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## The Effects of Brain Drain on Haiti

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### Abstract

This study was conducted in the form of a historical analysis to understand and determine the various ways that human capital flight, better known as brain drain, has impacted Haiti and how occurrences such as political events, have influenced brain drain in return. The first research question seeks to identify determinants in Haiti that contribute to brain drain. An analysis shows that the three main contributors are the economy, healthcare, and education. The economy is a major factor because of the mishandling and insufficient availability of funding to provide and maintain job prospects. It also affects healthcare and education because Haiti is not financially stable and the country does not have enough fiscal capital to apportion to those systems. Healthcare is a contributing factor to brain drain because the pay to healthcare professionals such as doctors and nurses, who are lacking in accessibility, is lower than in other countries. Another contributor to brain drain is education because the education system is weak and not only do few individuals acquire a post-secondary education, there are few opportunities to advance in specialized fields of interest and conduct meaningful research. Also, the country does not have enough money to provide upgraded, recent resources and materials needed for research and studies.

Brain drain has impacted political development because there are not enough policies to address many of the issues faced by Haiti, while economic development has been effected because the output of human capital is not enough to sustain the lost capital from highly-skilled emigrants. The development of education has been impacted by brain drain in the same way that education has influenced brain drain through the absence and lack of necessary educational resources, which is a result of the very low funding allocated to post-secondary education. The lack of job and career opportunities, as well as opportunities to advance in education, motivates Haiti's educated professionals to leave the country.

The presidential reign of Francois Duvalier was imperative in influencing the brain drain epidemic that plagues Haiti because many Haitians emigrated to places such as the Dominican Republic, the United States, Canada, and Cuba. The reasons behind the emigration were as a result of many changing policies and rules that were enforced that placed many people's lives in jeopardy. In fear, numerous Haitians left the country for better career and lifestyle opportunities abroad and the number of documented Haitians that have left the country has continued to increase annually.

### Introduction

Human capital flight, more commonly referred to as 'brain drain', has continued to have significant negative effect on the development of the Republic of Haiti. It is a predicament that has been researched at numerous times and in numerous ways, with several common definitions. According to Viem Kwok and Hayne Leland, brain drain "...commonly used to describe one of the most sensitive areas in the transfer of technology [that] refers to skilled professionals who leave their native lands in order to seek more promising opportunities elsewhere" (Kwok and Leland 1982). Robert L. Barker, author of *The Social Work Dictionary*, defined brain drain as "A nation's or institution's loss of scientific, technical, or leadership talent when these people relocate. This is a problem in developing countries, which use their limited resources to educate citizens only to see them migrate to nations that offer higher salaries or other desirable conditions" (Barker 2003), while Allan G. Johnson, author of the second edition of *The Blackwell Dictionary of Sociology*, labels brain drain as "...a situation that occurs when talented highly skilled people migrate from one place to another, especially in search of advanced education and employment. It often occurs when young people migrate from Third World countries to Europe or the United States" (Johnson 2000). The International Physicians for the Prevention of Nuclear War (IPPNW) simply defines the brain drain situation as the "permanent [or long-term] migration of [a] skilled group of [a] population from one country to another" (International Physicians for the Prevention of Nuclear War).

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When brain drain occurs, individuals with expertise and talent in a variety of disciplines depart from where they live and migrate elsewhere. The reasoning may vary anywhere from poor living conditions and lack of employment opportunities to war and political instability. As a result of this emigration, the region where these adept, educated individuals come from is left educationally and economically deprived. The region that experiences this drain in talent loses resources that it needs to adequately sustain itself. Brain drain can be a serious predicament depending on the country that one is referring to, the population, the number of educated individuals that leave, and the fluctuation in the magnitude of how many people leave annually.

Knowing the gravity of the brain drain situation in Haiti is important largely due to the fact that it is a developing country. Although it appears that there is no universal definition for brain drain, the term generally refers to low or even mid-income countries that are not industrialized. Some developing countries are referred to as Least Developed Countries (LDCs). The UN distinguishes LDCs as low-income countries; that have weak human resources on nutrition, health, education, and adult literacy; are economically vulnerable in terms of instability of agricultural production, instability of the exportation of goods and services, the economic importance of non-traditional activities, concentration of merchandise exportation, impediment of economic smallness, and the percentage of the population displaced by natural disasters (UN OHRLLS 2003).

