

# **Political Persecution or Economic Deprivation? A Time-Series Analysis of Haitian Exodus, 1990-2004**

Stephen M. Shellman  
Department of International Affairs  
University of Georgia  
[smshel@uga.edu](mailto:smshel@uga.edu)

&

Brandon Stewart  
Department of Government  
College of William & Mary  
[bmstew@wm.edu](mailto:bmstew@wm.edu)

*Authors' Note:* Stephen Shellman is an Assistant Professor in the Department of International Affairs at the University of Georgia, and previously held the rank of Visiting Assistant Professor at the College of William & Mary. Brandon Stewart is an undergraduate Government major at the College of William & Mary. We would like to thank Hongri Jiang and Andrew Reeves for their research assistance. We also wish to acknowledge support from several sources that made this study possible. The American Political Science Association's Small Research Grant Program and the Chappell Faculty-Student Research Fellowship awarded by the Charles Center at William & Mary facilitated the completion of the study. Grants awarded by the National Science Foundation (SES 0516545 & 0214287) supported generation of the domestic and foreign conflict-cooperation data used in the study.

## **Abstract**

This study addresses the factors that lead individuals to flee their homes in search of refuge. Many argue that individuals abandon their homes in favor of an uncertain life elsewhere because of economic hardship, while others argue that threats to their lives, physical person, and liberty cause them to flee. This study engages the debate by analyzing flight patterns over time from Haiti to the United States as a function of economic and security factors. Which factors have the largest influence on Haitian-U.S. migratory patterns? Our results show that both economics and security play a role, however, our analyses are able to distinguish between the effects of different individual economic and security indicators on Haitian-U.S. migration. In particular, the time-series analyses assess the impacts of important events in Haitian history on flight patterns such as the 1991 and 2004 *coups d'état*.

This study explores the determinants of migration and attempts to differentiate the impact of economic and political causes. More specifically, we focus on the economic and security push and pull factors that cause people to flee their homes and seek refuge abroad. Our motivating question is: What factors explain the variation in migration movements over time? This study builds on previous work done at the global level; we apply the arguments from that work to Haitian migrants over the period 1990-2004, and test the implied hypotheses using time series data and methods. Moreover, we independently model the short-run and long-run impacts of key political and economic events (e.g. coups and sanctions) during the last 15 years on Haitian flight.

Skepticism over the label “refugee” used to describe Haitian immigrants to the United States is common. Instead, many view such immigrants as fleeing economic deprivation rather than political persecution. The view of Haitian migrants as economically motivated contorts the meaning of the word “refugee” in the popular lexicon. For example, in May of 2004, George W. Bush proclaimed that the U.S. “will turn back any [Haitian] refugee that attempts to reach our shores.”<sup>1</sup> At the time, a violent uprising in Haiti causing bloodshed, death, and destruction had erupted. Many went so far as to call it a coup. Yet, the Bush administration’s spin would have you believe that those fleeing the country were “economic migrants.” According to the UN definition of a refugee (one who, owing to a fear of persecution, has abandoned his or her home in favor of relocating abroad) the US policy constitutes a direct violation of the 1951 Geneva Convention and the principle of ‘nonrefoulment.’ State parties to the Convention are legally bound to provide refuge to such persons and cannot forcibly return them to their homeland if such a fear is demonstrable.

---

<sup>1</sup> <http://www.refintl.org/content/article/detail/3897>

Just as the debate over what distinguishes “political refugees” from “economic migrants/refugees” exists within policy communities, it also surfaces in the academic literature. For example, both Moore and Shellman (2004a) and Schmeidl (1997) show that while the size of the economy matters, violence in the country of origin has a larger effect on refugee flows than macro-economic variables. Alternatively, Neumayer (2005a) argues that economic hardship and economic discrimination lead to higher flows of asylum seekers (to Western Europe) than political oppression and violent conflict. This leads him to conclude that many asylum seekers are best described as “bogus refugees” in search of a better life and economic well-being rather than genuine refugees fleeing persecution.

Nevertheless, as Neumayer (2005a; 2005b) points out, this debate is an important topic for myriad reasons. Asylum migration creates conflict within developed countries as asylum and native populations clash. Moreover, origin and asylum countries’ governments may criticize each other for their policy choices. On the one hand, origin governments may criticize receiving states for sheltering their dissidents. On the other hand, receiving governments may be criticized by their own citizens for caring for foreigners while not caring adequately for their own citizens. These scenarios can even escalate to international and civil war (Salehyan & Gleditsch 2004). Finally, many accuse refugees of draining the economy because they often agree to work for lower wages than the natives and generate unemployment for the state’s citizens (UNHCR 2002).

As a result, policy-makers face a decision as to how to respond to such humanitarian crises. Loescher (1993) contends that all countries make asylum policies in their own self-interest. Backlash policies to reduce immigration and asylum seekers are often justified with the statements that many individuals seeking asylum and fleeing their

countries are not doing so in response to persecution, but instead, to economic deprivation. Throughout history, the United States enforced a ‘stiff’ policy towards Haitian migrants. For example, once the Clinton Administration changed its policy on interviewing interdicted persons at sea, National Security advisor, Samuel Berger, commented that he was confident that 19 of every 20 Haitians would be found to be economic refugees.<sup>2</sup> The statement illustrates the heart of the debate and its potential policy implications.

This article builds on the Moore & Shellman (2004a; 2004b) global studies by applying the argument contained therein and systematically evaluating its predictions in a particular case over time. This study assesses the impacts that different economic and security variables have on Haitian migration to the United States. Previous systematic empirical investigations of asylum and refugee trends analyze annual-level data for many countries, which only reveal the aggregate tendencies of migratory populations over space and time.<sup>3</sup> We argue that these data mask the details of the migration process. Instead, we employ a longitudinal design to capture “an empirically rich dynamic underlying the process tendencies” (Wood 1988, 229). We divide the temporal units into weeks to provide a closer look at the migration process. This fine-grained temporal unit provides better resolution for sensing the causal mechanisms at work (Wood 1988, 215). Moreover, we use a quasi-experimental design (Campbell & Stanley 1966; Wood 1988) to trace the impacts of particular events on migration over time. Using this method, we can more readily detect the sequences, magnitudes, and durations of key events –like policy shifts, *coups d'état*, and economic sanctions– on the migratory process. Finally, the

---

<sup>2</sup> <http://www.wpunj.edu/~newpol/issue17/dow17.htm>

<sup>3</sup> See Schmeidl (1997, 1998, 2000), Davenport, Moore & Poe (2003), Moore & Shellman (2004a), Neumayer (2005).

case study compliments other global studies and serves as one opportunity to evaluate the applicability of general global models to a particular case.

The article proceeds as follows. First, we begin with a general argument about when we should observe migration and the implied hypotheses. Then we discuss Haiti's politics and economics, as well as key events and their predicted effects on Haitian migration. We then present our research design, which covers issues related to measurement, specification, and estimation of statistical equations. Finally, we report our results and conclude by discussing the implications of those results in terms of policy and the literature.

### **The Argument & Hypotheses**

In this study, we apply an argument consistent with that of Moore and Shellman (2004a; 2004b) and Neumayer (2005a). In short, both arguments contend that individuals will flee their homes when the costs of staying exceed the benefits. Moore and Shellman (2004b) take it a step further and factor the costs and benefits of fleeing to another country into the equation, such that the individual compares the costs and benefits of staying in the origin country to those of going to the potential asylum country. We similarly assume that to make such decisions, individuals examine the information available to them in the origin and potential asylum environments.

We also assume that individuals are purposive and value their liberty, physical person, and life in addition to economic prosperity. Moreover, they monitor their environments and those around them to develop expectations about becoming a victim of persecution as well as potential economic distress or opportunity. When economic distress and/or the probability of being persecuted rises, the expected utility of staying

decreases while the utility of leaving increases. Finally, origin domestic policies and asylum foreign policies will also affect individuals' decisions. Below, we hypothesize how economics, security, and domestic and foreign policies should influence migratory flows.

### ***Security***

We identify two main sources of threat to the physical person of an individual. The first is state-sponsored violence and the second is dissident/rebel violence. Most of the literature tends to focus on state-sponsored violence. Some scholars focus on human rights abuses (e.g. Gibney, Apodaca, and McCann 1996), while others focus on genocide (e.g. Rummel 1994) or ethnic victimization (e.g. Kaufman 1998). Yet, others focus on dissident violence and its threat to the population at large (e.g. Moore & Shellman 2004a). Previous studies find that human rights abuses and dissident violence increase the annual expected number of asylum applicants in Western Europe (Neumayer 2005a) and annual expected number of refugees around the globe (Moore & Shellman 2004a; Davenport, et al. 2003). We similarly contend that as the publicly visible behavior of the government and/or the dissidents becomes increasing hostile, larger numbers of individuals will attempt to flee the country.

### ***Economics***

The second broad factor that should impact migration decisions is the economy. Bauer & Zimmermann (1994) suggest that wage differential in the origin and destination countries will be a key factor in international migration decisions. As the economy declines in the origin country, potential foreign destination choices appear more attractive. Borjas (1994)

and Massey et al (1993) contend that workers migrate if they feel they can increase their standards of living. As such, we submit that economic opportunity (or lack thereof) in the origin country should affect migration, as well as economic opportunity in the potential destination country. As the origin economy decreases in size, larger numbers of individuals will migrate abroad. In contrast, as the potential destination country's economy increases in size, more individuals will migrate to that destination country.

### ***Domestic Politics***

Origin countries' emigration policies may aid or hinder refugees attempting to leave the country. On the one hand, not all individuals subject to unbearable conditions in their homelands are allowed to escape them. For example, few refugees were free to leave Cambodia between 1975 and 1978 due to the sealing of the borders by the Khmer Rouge. Similarly, in the mid-1920's the Soviet Union adopted a "no-exit" policy, which, with minor exceptions, was maintained until the fall of the empire. Consequently, following the initial large flows of refugees generated from the Russian Revolution, over the long-term the Revolution generated smaller numbers than if it had not implemented the no-exit policy. Zolberg et al. (1989, 17) believe that many would have left during the "murderous collectivization drives and purges of the 1930's." however, records indicate that few did. On the other hand, many countries enact policies that provoke the exodus of citizens and/or put no restrictions on exit. For example, Idi Amin, Uganda's dictator, decided in 1972 to rid his country of the minority Indian population and put no restrictions on emigration of the Indians. Given the argument, we expect that harsh exit policies will lead to decreased migration, while liberal exit policies (especially those in combination with repression) will facilitate migration.



## ***Foreign Policy***

Additionally, foreign policy should impact an individual's decision to flee. In particular, the potential destination country's immigration policies may aid or hinder refugees attempting to enter. Countries with strict entrance policies tend to turn refugees away, whereas countries with liberal entrance policies allow more refugees to cross the borders.

