varying inflationary policy against levels of wealth, holding all other variables at their mean. As indicated by the preceding graphs of predicted probabilities, triple and quadruple digit inflation have the greatest effect on the probability a state will initiate conflict. Each value in Table 2 represents the probability of a use of force, regardless of scale, by adding the probabilities of a hostility level of 4 (Force < 1000 deaths) and 5 (War). The value in parentheses adjacent to the cell entry is the predicted probability of war alone. From the table we can observe the propensity toward conflict different types of states. A developed state with low inflationary policy will have the least likelihood of initiating a conflict that includes the use of force (1%). A state with moderate fiscal policy and gdp per capita measures, such as East Germany, jumps to a 15% probability of initiating a conflict and a 1%

likelihood of initiating a war. Alternatively, to illustrate the effectiveness of the inflation variable when it surpasses the crisis point, high inflation policy states have an almost certain probability of conflict initiation across all levels of wealth. Placed into perspective of regime type, an authoritarian state that is pursuing a sound fiscal policy domestically only has 15% chance of conflict initiation. Important is the very little variance across low level and average level chances in inflationary policy. The majority of states pursue relatively sound fiscal policies, inflating their currencies on average 116%. This level of money supply increase does cause inflation, but is unlikely to prompt severe uncertainty or instability necessary to spur a conflict initiation. However, high levels of inflation bordering on hyper-inflation (approx. 1,400% annually) have a dramatic probability of war. Holding all other variables at their mean and money supply at 1,400%, the probability of the use of force balloons to 83%, and a 48% chance of war (Table 4).

Table 2: Predicted Probabilities of Force

	Low GDP ($39/capita)	Average GDP ($1810/capita)	High GDP ($25923/capita)
Low Inflation (<2%)	.15 (.01)	.12 (.00)	.01 (.00)
Mean Inflation (116%)	.17 (.01)	.15 (.01)	.01 (.00)
High Inflation (5,400%)	.99 (.99)	.99 (.99)	.99 (.11)

Holding the democratic peace variable at its mean value of -1, the observable interaction in the varying levels of money supply increases and international reserve levels as a proportion of GDP are displayed in Table 3 for non-currency union members and Table 4 for currency union members. The higher overall values for the probability of conflict initiation is indicative

of hypothesis six claim that states in currency unions will have a greater likelihood to initiate conflict than states isolated in their domestic currency manipulations. The tables 3 and 4 illustrate the external instability mechanism that prompts inflating states to be more aggressive. The international repercussions of inflationary policy are more severe for states who are also members of currency unions. The interconnectedness of the states fiscal policy will result in a greater propensity of a state to blame its currency union members for its domestic woes, and therefore initiate aggressive behavior.

Table 3: Predicted Probabilities of Force for Non-Currency Union Members

	Low Dependence (reserves/gdp = 0)	Average Dependence (reserves/gdp = .04)	High Dependence (reserves/gdp = 1.82)
Low Inflation (<2%)	.10 (.00)	.13 (.00)	.63 (.28)
Mean Inflation (116%)	.13 (.00)	.13 (.00)	.65 (.30)
High Inflation (5400%)	.38 (.06)	.39 (.18)	.97 (.45)

Table 4: Predicted Probabilities of Force for Currency Union Members

	Low Dependence	Average Dependence	High Dependence
Low Inflation	.10 (.00)	.13 (.00)	.63 (.28)
Mean Inflation	.16 (.01)	.16 (.01)	.67 (.32)
High Inflation	.82 (.35)	.83 (.48)	.99 (.87)