Trends in migration are not a new occurrence for Haiti. Large migration patterns began in the 1960s with the Duvalier regime that began with Francois Duvalier and continued in the 1970s in Cuba. Since these times, more Haitians have emigrated to countries such as the United States, Canada, Cuba, and France. In the U.S. there are continuous discussions about the large clusters of Haitians in cities such as Boston, New York and its metropolitan area, Miami and Fort Lauderdale.

### ***Purpose of the Study***

The purpose of this research study is to analyze human capital flight, or brain drain, within the Haitian Republic. There are differences of opinion in how scholars define and measure brain drain, or aspects of brain drain. I will be analyzing the internal potential causes of migration including natural disasters, political turmoil, and the education systems. My goal is to see if it is possible to pinpoint brain drain to one event or multiple events. I want to know how brain drain affects Haiti because of the perceived negative effects that occur as a result. I will seek to answer three questions within this study: (1) what are the internal factors that contribute to brain drain from Haiti, (2) how has brain drain impacted the overall political, economic and educational development of Haiti, and (3) how important were political events (e.g., removal of Jean-Bertrand Aristide, Papa Doc and Baby Doc Duvalier) in influencing brain drain?

In addition to these research questions, I am considering the philosophical question of how developed countries such as the United States fit into the issue of brain drain with their implemented programs to attract skilled workers from other regions, especially developing countries. In considering this, I believe this mentality is imperialistic in the sense that it allows countries like the U.S and the European Union (EU) to obtain control over less powerful countries. Others believe that the idea to take and utilize the most educated individuals for the benefit of their work is a good economic western thought. The question that will be answered in this instance is whether brain drain is the result of practical economics, of people trying to make a better living abroad due to circumstances such as corruption and poor management, or if Haitian migrants should remain in Haiti to work in institutions such as college, and banks.

### ***Significance of Research***

The significance of this research is to provide an in-depth understanding of how natural and political events can affect or motivate brain drain. An increased understanding may lead to the discovery of possible constructive solutions or preventative measures to curtail the negative effects of brain drain in Haiti. The impact of brain drain on Haiti is of particular importance now because Haiti cannot afford to lose any more valuable resources, especially human capital, since the tragic January earthquake.

### ***Delimitation***

The main delimitation that I faced in conducting this research has been the fact that my research is not empirical. My research is based on secondary research, on other individuals' research and work. Another delimitation I have faced is finding consistent, concrete, reliable data on Haiti that I can. Nevertheless this is an important topic because the problems experienced by Haitians are ongoing and further research will investigate causes of brain drain and its impact on Haiti. The research is relative to the overall development of Haiti because it is a variable in Haiti's development.

### ***Definitions Related to Research***

As previously mentioned, brain drain or human capital flight occurs when many of the proficient, educated individuals who leave the country, often in search of better living opportunities, do not return. As a result, their communities and country are left deprived of quality workers needed to improve conditions and the community is left at a disadvantage for which it must struggle to find a replacement or solution for the absent, but necessary work. International migration, the global movement of people between different countries, is a significant component of brain drain. Depending on the economy and population of a certain country, the magnitude of external international migration from a given country can be quite devastating. Another integral part of brain drain, or human capital flight, is human capital. Human capital is “the measure of the economic value of an employee’s skill set [that] builds on the basic production input of labor measure where all labor is thought to be equal. The concept of human capital recognized that not all labor is equal and that the quality of employees can be improved by investing in them. The education, experience and abilities of an employee have an economic value for employers and for the economy as a whole” (Edralin). The Concise Encyclopedia of Economics defines human capital as “expenditures on education, training, medical care, and so on as investments in human capital” (Becker 2008). It is important because a viable country is not possible if there are no human resources.

Section 1 of this paper is an introduction that includes definitions of relevant terms and states the purpose of the paper and the significance of the research. Section 2 provides a literature review that summarizes sources read in reference to the research. Section 3 explains the research design and the methodology used in the study. Section 4 summarizes the paper through findings, conclusions, and recommendations for future research.