As Zolberg (1989, 6) correctly points out, "people cannot leave their country if they have no place to go." Thus, government policies of potential host countries determine the ease with which refugees can enter a particular country. Some policies place restrictions on granting asylum even if individuals meet the UN declaration definition. Zolberg (1989, 7) reports that some countries attempt to avert, flows and that the best way to accomplish this is for both sending and receiving states to "slam the door shut."

Still other countries have political motivations. For example, U.S. foreign policy during the Cold War was extremely "anticommunist." Consequently over 95% of refugees admitted to the United States between 1945 and 1989 were from communist countries (Ferris 1998, 72). As a result, other peoples were denied asylum. Thus implies that the degree to which countries restrict or open their borders to migrants/refugees influences the number of migrants/refugees that flow between dyads (origin to destination).

Similarly, if the origin and destination country are engaged in a political conflict (armed or diplomatic), the flow of migrants between origin country and destination country will decrease. Schmeidl (1997) argues that international conflict leads to a decrease in refugee flight and an increase in internally displaced persons (those who flee

persecution but remain within their own borders). In the case of an armed conflict, individuals are deterred from fleeing either into the conflict or to the rival state. When hostilities cease, flows should increase from origin country to destination country.

### ***Natural Disasters***

Finally, natural disasters, like hurricanes, earthquakes, and volcanic eruptions, affect one's probability of dying and thus lead to changes in one's cost/benefit calculus of staying or going. Such disasters kill and injure many people, demolish homes and buildings, and destroy crops and ultimately economies. As such we expect migration to increase following natural disasters.

We choose to test these hypotheses with regard to Haitian migration to the United States. So before we delve into the research design we briefly discuss the history of the case. The Haiti discussion also generates a number of case-specific security and economic hypotheses to test.

### **Haiti's History & Case-Specific Hypotheses**

The small Caribbean nation has an unfortunate history of political instability, social unrest, and widespread poverty. In fact, 80% of the people live in poverty and in the last 15 years experienced two coups.<sup>4</sup> As such, the case yields an interesting laboratory in which to explore the effects of economics and security on migration.

Our analysis begins in the 1990's, so we provide a more detailed overview of Haiti's history from 1990-2004 below and depict some major events during that period in Figure 1. Within this overview, we hypothesize the effects of particular events on Haitian

---

<sup>4</sup> CIA World Factbook <http://www.cia.gov/cia/publications/factbook/print/ha.html>

migration to the United States. We begin in the 1990's with the time leading up to the 1991 coup and its hypothesized impact, and close by discussing the impact of the 2004 coup.

[Insert Figure 1 here]

### ***The Duvaliers***

To understand the current situation, we return to October 22, 1957 and the rise of Francois Duvalier, also known as 'Papa Doc.' He rose to power following a string of short-lived and politically unstable leaders and established the Tonton Macoutes, a militia that terrorized the general public and enforced his will. After his death in April 1971, his son Jean-Claude 'Baby Doc' Duvalier assumed control of the government. During Baby Doc's reign of political terror and oppression, migrants from Haiti frequently entered the United States (legally and illegally), which led Ronald Reagan to enter into an interdiction agreement with Jean-Claude Duvalier in 1981.

### ***Prosper Avril***

During the beginning of the 1990's, Prosper Avril, a Duvalierist military general, headed the regime. Avril rose to power in September of 1988 following a series of military generals who had seized control of the government after Baby Doc's exile. In the two years from 1988 to 1990, he presided over a regime marked by political terror, which managed to estrange almost every segment of Haitian society. Neither he nor the military generals that preceded him took action against the remaining Tonton Macoutes. The Haitian people were left to hunt them down themselves, beginning a trend of lawlessness and vigilantism that would shape future resolutions of political affairs.<sup>5</sup> In March 1990,

---

<sup>5</sup> Sobaka Dossier <http://www.diacritica.com/sobaka/dossier/pavril.html>

Avril was forced from power by intense civil unrest, and General Herard Abraham assumed the presidency until he could hand it over to Ertha-Pascal Trouillout, the Supreme Court President, a few days later. President Trouillout remained president until elections could be held.

### ***Aristide's First Term***

In 1990, Jean Bertrand Aristide, a Catholic priest who was working in the slums of Port-au-Prince, won the election with 67% of the vote. He had made a significant name for himself by denouncing the Duvalierists and the Tonton Macoutes. He promised to act on behalf of the poor in Haiti and to strive for national reconciliation. During the election he formed the coalition "Lavalas Family," which became one of the principle political parties in Haiti. His inauguration was threatened by a coup attempt on January 6, 1991 led by Roger Lafontant, Interior Minister under Avril and former member of the Tonton Macoutes. Former President Abraham condemned the coup and restored the government, allowing the inauguration of Aristide to go ahead as planned.

After assuming office, Aristide began a program of careful reform. He retired seven top military officials, replacing them with younger officers. He also began a process of economic reform, pushing for the break-up of monopolies and curbing the rampant tax evasion among the wealthy, while constantly reassuring the business community. During his first months in office, Aristide accepted \$511 million dollars in grants and loans to facilitate economic growth.<sup>6</sup> In the seven months between February 7 and September 30, 1991 there was a significant drop in Haitian emigrants, due most likely, to Aristide's enormous popularity.

---

<sup>6</sup> White, Robert. "Haiti: Policy Lost, Policy Regained." <http://www.cosmos-club.org/journals/1996/robertwhite.html>

### ***1991 Coup***

On September 30, 1991 a military coup led by Raoul Cédras, one of the generals appointed to the high command by Aristide, deposed the government. Aristide fled to exile in the United States while Cédras established control of the country. There was widespread political violence in the first days following the coup. Haitian elites and Cédras' soldiers began destroying all the vestiges of Aristide's regime and hunting down Aristide supporters. Cédras appointed a provisional president, Joseph Nérette, October 8, 1991, but continued to maintain *de facto* control of the country.

We expect that the violent coup should generate a large number of migrants to flee to the U.S. The probability of one's persecution should rise as the military violently takes over the government. However, as violence subsides and the situation stabilizes itself, the number of migrants should decline. In sum, we hypothesize an inverted-U relationship between time and migrants in the short-run following the 1991 coup. In other words, we suspect that just after the coup, the number of migrants will rise sharply and then fall over time.

### ***OAS v. UN Economic Sanctions***

Following the 1991 coup, economic sanctions were placed on Haiti by the Organization of American States (OAS). The sanctions were implemented on October 4, 1991, with the issuance of Executive Order No.12775, which declared a national emergency after the overthrow of President Aristide and imposed limited sanctions on the acting regime.<sup>7</sup> At this time the OAS recommended that all member states "suspend their economic,

---

<sup>7</sup> <http://www.ndu.edu/inss/books/Books%20-%201997/Imposing%20International%20Sanctions%20-%20March%2097/chapter2.html>

financial, and commercial ties with Haiti.”<sup>8</sup> However, unlike UN sanctions under the UN Charter, OAS sanctions are not binding to all members. The U.S., in particular, loosely enforced the embargo and did not attempt to freeze the *de facto* regime’s assets (per the OAS resolution) until late 1993. Other OAS members similarly did not enforce the embargo. As a result, we suspect that the *de facto* regime was able to maintain power.

In contrast, on June 23, 1993, “the U.N. Council transformed a strictly voluntary program of OAS regional sanctions into mandatory worldwide sanctions under Chapter VII of the U.N. Charter.”<sup>9</sup> This resolution led to an increase in monitoring and enforcement activity. After all, the embargo was binding for all UN members. The U.S. took things further by limiting air traffic to and from Haiti and offering assistance to the Dominican Republic to facilitate their efforts enforcing the embargo. Over time, multilateral cooperative efforts froze the *de facto* regime’s assets. Such sanctions brought the coup plotters to the negotiating table, resulting in Aristide’s return.

Under foreign economic sanctions an individual’s economic prosperity suffers. As such, we hypothesize that the OAS sanctions increase Haitian migration to the U.S. However, the UN Sanctions should have an even greater impact on migrants seeking refuge in the U.S. Specifically, we argue that immediately following the implementation of the UN sanctions, the number of Haitian migrants will increase to a point and then decrease as negotiations between the *de facto* regime and the U.S. increase and the reinstatement of Aristide nears. Similar to our hypothesis about the effect of the 1991 coup on migration, we contend that the functional form of the relationship between time and migration during the UN sanction period should be inverted-U shaped.

---

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

### ***Operation Able Manner***

Up until this point, the U.S. policy for Haitian migrants was to pick them up and interview them regarding their fears of political persecution. In May 1992, President Bush changed the national policy by giving an executive order that Haitian migrants were to be picked up and returned without any interview. Finally, just five days before leaving office, President Bush initiated Operation Able Manner, a reinforcement of the coast guard designed to drastically decrease the number of Haitian migrants reaching the U.S. At its height, Operation Able Manner involved 17 Coast Guard cutters, 9 aircraft and 5 navy ships patrolling the waters between Haiti and Cuba. We believe that this U.S. anti-immigration policy/US Coast Guard operation will decrease migration to the U.S. In other words, the Coast Guard presence should deter migration to the U.S.

### ***Aristide's Re-instatement***

President Clinton maintained the policy outlined in the executive order, as well as Operation Able Manner, upon his inauguration. On September 19, 1994, under increasing international and domestic pressure to intervene in the current conflict, President Clinton ordered 23,000 U.S. troops into Haiti as part of a multinational effort. Operation "Restore Democracy" forced the surrender of Raoul Cédras and the military-backed government and restored Aristide to the presidency. Shortly thereafter, President Clinton ended operation Able Manner, and Aristide disbanded the Haitian National Army. On March 31, 1995, President Clinton withdrew the vast majority of U.S. forces from Haiti.

We hypothesize that the presence of foreign troops and the wall of "defense" that the U.S. set up when returning Aristide to power should lead to an initial decline in

migration to the United States. It poses tremendous difficulty to get off the island past the U.S. occupation force and then the U.S. Coast Guard. As individuals are interdicted and returned at such high rates, fewer should flee to the United States. However, after U.S. troops leave in 1995, we should see emigration levels rise as Aristide restores his rule. Thus, we expect a U-shaped relationship between time and Haitian migration to the U.S. during the 1994-1996 Aristide period.

### ***The Préval Regime***

Aristide, under pressure from the U.S. government, respected the constitutional rule that a president cannot serve consecutive 5-year terms, despite the fact that the majority of his term was spent in exile. His party, the Lavalas Family, put forward Rene Préval as a candidate for the presidency. The 1995 elections went smoothly, with no reported incidents of violence or voter intimidation, although only a little less than 30% of the electorate voted. Rene Préval won the election with 87% of the votes. In 1996, Préval's inauguration became the first successful transition of power in Haiti between two democratically elected leaders. During his administration, the economy improved as he was able to turn attention towards it and away from security oriented issues. In particular, the economy gained momentum throughout 1999 and 2000.