Also of interest in each case is a division between reserve holdings per GDP and monetary increases. Many highly developed states practice sound, Friedman style monetarism of very slight annual money supply increases, but yet they have very high levels of reserves due to trade. Dividing these two economic variables grants a more nuanced view of highly developed states' propensities toward aggression between domestic manipulation and external codependence. A high reserve per GDP state with very low monetary increases, such as India, still has a very large likelihood of some act of force (63%). Alternatively, looking at a state such mid-seventies Iran which engages in moderate inflation, but has a very high reserve position, the probability of forceful action increases further. However, for many European states, with moderate reserve per GDP positions and very low money supply increases, the propensity of conflict is 13%, with a less than .01% chance of war. Contrasting this current European situation with that of Europe immediately prior to World War II, many European states, including both France and Germany, had very high reserve positions per gdp and very high money supply increases. While operating under a different, pre-Bretton Woods system, Tables 3 and 4 illustrate the drive of states toward war during the 1930's. Compounding this explanation with the great depression as an economic explanatory variable, the purposeful conflict initiations by the Third Reich across Europe were unavoidable. Yet even the depression fits within the constructs of Austrian business cycle theory's explanation of money supply effects on domestic economies. As argued by Milton Friedman in *A Monetary History of the United States*, Friedrich Hayek's *Unemployment*, and Murray Rothbard's *America's Great Depression*, money supply increases by central banks created the malinvestment which led to the global economic collapse of 1929.

Based upon data from across a thirty year period, the relevance of inflationary monetary policy prompting increasing aggressive behavior by states is evident. When compared to competing neo-liberal explanations of conflict, it provides a more effective explanation of why states choose to use force against one another. The data and tables presented in this findings section provide a blueprint for predicting conflict likelihoods and important policy prescriptions in preventing international violence. Further examination of the data is listed in Appendix C.

Interesting and important to the model is its predictive capabilities in determining state behavior beyond the data examined. Looking beyond the 1984 end date of included data, the model grants interesting predictions for the United States in 2003. Using the values of the United States in 2003, the predicted probability indicated a 27% chance of force, with a 2% of initiating war (Table 5). Alternatively, using Ireland in 2003 as a comparison, the likelihood of any outcome but peace is miniscule (Table 6). These economic variables shed light on potential future state behaviors, and can grant policymakers greater analytical ability to determine the level of potential hostility a state may exhibit. Nevertheless, the model presents no means of determining where a state's conflict initiation may be directed. Further research using dyadic data may glean some generalizable predictors of the direction of hostility initiated by states undergoing dramatic inflation.

Table 5: Predicted Probabilities of United States 2003 Iraq War

Hostility Level	Predicted Probabilities
No Hostility	.66
Threat of Force	.01
Display of Force	.06
Use of Force	.25
War	.02

Table 6: Predicted Probabilities of Conflict for Ireland 2003

Hostility Level	Predicted Probabilities
No Hostility	.99
Threat of Force	<.01
Display of Force	<.01
Use of Force	.01
War	<.01

From within the dataset, the situation of Indonesia is the most prevalent. President Suharto in his efforts to consolidate power throughout the 1960's, pursued extreme levels of inflation for the payment of civil servants and greater government control of the country's resources. However, the inflation that resulted from Suharto's extreme printing of money caused economic collapse and famine, feeding uncertainty, and resulting in multiple attempts at assassination. This domestic uncertainty led Indonesia's government into an aggressive stance with the United States and its more immediate neighbors, culminating in the dispute over Borneo with Malaysia. In this case, quadruple digit inflation is maintained over multiple years, as is the inflating state's aggression levels.

Another example from later in the dataset is the hyperinflation of Argentina. In the early 80's, Argentina's trend of high inflation met its zenith, with corresponding increases in tensions with many of its neighbors as well as the United Kingdom. Shortly after is inflationary zenith, Argentina unexpectedly declared ownership of the Falkland Islands, prompting a brief war with the United Kingdom in which the far inferior Argentina was the aggressing state.

An obvious more recent example is that of Zimbabwe. In 2006, Zimbabwe printed 21 trillion ZWD for the payment of IMF debt. This initial hyper inflationary action was then dwarfed by a printing of 60 trillion ZWD to feed an expansion of the civil service jobs. In conjunction, these inflationary actions followed by a continued printing of money led to extreme

inflation potentially approaching 1.5 million percent. While Zimbabwe has not yet engaged in warfare with its neighbors, the hyperinflation is beginning to takes it toll on Zimbabwe's diplomatic relations, and the country has taken to blaming neighbors for their current domestic troubles and placing limitations on the ability of foreigners to enter the country.

CHAPTER 10

CONCLUSIONS

Findings indicate that inflationary monetary policy is one of the many effective domestic level variables affecting the probability of a state to initiate a conflict. Further study should be done to clarify the causal mechanism between inflation and conflict. Is inflation truly driving states toward more aggressive actions, or instead is inflation a mere side effect of some other relationship? If inflation is the causal mechanism at work, is the relationship between inflation and aggression accurately described in this thesis? Future methodological work would be helpful in clarifying the nature of the relationship illustrated in this paper.