### **Literature Review**

The overall topic investigated is the impact of brain drain on Haiti by investigating the contributors of brain drain, its impact on political, economic, and educational development, and the value of political events in inciting brain drain, through a historical perspective. As a result, included are the summaries of some of the sources that were found in relation to the research and brain drain. Most of them are research or working papers specifically about the impact of brain drain on various regions, measures, such as income, or institutions, such as education systems.

#### ***Brain drain and human capital formation in developing countries: winners and losers***

In this paper, Beine, Docquier, and Rapoport (2008) define brain drain as the “international transfer of resources in the form of human capital and mainly applies to the migration of relatively highly educated individuals from developing countries” (631). The study looks at the theoretical and empirical framework of brain drain and summarizes migration data gathered from a dataset created by Docquier and Marfouk (2008). The theoretical framework involves the influence and option of education as a factor to human capital, the effect of migration, and the proportion of educated people before and after migration, while the empirical framework considers variables such as the level of human capital before migration, the degree of skilled migration at the start of the migration period, and population density in 1990, the starting year of the study.

In terms of results, the study looks at econometric issues that include variables of life expectancy at birth, total country population, racial tensions, emigrants living in countries that are part of the Organization for Economic Co-Operation and Development (OECD) before the observed time period, and the gross domestic product (GDP) of countries that were a source of migration (639). Cross-sectional results, or results that span various countries, show that source countries care more about the individuals who remain in the country after receiving an education. Those countries that lose human capital from brain drain significantly lose more than those countries that obtain a slight gain from human capital. However, the research reveals that brain drain can have beneficial effects on developing countries that have a large enough population, such as China, India and Brazil, so as to offset/minimize the impact that the brain drain will have. Overall, the gains numerically outweigh the losses and as a whole, developing countries seem to expand their human capital (648). The significance of this document to my research is that the results found for Haiti showed that the country had a negative effect. It proves that between 1990 and 2000, brain drain had a negative effect on Haiti.

### ***International migration by education attainment, 1990–2000***

Docquier and Marfouk, along with Beine (2008), sought to address the issue of an absence of an organized, observational evaluation on the intensity of brain drain by creating a construct a worldwide database on international movement by educational achievement. They essentially argue that admission into schools in countries of origin would improve if more individuals go back to school in their native country, the chances of migration increase the anticipated return of human capital. They also note that “quality-selective” immigration policies were used to choose the individuals desired in the work force. The study calculates emigration rates and stocks by the level of education acquired in countries of origin in 1990 and 2000, using data sources such as censuses, microcensuses, register data. The findings of the study reveal that emigration stocks are larger in regions such as Europe and parts of Asia and are concentrated in regions such as the United States. The highest emigration rates are found in regions such as Central America, Africa, and the Caribbean.

### ***Educated migrants: is there brain waste?***

The research completed by Ozden seeks to analytically address the issue of why some talented immigrants, especially those that come from Latin American, Eastern Europe, and East Asian countries, find it difficult to obtain a skilled job in their area of expertise. Several variables such as money spent on post-secondary education, education taught in English, GDP, the distance between native countries and the U.S, and openness of U.S immigration policies to certain countries, and the level of difficulty encountered when migrating based on level of education (227).

Some individual factors that affect why people migrate are whether they should migrate, their financial ability to migrate and whether a person is prepared and content with living away from home, while country or communal factors that affect why people migrate are support or social networks. Some discrimination towards migrants is based on skill or education level, which is the case with OECD countries. Several predictions are provided for why occurrences such as ease of migration happen the way they do, where higher skilled migrants have more difficulty. Ease of migration is an important factor that is encountered when considering the jobs migrants receive when they arrive in their destination country.

Data from Docquier and Marfouk (2006) as well as U.S. Census data is used to conduct the research, of which there were over 200,000 observations included in the dataset. Occupations were divided and labeled as “high skilled, which incorporated individuals such as scientists, accountants, engineers, and teachers with at least a full college education, or low skilled, which categorized individuals who obtained less than a full college education and included technicians, police, waiters, and drivers (232).