Back in 1996, the Lavalas Party began to rupture as conflicts broke out over political power. Parliamentary elections in 1997 failed, and a struggle to confirm a new prime minister occurred. In January of 1999, Préval dissolved the parliament and ruled by decree, ignoring the constitution. In March of that year, he appointed a prime minister without seeking confirmation.



Préval's administration was one of the few periods in recent Haitian history where the government was able to turn their attention towards the economy as opposed to public security. After all, both the Avril and Cédras regimes were marked by political oppression. Aristide's first brief presidency was turbulent, as was his return to power, and his second term was marked by armed militias and imposed order through repression. *Ceteris paribus*, during the Préval administration migratory flows from Haiti to the U.S. should decline relative to other Haiti Administrations.

### ***Hurricane Georges***

In September of 1998, a disastrous hurricane hit Haiti, bringing with it winds up to 100mph. The government declared a state of emergency, shut down the airport, and closed all the schools. Estimates show that about 150 people were killed by the hurricane and its aftermath. The poorest individuals were hit the hardest, as they are the ones who live in poorly constructed housing.

Due to the nature of the disaster and its ramifications, we expect that migration from the U.S. to Haiti rapidly increases and then falls off following the hurricane. Thus, we expect an inverted U-shaped relationship between time and Haitian migration in the short-run following the hurricane.

### ***Aristide's 2000 Election & Second Term***

Unlike the 1996 elections, there was a great deal of political violence leading up to the 2000 elections. OAS reported 70 violent incidents between January 1 and the election. The death of Jean Dominique, a renowned journalist, on April 3 brought the attention and condemnation of the world to the events in Haiti. Just days later on April 8,

100 protesters burned down a Lavalas-Opposition Coalition headquarters. Police were on the scene, but neither moved to stop the protestors, nor arrest any of them. Subsequently, many foreign countries, including the U.S. and the E.U., pulled their aid from Haiti, causing the economy to shrink. Following the election, the police arrested 35 opposition activists, many of whom, ironically, were protesting election fraud.

Later in 2000, the Lavalas Family succeeded in winning 67% of the seats in the parliament. Aristide stood for the presidency again and was elected. During Aristide's second term the socio-economic quality of life for the slum dwellers continued to decrease. Aristide began to rule with heavy influence from patronage and enforcing his dictates with armed gangs. Aristide also began to draw political criticism from foreign powers, including the U.S., for not including more opposition leaders in his coalition.

Aristide's return to power should quickly reduce migrant levels as he begins to solidify his power base and employ the use of his armed gangs to maintain control. Moreover, the economy improves during his time in office. Yet, over time and towards the end of his reign, the economy worsens and protest increases. We expect that towards the end of his term, the economy and political protests should increase the number of migrants fleeing the country. As such, we expect a U-shaped relationship between time and Haitian Migration from Aristide's inauguration until the 2004 coup.

### ***2004 Coup***

In February of 2004, the discontent of the people reached a boiling point as protestors in the street began arming themselves. The failing economy and increased gang violence pushed the opposition to the edge. Popular support began to erode and with the army disbanded, the Front for Haitian Advancement and Progress (FRAPH) took advantage of

a political opportunity.<sup>10</sup> A group of 700 rebels or so seized roughly half of the country and eventually forced Aristide into exile. The coup in February 2004 was a difficult time for the already struggling economy. Refugees International estimates that \$500 million dollars of damage was done to the infrastructure in Haiti.<sup>11</sup> In February 2004, President George W. Bush began Operation Able Sentry (similar to Able Manner) to stem the tide of refugees. After Aristide abdicated the presidency, Boniface Alexandre was installed as the provisional president, until elections could take place.

Similar to the 1991 coup, we expect increasing numbers of Haitian migrants following the 2004 coup followed by an overall reduction of migrants as the country stabilizes.

### *U.S. & Haiti Domestic Politics*

Last, while we discussed the hypothesized impact of specific U.S. policies enacted over the 1990-2004 period such as Able Manner and the different Executive Orders advanced by different U.S. Presidents, are their party/administration differences in how different Presidents handled the Haiti immigration issue? During this time, three different presidents held office in the U.S., yet none differ dramatically in the way they approached the Haiti immigration issue. For example, Bush Sr. enacted Able Manner just prior to leaving office and Clinton maintained it. Similarly, Bush Jr. continued the rhetoric that Haitian immigrants were fleeing poor economic conditions not persecution and enacted Operation Able Sentry. Therefore, we expect to find no difference in levels of Haitian migration across the different Presidents' terms.

---

<sup>10</sup> See McAdam (1982, Chapter 2) for a description of his “political process model.”

<sup>11</sup> Refugee International <http://www.refintl.org/content/country/detail/2949>

In terms of Haitian politics, we have covered the major regime changes and their hypothesized effects. However, we should describe the general Haitian emigration policies before moving to test all of our hypotheses. We previously noted that harsh policies should decrease migration while liberal policies should increase migration. Overall, the Haitian government's policies during the 1990's were fairly 'liberal.' While police did catch people trying to leave, they would often allow them to go, especially if the migrants paid them off.

### **Research Design**

To test our hypotheses, we employ a longitudinal design to analyze Haitian migration to the United States. The final mathematical construction of some of our indicators depends on the results of Augmented Dickey-Fuller (ADF) stationarity tests. So, before we describe each of the variables, we discuss the general issue and later refer to the impact of the ADF tests on some of the constructed variables.

When estimating regression models, it is important that time-series variables entering the equation are stationary (i.e., have a constant mean and variance). We perform ADF tests on each variable entering the statistical equations described below. Initial tests of the economic series revealed non-stationary series. However, we took the first difference of each series and ADF tests on each of the differenced series show that they are all stationary. Tests convey that all of the interval-level constructed variables entering the equations below are stationary, minimizing the chances of finding spurious relationships.

### ***Dependent Variable***

We developed a sample using the week as our unit of observation. Our temporal domain is January 1990 through June 2004. To test our hypotheses about Haiti-U.S. migration, we chose to model weekly Haitian interdictions at sea by the U.S. Coast Guard. The data themselves come from the U.S. Coast Guard's publicly obtainable interdiction logs.<sup>12</sup> To demonstrate the indicator's construct and external validity, we correlated the annual sums of interdictions with the available Moore & Shellman (2004b) measure of refugee flows (obtained from the UNHCR) and found a .67 correlation between the two annually aggregated series.<sup>13</sup> This tells us that our measure reflects other similar aggregate measures. With respect to reliability, the U.S. Coast Guard records interdictions at sea each day by the migrant's country of origin. The record-keeping process implies a highly reliable measure.

Of course, the measure is not without its limitations. To begin, the measure only captures those individuals who are caught trying to enter the U.S. and ignores those who successfully enter the U.S. illegally. Second, it only captures those individuals traveling to the U.S. by boat (however, boats are the dominant form of transportation) and ignores individuals applying for refugee and asylum status in the U.S. "in-country" office located in Port-Au-Prince (established in 1994 under the Clinton Administration). However, given its relatively strong correlation to annual refugee flows, we feel it serves as a good indicator of weekly migratory flows from the U.S. to Haiti.

### ***Security Indicators***

To measure the threat to one's physical person, we used event data from Project Civil

---

<sup>12</sup> We filed a written request to obtain the US Coast Guard's logs.

<sup>13</sup> Weekly-level refugee data is unheard of.

Strife (PCS).<sup>14</sup> According to Goldstein (1992, 369) event data are “day-by-day coded accounts of who did what to whom as reported in the open press,” and offer the most detailed record of interactions between and among actors. To utilize event data in statistical models, one must first aggregate the events in a way that requires some method of combining different event types into a “single theoretically meaningful measure (in one or more dimensions)” of the relationships among actors (Goldstein 1992, 370). Most event data projects convert events into a measure of conflict-cooperation.<sup>15</sup> The conflict-cooperation variable is said to measure the intensity of one actor’s behavior directed towards another actor.

A machine-coding procedure that converts English-language reports into event data by assigning particular numerical codes to actors, targets, and verbs generates the PCS data. Specifically, the project uses a modified version of Text Analysis By Augmented Replacement Instructions (TABARI), developed by Phil Schrodt, to generate domestic political event data.<sup>16</sup> TABARI uses a “sparse- parsing” technique to extract the subject, verb, and object from a sentence and performs pattern matching using actor and verb dictionaries.<sup>17</sup> In short, TABARI matches words from an electronic text file (news story) to words contained in the actor and verb dictionaries and assigns a corresponding code to each actor and verb, and finally, spits out the date.<sup>18</sup> Machine-coded data are only as good as the dictionaries, so each of the actor dictionaries is customized for each case. Our verb dictionary is a modified KEDS verb dictionary. Verbs and verb phrases are

---

<sup>14</sup> See Shellman, Stewart, and Reeves (2005) for more information on coding rules and procedures.

<sup>15</sup> Such projects include: Cooperation and Peace Data Bank – COPDAB, World Events Interaction Survey – WEIS, Integrated Data for Events Analysis – IDEA, Protocol for the Assessment of Nonviolent Direct Action – PANDA, Intranational Political Interactions Project.

<sup>16</sup> See <http://raven.cc.ukans.edu/~keds/index.html> for information on the KEDS and TABARI projects.

<sup>17</sup> TABARI recognizes pronouns and dereferences them. It also recognizes conjunctions and converts passive voice to active voice (Schrodt 1998).

<sup>18</sup> These particular data are coded from Associated Press reports available from Lexis-Nexis.

assigned a category based on the WEIS coding scheme.<sup>19</sup> Then, these categories are scaled on an interval conflict-cooperation continuum using the Goldstein (1992) scale. However, KEDS has introduced new codes in addition to those used by McClelland and the WEIS project. Most of these are borrowed from the Protocol for the Assessment of Nonviolent Direct Action (PANDA) project.<sup>20</sup> The KEDS project investigators assigned weights to the new codes that are comparable to the Goldstein weights, and we used those weights in tandem with the Goldstein weights to create the scaled event data series analyzed in this study.<sup>21</sup> These data now represent a conflict-cooperation measure of behavior by one actor directed towards another.

Our theory contends that individuals monitor the behavior of government forces and guerrillas and flee when the perceived threat is heightened. Thus, we aggregated rebel actors together, government actors together, rebel targets together, and government targets together.<sup>22</sup> Finally we averaged the conflict-cooperation values associated with each directed dyad (rebels to government and government to rebels) by week. In the end, we created directed dyadic event scores on a -10 (hostility) to +10 (cooperation) continuum that summarize the weekly level of behavior directed by the rebels towards the government and the government towards the rebels.

In converting events to a time-series, one must choose an appropriate level of aggregation (Freeman 1989). Many contend that high levels of aggregation such as monthly, quarterly, and annual data tend to diminish the important dynamics evident in day-to-day conflict and cooperation, and Shellman (2004a) provides some evidence of this empirical artifact. On the other hand, daily data prove to be too small of a unit. There

---

<sup>19</sup> See "World Event/Interaction Survey (WEIS) Project, 1966-1978," ICPSR Study No. 5211.