Another interesting area for future research would be comparing the effectiveness of high inflation in predicting hostility relative to hard power measures. This paper successfully demonstrates that monetary power is an effective predictive measure of hostility when compared to other domestic variables. The realist criticism will be, however, that all these domestic level variables will be rendered spurious when incorporated within a model using changes in relative power as an explanatory variable. Beyond the purview of this thesis, the dispute addresses the broader paradigmatic struggle between liberalism and realism. This study may indicate liberalism has been searching in the wrong areas for competitive explanatory variables. Opposed to a focus on difficultly defined institutions or vague absolute gains, liberalism should return to its Smithian economic roots by focusing on domestic level economic variables as a determinant of international behavior.

Furthermore, the findings of this paper directly prescribe states to avoid hostile behaviors by maintaining reasonable levels of inflation. Any gains that may be achieved by dramatic increases in the money supply may not be merited in light of the increased drive of states to initiate conflict. Focusing on the policy prescriptions for the United States today, the country exists in a precarious position as a continued initiator of aggressor. With a dependency on trade increasing and continued money supply expansion to prop up domestic economic sectors, the United States propensity to initiate conflict will likely continue. This continued devaluation in the dollar may prompt the U.S. into pre-emptive warfare against important trading partners to maintain its position in the international market place. However, as such a war would be disastrous, the alternative policy possibility is a pre-emptive monetary strike by denationalizing the U.S. currency. Removing the fundamental problem of inflation should decrease the likelihood of each potential motivating factor toward hostility.

Consistent with the policy recommendations of Hayek, Forbes, and others, a system of competing currencies, including credit, fiat, and a return of hard currency, will likely make the economy less susceptible to economic shocks from both within and without (Hayek 1976). Not only would this policy prescription safeguard U.S. economic stability against dramatic central banking inflations, but would also preserve economic well-being against predatory actions by countries holding large amounts of dollars.

Facing a dollar crisis, individuals could abandon their fiat holdings in exchange for alternative currencies freely competing in the market. In so doing, the U.S. economy may successfully survive independent of the dollar's destruction. While the dollar itself may decline as the international reserve currency, the maintenance of U.S. economic pre-eminence would place whatever domestic dominant currency emerged to also replace the dollar as the reserve

currency. Furthermore, this new form of monetary hegemony would lack the potential for hostility caused by states with high-dollar reserves by detaching U.S. economy through a system of competing currencies.

Of greatest importance is the ease and accuracy with which money supply increases can be measured. Unlike the more difficultly defined and measured independent variables of domestic uncertainty or instability, money supply levels can be found for most countries at the monthly, if not weekly time period. Using money supply increases as an independent variable grants researchers a consistent, predictive, and easily accessible measure of state behavior.

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Appendix A: Countries Included

Afghanistan
Algeria
Argentina
Australia
Austria
Bahamas
Bahrain
Bangladesh
Belgium
Belize
Benin
Bolivia
Botswana
Brazil
Bulgaria
Burkina Faso
Cameroon
Canada
Cambodia
Central African Republic
Chad
Chile
China
Colombia
Comoros
Congo (Brazzaville)
Congo (Kinshasa)
Costa Rica
Cote d'Ivoire
Cuba
Cyprus
Czechoslovakia
Denmark
Dominican Republic
Ecuador
Egypt
El Salvador
Ethiopia
Finland
France
Gabon
Gambia
Germany, Democratic Republic of
Germany, Federal
Ghana
Greece
Guatemala
Guinea
Guyana
Haiti
Honduras
Hungary
Iceland
India
Indonesia
Iran
Iraq
Ireland
Israel
Italy
Japan
Jordan
Kenya
Korea, Republic of
Kuwait
Laos
Lebanon
Lesotho
Liberia
Madagascar
Malawi
Malaysia
Maldives
Mali
Malta
Mauritania
Mexico
Moldova
Morocco
Mozambique
Myanmar
Nepal
Netherlands
New Zealand
Nicaragua
Niger