<sup>20</sup> See <http://www-vdc.fas.harvard.edu/cfia/pnscs/panda.htm> for information on the PANDA project.

<sup>21</sup> See <http://www.ukans.edu/~keds/data.html> for WEIS codes and adaptations PANDA.

<sup>22</sup> We also experimented with separating out the military from the government.

is almost certainly a lag effect at the daily level between conflict and migration and it is difficult to model such a lag structure. As a result, we choose to aggregate our conflict data and interdiction data by the week.

### ***Domestic Politics***

To measure Haiti's political climate aside from what the event data will capture on the government side, we use dummy variables to record the presence and absence of each regime's/leader's period in power (e.g., Aristide, Cédras, and Préval).

### ***Economic Indicators***

To measure the economic environment in Haiti, we use the monthly Consumer Price Index from the International Labor Organization (ILO) LABORSTAT database.<sup>23</sup> The CPI measures changes in the prices of goods and services that are directly purchased in the marketplace. Most think of the CPI as measuring the inflation rate, while others refer to it as a cost of living index. While many point out the distinctions between CPI and a complete cost of living index, the CPI can convey the changes in the prices of goods and services, such as food and clothing. Therefore, it serves as a good indicator of the monthly economic environment in Haiti over time.

Unfortunately, the data came in two series, each having a different base year, which do not overlap.<sup>24</sup> Furthermore, there were 8 months of missing data in 1996. The first series runs from Jan 1990 to December 1995 (1990=100). The second series runs from September 1996 to June 2004 (2000=100). To begin, we linearly extrapolated the first series through August 1996. Then, we merged the two together and created a dummy

---

<sup>23</sup> See <http://laborsta.ilo.org/>.

<sup>24</sup> However, the data range from similar starting and ending values and have similar means.



variable set equal to 1 from September 1996 through the end of the time-series. The dummy variable will tell us if the level of the time-series changes as a result of the second series. We also interact Haitian CPI with the dummy variable to see if the estimated effect of CPI changes as a result of the “new” series. After constructing the “level” indicator, we tested it for stationarity using the ADF test. We found that it was not stationary. So we took the first difference ( $\Delta$  HAITICPI). We chose to do this in the original monthly dataset such that when we merged the monthly change series with our weekly dependent variable, each week in each month would have the same value of  $\Delta$ HAITICPI associated with it.<sup>25</sup> An ADF test confirmed that the newly created “change” series is stationary. Moreover, the differenced variable makes the series more comparable than the two “level” series.<sup>26</sup> As such, we expect our dummy variable representing the second series to be insignificant.

To measure the U.S. economic environment, we used monthly U.S. CPI as well as monthly U.S. wages. These measures capture the economic pull of the United States. We expect inflation to be negatively signed and wages to be positively signed. We downloaded both series from the ILO LABORSAT website. Both series were determined to be nonstationary using ADF tests. Like  $\Delta$ HAITICPI, we took the first difference in the monthly series and merged them into our weekly master dataset. ADF tests of both differenced series confirmed that they are both stationary.

### ***Foreign Pressures***

Not only will domestic conflict and cooperation affect migration, but foreign pressures

---

<sup>25</sup> If we had merged the level in first and then taken the first difference, this would not be the case as several observations would be zero since the monthly value did not change from week 3 to week 4.

<sup>26</sup> To illustrate, a change from 0 to 5 and a change from 50 to 55 both result in a five unit change, while 0 and 50 and 5 and 55 are very different levels.

should also affect Haitian migration, especially U.S. foreign policy towards Haiti. To measure U.S. foreign policy we use event data summarizing the U.S.'s net conflict-cooperation directed towards Haiti. These data were also generated using TABARI but instead of coding domestic conflict and cooperation, they represent international conflict-cooperation levels and events. We originally sought to use Goldstein and Pevehouse's dataset available on the KEDS website. However, the temporal span of the data ends in mid-1997. We chose to use the existing dictionaries to regenerate data for 1990-1997 and extend the series through 2004 using full-text AP news reports.<sup>27</sup> We then created U.S. to Haiti Government, U.S. to Haiti Military, U.S. to Haiti Rebels and U.S. to Haiti (all) directed dyads. Finally, we averaged the Goldstein weighted event scores for each directed dyad by the week.

In addition, we controlled for each U.S. President's policies by recording the presence and absence of each leader in power over the time period (e.g. Bush Sr, Clinton, and Bush Jr.).

### ***Impact Assessments***

We also sought to measure the short-term impacts of particular events – both economic and violent – on Haitian migration to the U.S. over time. In particular, we assess the impact that the 1991 and 2004 coups have on Haitian flight to the U.S. We also analyze the impact of Aristide's return to Haiti in 1994 with the U.S. military presence and his second term in office on migration patterns. Third, we analyze the impact of both the Organization of American States (OAS) and United Nations (UN) economic sanctions on Haitian migration. Finally, we assess the impact that hurricane Georges had on Haitian

---

<sup>27</sup> The leadership and groups remain consistent from 1997-2004 so we feel that using the existing dictionaries rather than creating new ones does not pose great threat to the data's reliability and validity.

flight. To do so, we employ a form of multiple interrupted time-series (MITS) analysis which uses a series of dummy and counter variables to assess the impacts of such events on our dependent variable. While a visual inspection may confirm or deny our hypotheses, this method allows one to assess “whether the observed change is statistically significant thereby reducing the likelihood of chance differences” (Lewis-Beck and Alford 1979, 474). Consider the following simple regression equation:

$$Y_t = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \beta_4 X_{4t} + e_t \quad 1.0$$

where  $Y_t$  = weekly interdictions;  $X_{1t}$  = a counter for weeks (1 to N);  $X_{2t}$  = a dichotomous variable representing the presence of UN Sanctions scored 0 for observations from Jan 1990 till week four September 1991 and 1 from week four September 1994 through week two October 1994;  $X_{3t}$  = a counter for weeks during the sanction period (1 to 62);  $X_{4t} = X_{3t}^2$ ;  $\beta_0, \beta_1, \beta_2, \beta_3, \beta_4$  = parameters to be estimated,  $e_t$  = error.

The parameters  $\beta_0$  and  $\beta_1$  indicate the level and slope of the time-series prior to implementation of the UN Sanctions in September of 1993. To analyze whether or not the level and/or slope of the relationship change under UN sanctions, we examine  $\beta_2, \beta_3,$  and  $\beta_4$ . If the estimate for  $\beta_2$  is not statically significant, then we infer that the level of the time-series is unaltered by the intervention. We then examine  $\beta_3$  and  $\beta_4$  in tandem. We include the squared term to capture the curvilinear nature of our hypothesized relationship. Our inverted-U-shaped hypothesis is supported if  $\beta_1 + \beta_3 > 0$  and  $\beta_1 + \beta_4 < 0$ . The predicted slope will rise (+) and then fall (-). On the other hand, if the slope is unaltered by the sanctions, neither coefficient will be significant. The model would support a U-shaped hypothesis if  $\beta_3$  is statistically significant and the sum of  $\beta_1 + \beta_3 < 0$  and the sum of  $\beta_1 + \beta_4 > 0$ . Alternatively, we could detect a linear relationship in the time-series given an intervention. To model a linear relationship we would remove the squared

term from the model, re-estimate the equation, and check the significance of  $\beta_3$  and the sum of  $\beta_1 + \beta_3$ . We can introduce interventions and take them out by adding a series of dummy variables and counter variables.

We generated dummy, counter, and counter-squared variables for the 1991 coup, 1993 UN Sanctions period, the Aristide 1994-96 period, Hurricane George, the Aristide 2001-2004 period, and the 2004 coup to test our curvilinear hypotheses. For the coups and the hurricane, we wanted to see if there was a short-run impact in Haitian flight over a period of a few months in the instance of the coups and a period of a few weeks following the 1998 Hurricane. In some sense this became an empirical model-fitting exercise, yet all consistent with our general hypothesis about the slope of the time-series following and during each event period. Similar to trying different lag lengths in fitting a vector autoregression model, we introduced the stimulus and examined its impacts over different lengths of time. We examined the model fit based on the Wald Chi-Squared values, Vuong Tests, and the correlation between the actual and model-predicted values. We ultimately settled on 28 weeks for the 1991 coup, 11 weeks for the 2004 coup (the temporal sample constrained us going much beyond this), and 8 weeks for the hurricane. We report the descriptive statistics for each of our variables in Table 1.

[Insert Table 1 about here]

### ***Estimation & Method***

Our dependent variable is a count and is not normally distributed. To illustrate this property observe the histograms displayed in Figures 2A and 2B. Figure 2A displays the histogram for the whole sample, while Figure 2B shows the histogram for the zero-excluded sample. We plotted the second histogram so that one can observe the variation of lower frequency counts masked by our zero-inflated distribution. We discuss the zero-

inflated property below and how we choose to model it. Both histograms reveal Poisson-like distributions which are “derived from a simple stochastic process...where the outcome is the number of times something has happened” (Long 1997, 219). However, most situations in the social sciences rule out the Poisson statistical model because it assumes that each event is independent of one another; each event has no effect on the probability of the event occurring in the future. Moreover, the model assumes that the conditional mean of the outcome is equal to the conditional variance. We argue that decisions are linked via a common set of information such that they are not independent. As such our theory excludes the use of a Poisson model to estimate our dependent variable.

The appropriate statistical technique used to analyze such a distribution is the negative binomial regression (NBREG) model. This model includes a parameter,  $\alpha$ , which enables one to estimate the extent to which the events influence one another within each observation (King 1989a:764-9). Our argument implies that  $\alpha$  will be positively signed and statistically significant. We choose the NBREG model because the use of a linear regression model on these data can result in inefficient, inconsistent, and biased estimates (Long 1997, 217).

In addition, two-thirds of our dependent variable’s observations are zero. This is evident in the large spike in the histogram displayed in Figure 2A. To model this characteristic in our data, we use a zero modified estimation strategy. We use the zero-inflated model to model the probability of a zero count using a separate logit equation. Given our argument, our negative binomial distribution, and our zero-inflated counts, the

most appropriate model is the Zero-Inflated Negative Binomial (ZINB) regression model. Finally, we report robust standard errors.<sup>28</sup>

[Insert Table 2 about here]

## Results

We report the coefficient estimates for the model in Table 2 and we graphically display the substantive effects in Figures 3, 4, and 5. We also report the incidence rate ratios (IRR), which represent the change in interdictions given a one unit increase in the independent variable, holding all other variables constant. In the case of a dummy variable, such as UN Sanctions, the IRR is the relative rate of interdictions in a week given the presence of the sanctions relative to the absence of the UN sanctions. An IRR of 1.0 is equal to no change; values below 1.0 indicate a reduction in the expected count, holding all other variables constant.