Nigeria
Norway
Oman
Pakistan
Papua New Guinea
Paraguay
Peru
Philippines
Poland
Portugal
Qatar
Romania
Rwanda
Saudi Arabia
Senegal
Seychelles
Sierra Leone
Singapore
Solomon Islands
Somalia
South Africa
Spain
Sri Lanka
Sudan
Suriname
Swaziland
Sweden
Switzerland
Syria
Taiwan
Tanzania
Thailand
Togo
Trinidad and Tobago
Tunisia
Turkey
Uganda
United Arab Emirates
United Kingdom
United States of America
Uruguay
Venezuela
Vietnam
Yemen, Arab Republic
Yemen, People's Republic
Yugoslavia
Zambia
Zimbabwe

Appendix B: Currency Unions

Members		**End Date**
Australia	Solomon Islands	1979
Bangladesh	India	1974
Belgium	Congo (DR)	1961
Belgium	Rwanda	1966
Benin	Burkina Faso	
Benin	Cote d'Ivoire	
Benin	Gabon	
Benin	Guinea	1969
Benin	Madagascar	1982
Benin	Mali	
Benin	Mauritania	1974
Benin	Niger	
Benin	Senegal	
Botswana	Lesotho	1977
Botswana	Swaziland	1977
Cameroon	Benin	
Cameroon	Burkina Faso	
Cameroon	Chad	
Cameroon	Comoros	
Cameroon	Congo (Rep)	
Cameroon	Cote d'Ivoire	
Cameroon	Gabon	
Cameroon	Guinea	1969
Cameroon	Madagascar	1982
Cameroon	Mali	
Cameroon	Mauritania	1974
Cameroon	Niger	
Cameroon	Senegal	
Central African Rep.	Benin	
Central African Rep.	Burkina Faso	
Central African Rep.	Chad	
Central African Rep.	Comoros	
Central African Rep.	Cong (Rep)	
Central African Rep.	Cote d'Ivoire	
Central African Rep.	Gabon	
Central African Rep.	Guinea	1969
Central African Rep.	Madagascar	1982
Central African Rep.	Mali	
Central African Rep.	Mauritania	1974
Central African Rep.	Niger	
Central African Rep.	Senegal	
Chad	Benin	

Chad	Burkina Faso	
Chad	Comoros	
Chad	Congo (Rep)	
Chad	Cote d'Ivoire	
Chad	Gabon	
Chad	Guinea	1969
Chad	Madagascar	1982
Chad	Mali	
Chad	Mauritania	1974
Chad	Niger	
Chad	Senegal	
Comoros	Benin	
Comoros	Burkino Faso	
Comoros	Congo (Rep)	
Comoros	Cote d'Ivoire	
Comoros	Gabon	
Comoros	Guinea	1969
Comoros	Madagascar	1982
Comoros	Mali	
Comoros	Mauritania	1974
Comoros	Niger	
Comoros	Senegal	
Congo (Rep)	Benin	
Congo (Rep)	Burkina Faso	
Congo (Rep)	Cote d'Ivoire	
Congo (Rep)	Gabon	
Congo (Rep)	Guinea	1969
Congo (Rep)	Madagascar	1982.
Congo (Rep)	Mali	
Congo (Rep)	Mauritania	1974
Congo (Rep)	Niger	
Congo (Rep)	Senegal	
Cote d'Ivoire	Burkina Faso	
Cote d'Ivoire	Madagascar	1982
Cote d'Ivoire	Mali	
Cote d'Ivoire	Mauritania	1974
Cote d'Ivoire	Senegal	
France	Algeria	1969
France	Morocco	1959
France	Tunisia	1958
Gabon	Burkina Faso	
Gabon	Cote d'Ivoire	
Gabon	Guinea	1969
Gabon	Madagascar	1982
Gabon	Mali	
Gabon	Mauritania	1974