The first thing to inspect is our model choice and fit. Our alpha parameter, in Table 2, is statistically significant and positively signed as expected, indicating the appropriate choice is the negative binomial model over the Poisson. In addition, we performed two different Vuong (1989) (likelihood ratio) tests to determine if our specification fit the data better than alternative specifications.<sup>29</sup> The first Vuong test reported in Table 2 compares the vanilla negative binomial model to the ZINB model. The second reported test compares the restricted ZINB model containing only interval level variables and the CPI dummy to the unrestricted ZINB MITS model. Taken together, the ZINB MITS model outperforms its alternatives.

---

<sup>28</sup> We also performed some robustness checks using autoregressive moving average (ARMA) modeling techniques. Such techniques control for series noise and address the autocorrelation problem. Yet they do not take into consideration the truncated distribution and in our case predict lots of negative values. That said, the impact assessments were all supported and many other variables remained significant and in the right direction using a (1, 0, 1) ARIMA specification.

<sup>29</sup> The test basically compares the log-likelihood values from restricted and unrestricted model.

[Insert Figure 3 about here]

We choose to focus on the count equation results rather than the zero-inflated estimates. Overall, the model does not do a great job at modeling the zeros. However, the model does a much better job in terms of explaining the variance in the positive counts. Figure 3 plots the time-series actual values and the model-predicted values against one another. The grey line represents the actual values while the black line represents the predicted values. Along the X-axis, we plot the key events over the period 1990-2004. Visual inspection shows that the model does a decent job of explaining the variance in the series. In particular, visual inspection reveals the predicted values spike with the actual values after the 1991 and 2004 coups as well as the 1998 hurricane, as predicted. We also see an inverted-U-relationship over the 1993 UN sanctions period. Below, using the impact assessment results, we determine whether or not these visual inspections are statistically significant. But for now, we turn our attention towards the coefficient estimates and the predicted changes in the dependent variable (given changes in the independent variables).

To begin, Table 2 reports that weekly Haitian government behavior directed towards the Haitian rebels is not statistically significant. Yet, weekly Haitian rebels' behavior directed towards the Haitian government is negative and significant. To further inspect its impact turn attention towards Figure 4.

[Insert Figure 4 about here]

Figure 4A illustrates the predicted change in the dependent variable given a minimum value (0) to maximum value (1) change in the dummy variable of interest. Figure 4B displays the predicted change in interdictions given a change in the

independent (interval-level) variable of interest from its mean to a half standard deviation above its mean. All calculations were performed by setting all dummy, counter, and counter<sup>2</sup> variables to zero and all other variables to their mean.

In Figure 4B, an increase in the rebels' cooperation levels from -0.72 to 0.43 yields a reduction of almost 62 interdictions. Alternatively, an increase of hostility moving from -.72 to -1.87 increases interdictions by almost 62. This is no small effect. Many of the violent rebel groups in Haiti are primarily remnants of the Duvalier regime and the Tonton Macoutes. These groups represent a repressive regime that the people detest. By contrast, Aristide and Préval, represent leaders who won elections by very large margins as well as, even in their worst states, retained a sizeable popular following. The varying perceptions of the government and the dissidents who are committing the acts of violence may be influencing the variation in results, particularly the finding that state violence is statistically not significant. The Haitian government is arresting rebels and "protecting" the people.

In terms of the economic effects of the Haitian economy on Haitian flight patterns we observe a positive and statistically significant coefficient for our  $\Delta$ HAITICPI indicator. This implies that as the change in inflation increases, more people flee the country to the U.S. Note that the Haiti CPI dummy variable is negative but not statistically significant.<sup>30</sup> To assess how change in CPI affects interdictions turn attention towards Figure 4B. As change in Haiti CPI moves from .74 to about 16, the predicted change in interdictions increases by about 150. As such, we infer that, short-run changes in the Haitian economy in-part explain variance in Haiti-U.S. migration.

---

<sup>30</sup> We then checked to see if there was a different slope prediction for the second series by inter-acting the dummy variable with  $\Delta$ HAITICPI. The results confirmed no such relationship, as neither the dummy nor the interaction term was statistically significant.



However, the U.S. economy does not appear to be much of a pull factor for Haitians. For example, in Table 2 neither the coefficient on wages nor the coefficient on  $\Delta$  U.S. CPI are statistically significant. This is consistent with Moore & Shellman's (2004b) global finding in their directed-dyad study of annual origin to asylum refugee flows. They found that asylum GNP did not have a statistically significant impact on destination choices. Neumayer (2005b) on the other hand finds that asylum applicants in Western Europe are attracted to richer countries when controlling for fixed effects.

The finding herein suggests that Haitians may not necessarily be attracted to the short-run increases and decreases in the U.S. economy. We know that US wealth is much greater than Haiti and so perhaps its wealth is so great in comparison to Haiti that changes up and down are relatively unimportant. That said, the ebb and flow of the US economy has no impact on the variation in weekly Haitian migration to the US. Of course, a better test would look at migration from Haiti to Canada, the Dominican Republic, and France. Perhaps then, we could more accurately test whether or not Haitian migrants were particularly drawn to the U.S. economy over the French, Canadian, and/or Dominican Republic economies (controlling for distance). However, given these data and our design, Haitian-U.S. migration levels are virtually unaltered by rising U.S. wages and decreasing inflation.

Next, we turn attention towards U.S. foreign policy and the other foreign pressure variables. To begin, we experimented by creating U.S. to Haiti military, U.S. to Haiti Government, U.S. to Haiti Rebels, and U.S. to Haiti ALL variables. Different combinations revealed similarly signed and similarly sized coefficients. Joint F-tests indicated that the effects were the same across our different combinations. As such, we chose to report the U.S. to Haiti ALL findings. This variable represents all conflict and

cooperation sent by the U.S. towards the Haitian rebels, government, military, and general society in each week from 1990-2004. Table 2 indicates a negatively signed and statistically significant coefficient estimate and Figure 4 shows a similar but smaller effect on interdictions than rebel behavior. An increase in U.S. cooperation directed towards Haiti from .04 to about 2 (on a scale from -10 to +10) yields a predicted decrease in the interdiction count of about 50. Of course, the opposite holds true if the U.S. government increases its hostility from .04 to about -2. This results in an increase of about 50 interdictions. Thus, coercive U.S. foreign policy, increases the number of weekly Haitian-U.S. migrants. However, this may be misleading. The variable measures all types of actions and policies towards Haiti, from asylum policy to restoring Aristide to power, to economic aid. As such, it may be difficult to sort out how migration is affected by each of these particular arenas of US foreign policy towards Haiti. All we can say is that in the aggregate, hostile US foreign policy increases migration and friendly US policy decreases migration.

One particular type and example of hostile U.S. foreign policy towards Haiti is the U.S. Coast Guard Operation Able Manner. This operation actually decreased interdictions over the course of the period as expected as the coefficient in Table 2 is negative and statistically significant. The IRR indicates that Able Manner reduced interdictions almost 19 percent. Figure 4A illustrates that the variable has a predicted negative change of 160 individuals associated with the level of the series, holding all other variables at their means and counter and dummy variables at zero. This is evidence that, though migrants were responding to increased migrant flows following the 1991 coup, their presence became known and overall the operation reduced Haitian migration to the U.S.

As for OAS sanctions, they increased the level of the time-series by about 600 holding all other variables constant at their means and all other dummy variables and counter variables at zero. This implies that the sanctions negatively affected the economy and in turn led to an increase in migration. Yet, that increase was not as much as the predicted increase in migration once the UN made the sanctions binding for all its members in 1993. Figure 4A, as expected, illustrates that the UN Sanctions increased Haiti to U.S. migration levels more than the OAS Sanctions. Similarly, a comparison of the IRRs suggests that OAS sanctions increased interdictions by almost 23 percent, whereas UN sanctions increased them by more than 28 percent. We come back to the UN Sanctions in the context of our impact assessments discussed below.

However, before we move to that discussion, we should note that the Prével dummy variable is negative and significant indicating that his relatively stable regime is associated with lower levels of Haiti to U.S. migration. Finally, though our reported results do not include the estimates for the Clinton and Bush Jr. variables, neither was statistically significant (i.e. different from Bush Sr.). The other coefficients remained unaltered by the inclusion of the U.S. President dummy variables and Vuong tests revealed a better fit with the restricted model (i.e. no presidential dummies).

[Insert Figure 5 about here]

### ***Impact Assessments***

Figure 5 graphs the results of the impact assessments. Specifically, they show the predicted impacts for each event on Haitian interdictions. It is important to note that these predictions are calculated by setting all of the interval level variables at their means and all non-event-associated dummy variables at zero. The dummy variable applicable to

each event is set equal to 1 (e.g. 1991 coup) and the event-associated counter (e.g. 1991 coup counter) and counter squared variables (e.g. 1991 counter squared) are set to values across the appropriate range of sample values (e.g. 1 to 28 and 1 to 784, respectively) to predict each point estimate. If another event simultaneously takes place, that event dummy is also set equal to one and its counter and counter squared variables (if any) are set equal to their means.

We begin with the 1991 coup. First observe the coefficients for the coup dummy, its counter, and its counter squared variable. To begin, the dummy is statistically significant and negative, while the counter variable is positive and significant and the counter squared variable is negative and significant. This indicates that the functional form of the relationship appears to be specified correctly. Note that the counter variable for the overall model is basically equal to zero and is not statistically significant. Thus one needn't worry too much about adding the counter coefficient to all the dummy counters and counter-squared variables. The signs and significance levels of the intervention dummies and counters tell the story.

To view the predicted impact of the 1991 coup on Haitian migration to the U.S., turn attention towards the top-left corner of Figure 5. On the day of the coup, the level on average increases to about 100, but over time, more and more people tend to flee the country until total weekly interdictions peak in the first week of January and then tend to decline to their initial level in September. The model's peak prediction is about 1000 in January week 1. That week the actual number picked up was about 700. Again, remember that this prediction sets many other variables in the equation above or below their actual values. The graph in Figure 5 (bottom right corner) for the 2004 coup tells a similar story, where the impact of the coup increases migration to a point and then

migration levels taper off. Table 2 confirms that all the variables are significant and in their anticipated directions.

Another very similar looking graph in Figure 5 is Hurricane Georges. Again, we see a spike in the interdiction count just after the hurricane and then the level drops off as expected. One can also observe this effect in Figure 3. Our predicted value is very close to the actual value in September of 1998.

Finally, the UN sanctions' predicted effects conform to our expectations as well as Aristide's reinstatement in power. Below we comment on the two events in succession given the graphs depicted in Figure 5. We argued that the impact of collective international sanctions on Haiti deteriorates the economy and thus, should create a greater migratory flow over time.<sup>31</sup> Yet as the U.S. begins to mobilize for its mission to reinstall Aristide in power, levels should begin to fall off. In 1994, after Aristide is installed in power, levels should continue to fall until the 2001 election approaches. Violence increases prior to the election but there is actually no violence on Election Day itself. At this point violence drops off and so should interdiction counts. As pointed out before, public security issues became less important under Préval, and so less people fled.