Gabon	Niger	
Gabon	Senegal	
Gambia	Ghana	1965
Gambia	Nigeria	1967
Gambia	Sierra Leone	1965
Ghana	Nigeria	1965
Ghana	Sierra Leone	1965
Guinea	Burkina Faso	1969
Guinea	Cote d'Ivoire	1969
Guinea	Madagascar	1969
Guinea	Mali	1969
Guinea	Mauritania	1969
Guinea	Niger	1969
Guinea	Senegal	1969
Guyana	Trinidad and Tobago	1971
India	Maldives	1966
India	Pakistan	1966
India	Seychelles	1966
Kenya	Somalia	1971
Kenya	Tanzania	1978
Kenya	Uganda	1978
Kenya	India	1961
Lesotho	Swaziland	
Madagascar	Burkina Faso	1982
Madagascar	Mali	1982
Madagascar	Mauritania	1974
Madagascar	Niger	1982
Madagascar	Senegal	1982
Malawi	Zambia	1967
Malawi	Zimbabwe	1967
Malaysia	Singapore	1971
Maldives	Pakistan	1971
Mali	Burkina Faso	
Mali	Mauritania	1974
Mali	Niger	
Mali	Senegal	
Mauritania	Burkina Faso	1974
Mauritania	Niger	1974
Mauritania	Senegal	1974
Mauritania	Seychelles	1976
Niger	Burkina Faso	
Niger	Senegal	
Nigeria	Sierra Leone	1965
Oman	India	1970
Pakistan	Seychelles	1967

Portugal	Mozambique	1977
Qatar	India	1966
Qatar	United Arab Emirates	
Senegal	Burkina Faso	
Somalia	Tanzania	1971
Somalia	Uganda	1971
South Africa	Botswana	1977
South Africa	Lesotho	
South Africa	Swaziland	
Sri Lanka	India	1966
Sri Lanka	Pakistan	1967
Tanzania	Uganda	1978
United Kingdom	Bahamas	1966
United Kingdom	Cyprus	1972
United Kingdom	Gambia	1971
United Kingdom	Ghana	1965
United Kingdom	Iraq	1967
United Kingdom	Ireland	1979
United Kingdom	Israel	1979
United Kingdom	Jordan	1967
United Kingdom	Kenya	1967
United Kingdom	Kuwait	1967
United Kingdom	Libya	1967
United Kingdom	Malawi	1971
United Kingdom	Malta	1971
United Kingdom	New Zealand	1967
United Kingdom	Nigeria	1967
United Kingdom	Oman	1971
United Kingdom	Sierra Leone	1965
United Kingdom	Somalia	1967
United Kingdom	South Africa	1961
United Kingdom	Tanzania	1967
United Kingdom	Uganda	1967
United Kingdom	Yemen (PDR)	1972
United Kingdom	Yemen (AR)	1972
United Kingdom	Zambia	1967
United Kingdom	Zimbabwe	1967
United States	Bahamas	
United States	Dominican Republic	1985
United States	Guatemala	1986
United States	Liberia	
Yemen (PDR)	Kenya	1972
Yemen (PDR)	Somalia	1971
Yemen (PDR)	Tanzania	1972
Yemen (PDR)	Uganda	1972
Yemen (AR)	Kenya	1972

Yemen (AR)	Somalia	1971
Yemen (AR)	Tanzania	1972
Yemen (AR)	Uganda	1972
Zimbabwe	Zambia	1967

Appendix C: Data

Dependent variable level of hostility from Correlates of War Militarized Interstate Disputes v3.10. 1 observation non-dyadic per year used. If multiple conflicts active in year, highest hostility code used.

Hostility Coding

1 = No Action

2 = Threat to use force

3 = Display of force

4 = Use of force

5 = War

Independent variables

1.Polity Score – Polity scores was taken from the Polity IV dataset. Countries are coded annually for level of autocracy and democracy separately. This paper used the "demaut" variable combining the two measures by subtracting the autocracy score from the democracy score, both of which range from 0-10. The highest possible level of autocracy is -10, while the highest level of democracy would be positive 10.

2.GDP per capita taken from the United Nation Statistical Division. Raw numbers for each year per country were used.

3.Reserve Positions extracted from IMF data accumulated and distributed by the United Nations Statistical Division and then divided by the measure in Independent variable 2. Raw numbers for each year entry per country were used.

4.Change in money supply variable extracted from Banks' Cross-National Time-Series Data Archive. Observed data for each country year (n) is acquired by subtracting raw money supply in year n-1 by year n-2 and then dividing by year n-2.