The coefficients on the UN sanctions counter and counter squared variable are both statistically significant and positively and negatively signed, respectively, as expected. This confirms our inverted-U hypothesis (See Figure 5). Also consistent with our expectations, the coefficient on the Aristide 1994 counter is negative and the coefficient on the squared term is positive. Both are statistically significant. Figure 5 confirms the U-shaped hypothesized effect that Aristide's reinstatement and hand-over to Préval has on Haitian migration.

---

<sup>31</sup> Note that the Cédras military regime is in power during this time. It could be the case that the combination of the military regime and its effect on foreign nations' policies and their effects on the economy and the economy itself are ultimately causing increases in migration.

This same U-shaped relationship for Aristide's second term (2001-2004) is also apparent in Figure 5. The effect is not as pronounced as the 1994 effect but Table 2 reports that the coefficients associated with the counter and counter squared variables are statistically significant at the .10 level.

## **Conclusion**

This article set out to examine the debate over whether or not migrants were political refugees fleeing persecution or bogus refugees fleeing failing economies, particularly within the context of Haitian migration to the U.S. We found evidence for both factors. To begin, the Haitian economy tends to push people out as it worsens. Yet, we failed to find evidence that short-run changes in the U.S. economy attract Haitians. In contrast, we found that rebel violence has a large substantive and statistically significant impact on Haitian migration. Moreover, we observed large flows of Haitian migrants following coups. Finally, economic sanctions, foreign pressures, and Hurricane Georges also tended to increase migratory flows.

Our results are consistent with most of the studies in the literature. For example, dissident violence has a large impact on migration as reported in Davenport et al (2003), Moore & Shellman (2004a), and Neumayer (2005a; 2005b). On the contrary, state-sponsored violence did not have a statistically significant impact. However, military coups generated large flows of Haitian migrants to the U.S. As for the U.S. economy, neither changes in wages nor inflation appear to impact Haitian migration to the U.S. However, change in Haiti's inflation rate does alter flows. Specifically, as inflation climbs, Haiti to U.S. migration also climbs. Moreover, UN sanctions seemed to dramatically increase Haitian interdiction counts. Yet, those sanctions overlapped with a

repressive military regime. Such facts make it difficult to separate out the economic and political factors.

In terms of its impact on the literature, the study expands the literature by using the week as the unit of analysis. We contend that this choice allows detection of more nuanced changes in the migratory process. Furthermore, the study yields insight into a particular case. Interestingly, the results of the study resemble the results generated from large-N pooled-time-series designs. Finally, it opens new avenues for exploration. Our study in many places assumes indirect effects of some of the variables yet tests them as direct effects. In the future for example, we can model government-dissident dynamics (Moore 1998; Moore 1998; Shellman 2006) which would lead to predictions in the escalation of conflict and serve as an early-warning mechanism for subsequent Haitian flight. Similarly, we can model the impact that foreign policy has on domestic policy and subsequently on migration. In short, the study opens up the possibility of exploring the migration process using multiple-equation modeling techniques.

That said, our study provides evidence that many Haitian migrants are in fact refugees under the 1951 UN Convention's definition. U.S. foreign policy continues to reject the notion that the Haitian people flee their homeland in fear of persecution. Rather, the U.S. government promotes the idea that such people are fleeing economic deprivation. Although it is difficult to separate the impact of the failing economy from the impacts of security, there appears to be a direct impact of violence on Haitian migrants even when the economy is not fluctuating so rapidly. This suggests that while there are economic concerns there are also distinct security concerns that cause Haitians to flee. However, for the most part, the U.S. policy of rejecting Haitian migrants on the grounds that they are economic migrants, calls into question whether or not they are often

violating the UN's principle of 'nonrefoulement.' The U.S. "gets away with it" by claiming that Haitians are "bogus refugees" and not acknowledging the evidence of security concerns.

Aside from calling in to question U.S. policy on the handling of Haitian migrants, the study has additional implications. For example, we found that rebel violence and the status of the Haitian economy were the two strongest factors in determining the number of Haitian migrants to the U.S. These factors provide insight into the refugee question as well as a basis for long-term policy advice on handling the large influx of Haitian migrants. These findings support policy which would seek to stabilize the government in Haiti as well facilitate the growth of their economy in an attempt to decrease the number of Haitian migrants to the U.S.



## References

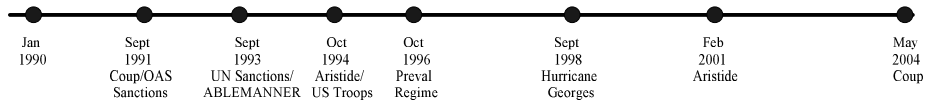
- Bauer, Thomas, and Klaus Zimmermann. 1994. "Modeling International Migration: Economic and Econometric Issues." In Causes of International Migration, edited by Rob van der Erf and Liesbeth Heering, 95-115. Brussels: Statistical Office of the European Communities.
- Borjas, George J. 1994. "The Economics of Immigration." Journal of Economic Literature 32 (4):1667-1717.
- Campbell, Donald T. and Julian C. Stanley. 1966. Experimental and Quasi-Experimental Designs for Research. Chicago: Rand McNally.
- Davenport, Christian, Will H. Moore & Steven C. Poe. 2003. "Sometimes You Just Have to Leave: Domestic Threats and Forced Migration, 1964-1989." International Interactions 29:27-55.
- Ferris, Elizabeth G. 1998. Uprooted! Refugees and Forced Migrants. Cincinnati: Friendship Press.
- Freeman, John R. 1989. "Systematic Sampling, Temporal Aggregation, and the Study of Political Relationships." Political Analysis 1: 61-88.
- Gibney, Mark, Clair Apodaca & James McCann. 1996. "Refugee Flows, The Internally Displaced and Political Violence (1980-1993): An Exploratory Analysis." In Whither Refugee? The Refugee Crisis: Problems and Solution, edited by A.P. Schmid. Leiden: PIOOM.
- Goldstein, Joshua S. 1992. "A Conflict-Cooperation Scale for WEIS Events Data." Journal of Conflict Resolution 36: 369-85.

- Kaufmann, Chaim. 1998. "When All Else Fails: Ethnic Population Transfers and Partitions in the Twentieth Century." International Security 23(2): 120-156.
- King, Gary. 1989a. "Variance Specification in Event Count Models: From Restrictive Assumptions to a Generalized Estimator." American Journal of Political Science 33(3): 762-84.
- Lewis-Beck, Michael S. and John R. Alford. 1980. "Can Government Regulate Safety? The Coal Mine Example." The American Political Science Review. 74(3): 745-56.
- Loescher, Gil. 1993. Beyond Charity: International Cooperation and the Global Refugee Crisis. New York: Oxford University Press.
- Loescher, Gil & Ann Loescher. 1994. The Global Refugee Crisis: A Reference Handbook. Santa Barbara: ABC-CLIO.
- Long, J. Scott. 1997. Regression Models for Categorical and Limited Dependent Variables. Thousand Oaks: Sage.
- Massey, Douglas S., Joaquín Arango, Graeme Hugo, Ali Kouaouci, Adela Pellegrino and J. Edward Taylor. 1993. "Theories of International Migration: A Review and Appraisal." Population and Development Review 19(3):431-466.
- McAdam, Doug. 1982. Political Process and the Development of Black Insurgency, 1930-1970. University of Chicago Press.
- Moore, Will H. and Stephen M. Shellman. 2004a. "Fear of Persecution, 1952-1995." Journal of Conflict Resolution 48(5): 723-745.
- Moore, Will H. & Stephen M. Shellman. 2004b. "Whither Will They Go? A Global Analysis of Refugee Flows, 1955-1995." Paper presented at the annual meeting of the Midwest Political Science Association, Chicago, 15-17 April.

- Neumayer, Eric. (2005a). "Bogus Refugees? The Determinants of Asylum Migration to Western Europe," Forthcoming in International Studies Quarterly.
- Neumayer, Eric. (2005b). "Influences on Asylum Recognition Rates in Western Europe." Journal of Conflict Resolution 49(1): 43-66.
- Saleyhan, Idean & Kristian Gleditsch. 2004. "Refugee Flows and the Spread of Civil War," working paper, University of California, San Diego.
- Schmeidl, Susanne. 1997. "Exploring the Causes of Forced Migration: A Pooled Time-Series Analysis, 1971-1990." Social Science Quarterly 78(2): 284-308.
- Schmeidl, Susanne. 1998. "Comparative Trends in Forces Displacement: IDPs and Refugees, 1964-96." In Internally Displaced People: A Global Survey, edited by J. Hampton. London: Earthscan Publications, pp. 24-33.
- Schmeidl, Susanne. 2000. "The Quest for Accuracy in the Estimation of Forced Migration." In Humanitarian Action: Social Science Connections, edited by S.C. Lubkemann, L. Minear and T.G. Weis. Providence: Occasional Paper #37, Thomas J. Watson, Jr. Institute for International Studies, pp. 127-157.
- Schrodt, Philip A. 1998. "KEDS: Kansas Event Data System Manual." Typescript.
- Shellman, Stephen M. 2004. "Time Series Intervals and Statistical Inference: The Effects of Temporal Aggregation on Event Data Analysis." Political Analysis 12(1): 97-104.
- Shellman, Stephen M., Brandon M. Stewart, and Andrew Reeves. 2005. Project Civil Strife Codebook, v1.0. Typescript. College of William & Mary.
- Vuong, Q. 1989. "Likelihood ratio tests for model selection and non-nested hypotheses." Econometrica 57 (2), 307-333.

Wood, Dan 1988. "Principals, Bureaucrats, and Responsiveness in Clean Air Enforcements." American Political Science Review 82(1): 213-234.

Zolberg, Aristide R., Astri Suhrke & Sergio Aguayo. 1989. Escape From Violence: Conflict and the Refugee Crisis in the Developing World. New York: Oxford University Press.



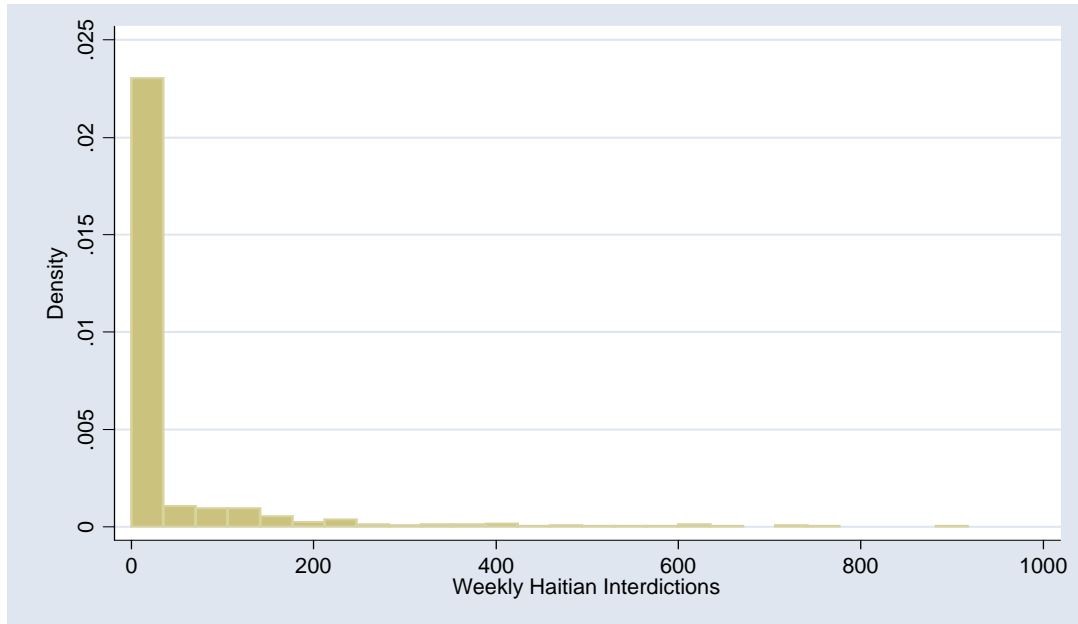
**Figure 1 Haiti Timeline of Events, 1990-2004**

**Table 1 Descriptive Statistics**

Variable	Mean	Standard Deviation	Minimum	Maximum
U.S. Interdictions of Haitian Migrants	33.31	96.07	0	758
Monthly ΔHaiti CPI	0.74	15.26	-192.81	25.33
Haiti CPI Dummy 1996-2004	0.53	0.49	0	1
Average Weekly Rebel to Government Behavior	-0.73	2.30	-10	10
Average Weekly Government to Rebel Behavior	-0.73	2.20	-10	8.3
Coup 1991 Dummy	0.039	0.19	0	1
Coup 1991 Counter	0.545	3.12	0	27
Coup 1991 Counter Squared	10	66.64	0	729
Coup 2004 Dummy	0.02	0.13	0	1
Coup 2004 Counter	.10	.85	0	11
Coup 2004 Counter Squared	0.74	7.57	0	121
Aristide Dummy 1994-1996	0.09	0.29	0	1
Aristide Counter 1994-1996	2.81	10.46	0	62
Aristide Counter Squared 1994-1996	117.20	511.39	0	3844
Preval			0	1
Aristide 2001-02 Dummy	0.21	0.41	0	1
Aristide 2001-2002 Counter	15.06	35.012	0	144
Aristide 2001-2002 Counter Squared	1451.256	4012.25	0	20,736
Average Weekly U.S. Foreign Policy towards both Government & Rebels	0.05	2.02	-10	7.87
OAS Economic Sanctions 10/14/1991- 6/22/1993	0.12	0.33	0	1
UN Economic Sanctions 6/23/1993-10/1994	0.09	0.29	0	1
UN Economic Sanctions 1993 Counter	2.82	10.47	0	62
UN Economic Sanctions 1993 Counter Squared	117.42	511.62	0	3,844
Operation ABLE MANNER (1994)	0.13	0.33	0	1
Monthly Δ U.S. CPI	0.21	0.22	-0.41	0.81
Monthly Δ U.S. Wages	0.03	0.06	-0.11	0.20
Clinton 1 <sup>st</sup> Administration	0.28	0.45	0	1
Clinton 2 <sup>nd</sup> Administration	0.28	0.45	0	1
Bush Jr. 1 <sup>st</sup> Administration	0.24	0.43	0	1
Hurricane Georges Dummy (1998)	0.05	0.54	0	8
Hurricane Georges Counter (8weeks)	0.01	.11	0	1
Hurricane Georges Counter Squared	0.29	3.55	0	64
Count	348.5	201.06	1	696

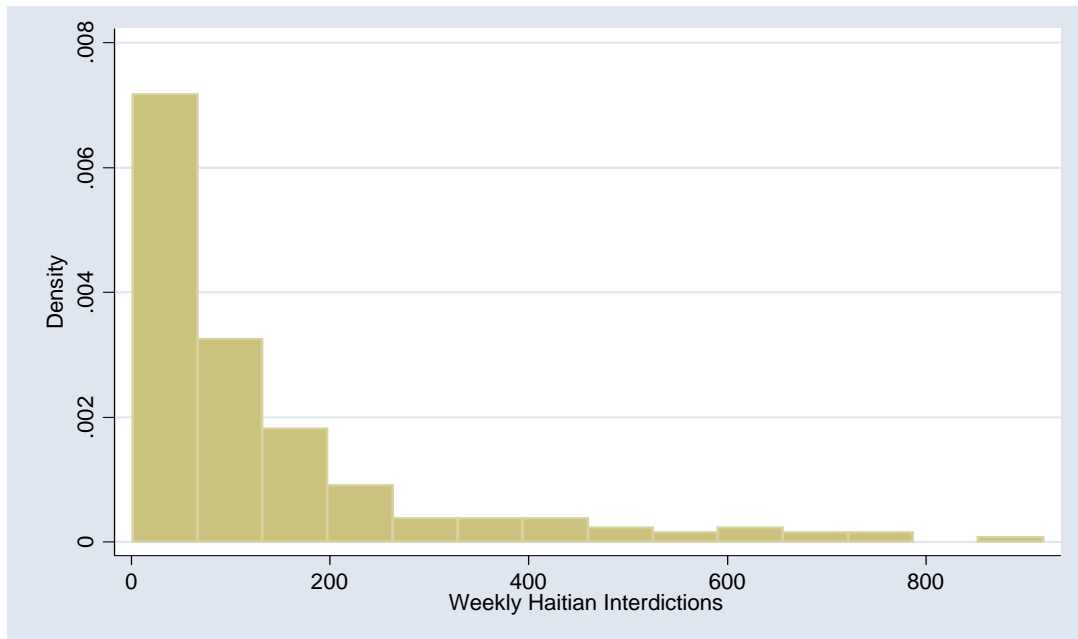
---

**A: Includes Zeros**



---

**B: Excludes Zeros**



---

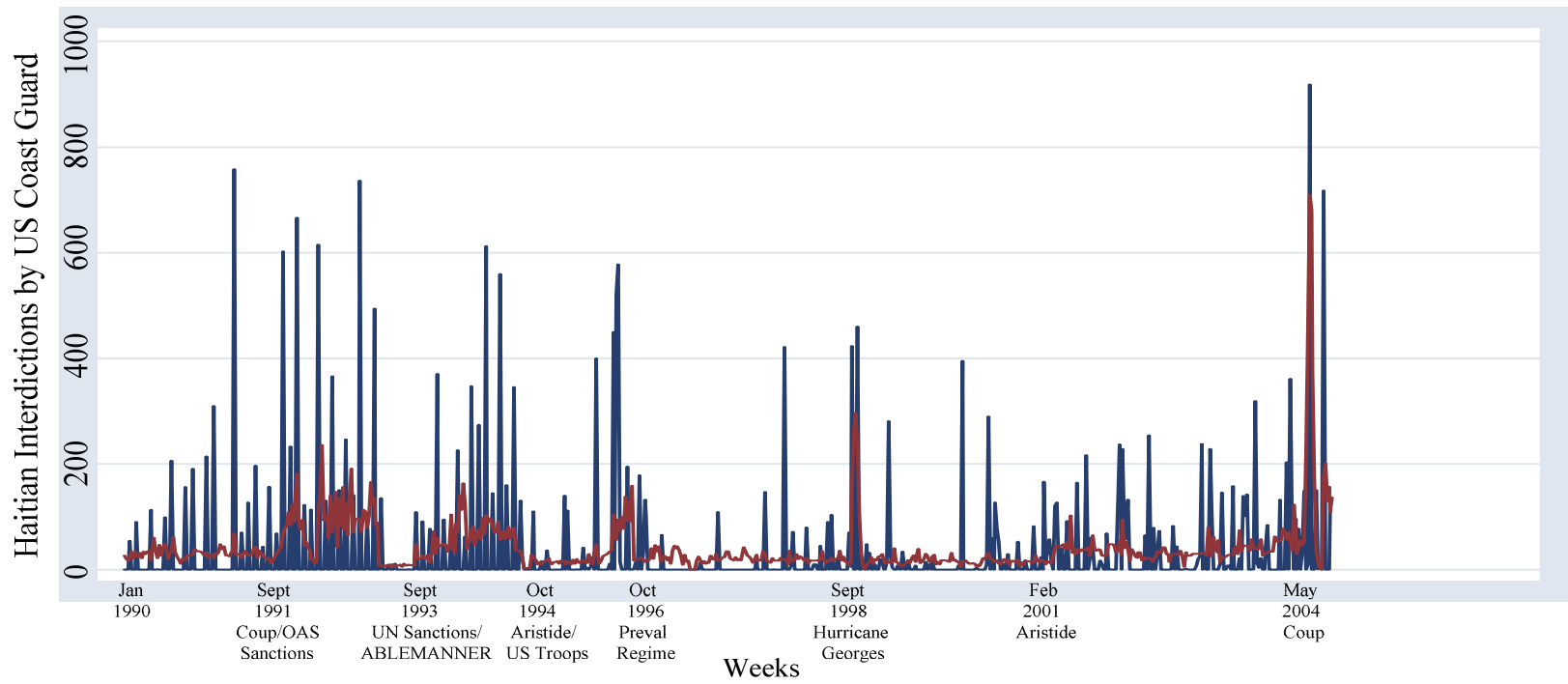
**Figure 2 Histograms of Total Weekly Haitian Interdictions by U.S. Coast Guard, 1990-2004**