Table 7: Averages by Region

Region	Avg. Chng. Money Supply	Avg. Per Capita GDP
North America	.62	2380
Latin America	.89	808
Europe	.21	3474
Middle East	.52	2048
East Asia	2.71	133
Oceania	.37	2223
Africa	1.83	491

Table 8: Marginal Effects, Probability Outcome 1 = .80

Variable	Dy/dx	Z score	X value
Polity Score	-.0035523	-2.99	-1
Reserve Position	-.2160067	-3.98	.048
Currency Union	.0050404	2.88	2
Change in Money Supply	-.0096039	-2.15	1.16
Currency Union * Change in Money Supply	-.0139245	-1.87	1.16
Democracy * Change in Money Supply	.0196964	1.95	0
Bretton Woods	.0191499	1.17	0
GDP	.000013	3.79	1809.953
Africa	-.0031719	-0.09	0
South America	.0413496	1.47	0
Europe	.1130973	3.16	1
Middle East	-.2730286	-6.17	0
East Asia	-.1384887	-3.29	0
Oceania	.1018806	3.41	0

Table 9: Marginal Effects, Probability Outcome 2 = .01

Variable	Dy/dx	Z score	X value
Polity Score	.000071	2.38	-1
Reserve Position	.0043151	2.96	.048
Currency Union	-.001007	-2.39	2
Change in Money Supply	.0001919	1.94	1.16
Currency Union * Change in Money Supply	.0002782	1.80	1.16
Democracy * Change in Money Supply	-.0003935	-1.77	0
Bretton Woods	-.000398	-1.14	0
GDP	-.00000026	-3.03	1809.953
Africa	.000063	0.09	0
South America	-.00008998	-1.31	0
Europe	-.0017782	-2.69	1
Middle East	.0028707	3.66	0
East Asia	.0020566	3.04	0
Oceania	-.0025235	-2.40	0

Table 10: Marginal Effects, Probability Outcome 3 = .04

Variable	Dy/dx	Z score	X value
Polity Score	.0005275	2.82	-1
Reserve Position	.0320766	3.90	.048
Currency Union	-.0007484	-2.82	2
Change in Money Supply	.0014262	2.14	1.16
Currency Union * Change in Money Supply	.0020678	1.94	1.16
Democracy * Change in Money Supply	-.0029249	-1.92	0
Bretton Woods	-.0029368	-1.18	0
GDP	-.00000193	-3.97	1809.953
Africa	.0004685	0.09	0
South America	-.0065828	-1.38	0
Europe	-.0138068	-3.31	1
Middle East	.0240257	6.80	0
East Asia	.0161348	3.93	0
Oceania	-.0180046	-2.91	0

Table 11: Marginal Effects, Probability Outcome 4 = .14

Variable	Dy/dx	Z score	X value
Polity Score	.0027532	2.98	-1
Reserve Position	.1674172	3.94	.048
Currency Union	-.0039066	-2.87	2
Change in Money Supply	.0074435	2.14	1.16
Currency Union * Change in Money Supply	.0107923	1.86	1.16
Democracy * Change in Money Supply	-.0152658	-1.94	0
Bretton Woods	-.0147958	-1.17	0
GDP	-.0000101	-3.73	1809.953
Africa	.0024596	0.09	0
South America	-.031815	-1.48	0
Europe	-.0886368	-3.14	1
Middle East	.2130129	6.26	0
East Asia	.1086342	3.27	0
Oceania	-.0772243	-3.46	0

Table 12: Marginal Effects, Probability Outcome 5 = .01

Variable	Dy/dx	Z score	X value
Polity Score	.0002006	2.62	-1
Reserve Position	.0121979	2.87	.048
Currency Union	-.0002846	-2.41	2
Change in Money Supply	.0005423	1.92	1.16
Currency Union * Change in Money Supply	.0007863	1.61	1.16
Democracy * Change in Money Supply	-.0011123	-1.79	0
Bretton Woods	-.0010194	-1.12	0
GDP	-.000000734	-2.64	1809.953
Africa	.0001809	0.09	0
South America	-.002052	-1.54	0
Europe	-.0088755	-2.43	1
Middle East	.0331194	3.06	0
East Asia	.0116631	2.18	0
Oceania	-.0041282	-3.08	0

Model ran using ordered probit in Stata 9/SE and SPOST by Scott Long and Jeremy Freese.