**Table 2 Zero Inflated Negative Binomial Estimates  
of Weekly Haitian Interdictions by U.S. Coast Guard (1990-2004)**

<i>Category</i> Variable	Count		Inflate
	Coefficient (SE)	IRR	Coefficient (SE)
<i>Haiti Economy</i>			
Monthly ΔHaiti CPI	0.042 (.018)***	---	0.010 (.043)
Haiti CPI Dummy 1996-2004	-0.435 (.378)	0.647	-0.448 (.292)*
<i>Haiti Security</i>			
Average Weekly Rebel to Government Behavior	-0.127 (.035)***	---	-0.029 (.037)
Average Weekly Government to Rebel Behavior	0.027 (.047)	---	-0.023 (.039)
Coup 1991 Dummy	-2.39 (1.28)**	0.092**	0.405 (.578)
Coup 1991 Counter (28 weeks)	0.392 (.175)**	---	---
Coup 1991 Counter Squared	-0.014 (.006)***	---	---
Coup 2004 Dummy	-3.47 (.806)***	0.031***	-0.927 (1.15)
Coup 2004 Counter (?? weeks)	2.09 (.392)***	---	---
Coup 2004 Counter Squared	-0.231 (.037)***	---	---
<i>Haiti Politics</i>			
Aristide 1994-96 Dummy	-0.645 (.624)	1.91	-0.441(.392)
Aristide 1994-1996 Counter	-0.119 (.057)**	---	---
Aristide 1994-1996 Counter Squared	0.002 (.001)***	---	---
Préval 1996-2001 Dummy	-2.17 (.652)***	0.114***	0.637 (.995)
Aristide 2001-02 Dummy	-1.31 (.623)**	0.269**	-0.033 (.991)
Aristide 2001-2002 Counter	-0.015 (.011)*	---	---
Aristide 2001-2002 Counter Squared	0.0001 (.000)*	---	---
<i>Foreign Pressures</i>			
Average Weekly U.S. Foreign Policy towards both Government & Rebels	-0.067 (.035)**	---	0.012 (.046)
OAS Economic Sanctions 10/14/1991- 6/22/1993	0.819 (.279)***	2.27***	-0.500 (.418)
UN Economic Sanctions 6/23/1993-10/1994	1.04 (.819)*	2.83*	-1.218 (.791)*
UN Economic Sanctions 1993 Counter	0.074 (.025)***	---	---
UN Economic Sanctions 1993 Counter Squared	-0.001 (.000)***	---	---
Operation ABLE MANNER (1994)	-1.94 (.802)***	0.144***	0.760 (.628)
<i>United States Economy</i>			
Monthly Δ U.S. CPI	-0.379 (.304)	---	0.463 (.437)
Monthly Δ U.S. Wages	0.092 (1.49)	---	1.89 (1.52)
<i>Natural Disasters</i>			
Hurricane Georges Dummy (1998)	1.02 (.450)**	2.77**	-0.558 (.780)
Hurricane Georges Counter (8weeks)	1.189 (.273)***	---	---
Hurricane Georges Counter Squared	-0.218 (.033)***	---	---
<i>Time</i>			
Count	0.001 (.001)	---	---
Constant	7.24 (.789)***	---	0.537 (1.06)
N (zeros)	692 (490)		
<i>Model Fit</i>			
Alpha (Poisson v. Negative Binomial)	1.12 (.123)***		
Wald Chi-Square	757.12***		
Vuong Tests (Likelihood Ratio Tests)			
Negative Binomial v. ZINB	5.21***		
Baseline v. MITS	51.32***		

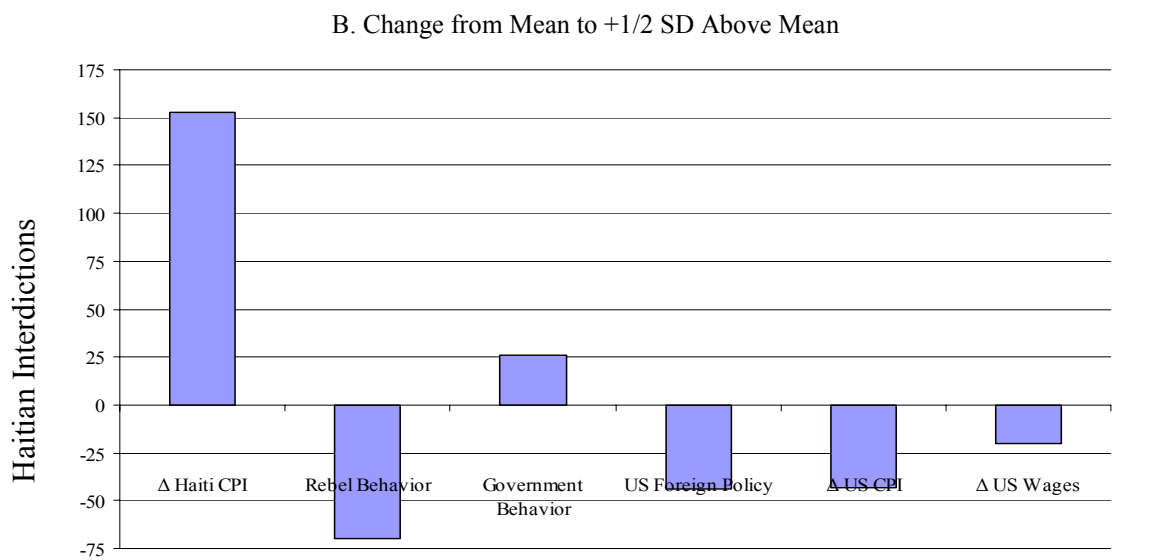
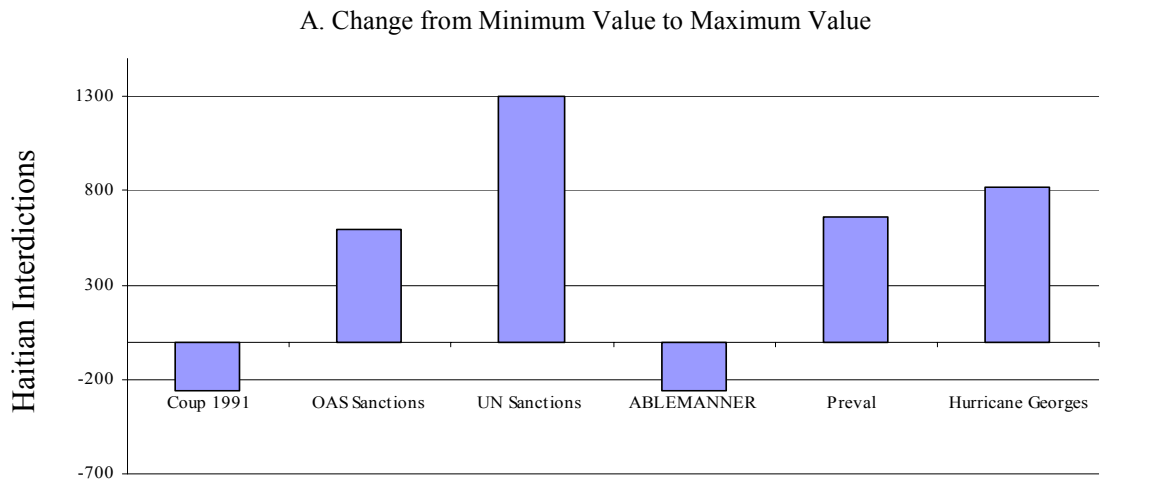
Significance Levels: \*\*\* = .01 level; \*\* = .05 level; \* = .10 level (one tail tests)



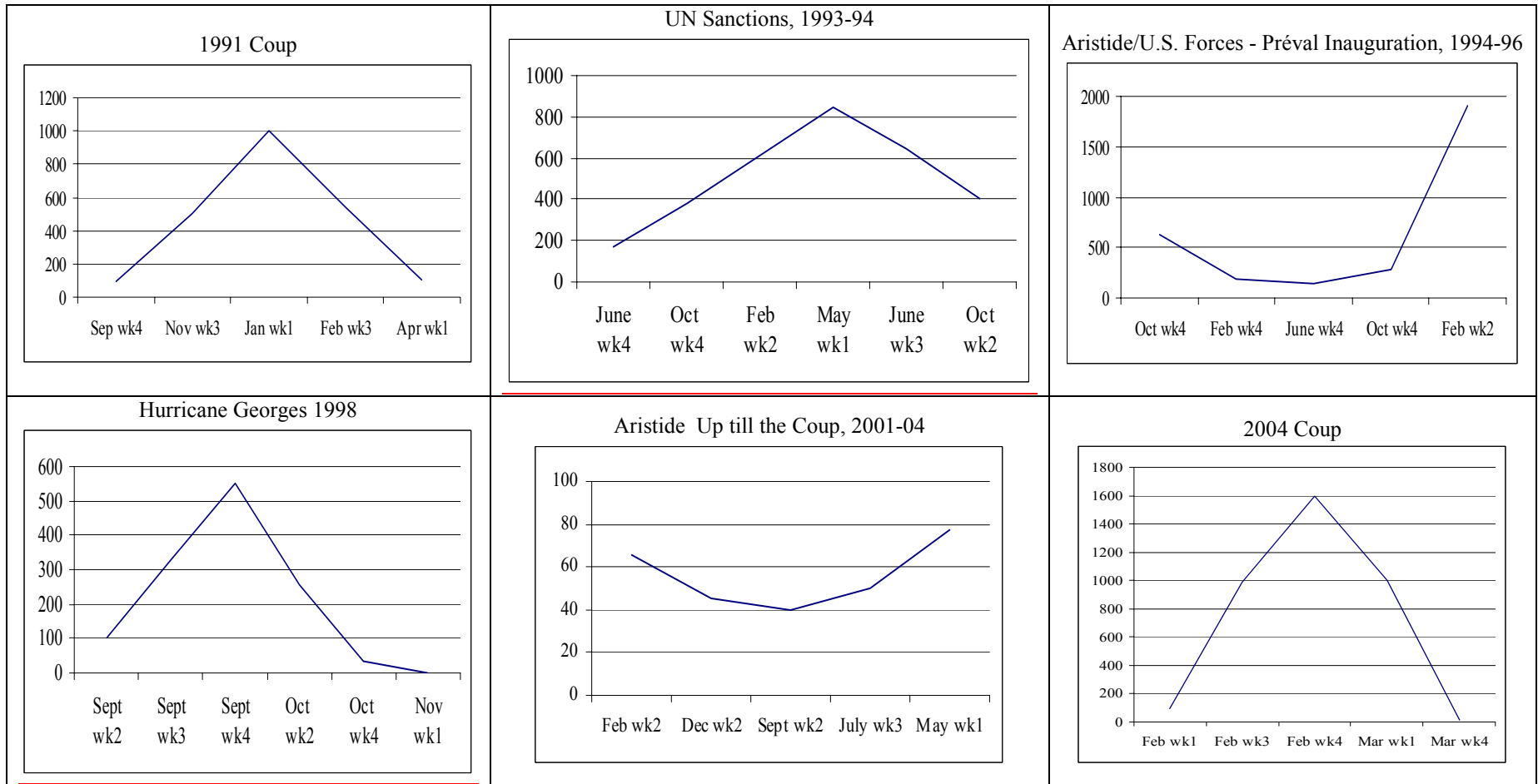


**Figure 3 The Model-Predicted Values Versus the Actual Values**

**Figure 4 Predicted Change in Interdiction Counts Given Changes in the Independent Variables (IVs)**



Note: For the calculations, all dummy and counter variables are held at zero and all other variables at their means.



Note: All predicted values are calculated holding all interval level variables at their means and non-event-associated dummy variables at zero. The dummy applicable to each event is set equal to 1 and the event-associated counter and counter squared variables are set across a range of sample values for each point estimate. If another event simultaneously takes place (e.g. Hurricane Georges and presence of Préval government) the non-associated-event dummy (e.g. Préval) is also set equal to one.

**Figure 5 Model-Predicted Impacts of Key Events on Haitian Interdictions by the U.S. Coast Guard**