A graph from Docquier and Marfouk’s (2006) research shows that in 2000, Mexico has the highest migration rate to the U.S, followed by the Philippines. Haiti’s migration rate to the U.S is significantly higher than the rates for migration to other parts of the world. Another graph obtained from Docquier and Marfouk’s (2006) data shows that for many countries, the share of emigrants that go to the U.S is higher than the EU-15. However, this does not include Mexico, whose share of highly skilled emigrants to the EU-15 is over three times that for the U.S. In terms of Haiti, the focus point of this research, the share of highly skilled emigrants that go to the EU-15 is higher at 46%, while the percentage for the U.S is 38%.

A table obtained from the World Bank on tertiary education shows that enrollment in post secondary education in Haiti is almost nonexistent compared to an approximate low portion of Haitian immigrants who have a post-secondary degree when they arrive to the United States. The last table used in this research compares the stock of migrants in the U.S and the European Union with a primary, secondary or tertiary education. Although the number of migrants with a tertiary education increased from 1990 to 2000, the number was higher for the United States.

The researchers calculated the proportion of migrants who had skilled jobs and a tertiary education and data shows that in general, Latin Americans are the least likely to find skilled jobs. Two types of variables, quality variables that explain why the equal levels of education are weighed differently in the U.S., and selection variables that explain the differences in abilities of migrants from different countries (237). From various calculations and graphing, the results show that the distance between the native country and the U.S., the English language, and money spent towards tertiary education seem to be important factors that have a positive and strong effect on the chances of educated migrants acquiring a skilled job. Educated migrants who come from countries where English is a commonly spoken language and where much of the money and resources are spent on post-secondary education, work more efficiently in the U.S. In turn, this becomes a significant reason to why migrants from certain geographical areas find it easy or more challenging to find skilled work when they migrate to the United States.

### ***Brain drain and inequality across nations***

In this research paper Docquier (2006) seeks to answer the question of whether brain drain is a constructive event or a when considering its ... on developing countries. He focuses on two aspects of migration that call attention to the emanation of brain drain on developing countries and the contradicting views and ideas of skilled migration as something that is quite advantageous, although it deprives countries of essential human capital. The purpose of this paper is to provide a better understanding and portrayal of brain drain and a survey of empirical and theoretical studies on brain drain (3) with the intent to offer policy recommendations that will benefit the impoverished people of developing nations, through the use of macroeconometric studies.

A common problem found in relation to brain drain is that accurate data on migration is unreliable and there is often a lack of information on the education level attained by immigrants. Docquier and Marfouk (2006) expanded on the brain drain research conducted by William J. Carrington and Enrica Detragiache by creating an international data set on skilled migration. One finding revealed that although larger countries have more people that emigrate, emigration rates are highest for middle class countries. The European Union plays a significant role in international migration because numerous individuals travel there from African countries and many of these countries are developing countries that are left at a disadvantage and cannot afford to lose these migrants. The data shows that there is a strong relationship between human capital and the output gained for every worker in the labor market in the sense that as human capital is reduced numerically, more workers have lower levels of education. There is research that shows that brain drain can be a positive occurrence when the human capital gained is greater than the human capital that was lost.

It was concluded from the research that the positive effects of brain drain can have a significant impact and may create an increase in human capital. The best possible skilled emigration rate necessary to create a gain in human capital differs depending on the country in question and factors including "population size, political environment, education policy, level of development, etc" (23), but on average a rate of five to ten percent is needed for a gain to be present. Obtaining human capital gain from international migration is possible if quality-selective immigration policies that do so are created and are affixed with motivators that influence people to return to their home countries and enforce international participation. Docquier seems to suggest that taxing individuals based on level of education would be a useful tool in increasing brain gain. He states that more empirical research and data such as surveys are important and necessary to create policies to combat brain drain.

### ***An analysis of the cause and effect of the brain drain in Zimbabwe***

This study, which was a conducted as a collective effort between the Scientific and Industrial Research and Development Centre (SIRDC) and the National Economic and Consultative Forum (NECF), was directed by C.J. Chetsanga. It was conducted to identify and understand the status of the brain drain epidemic that is occurring in Zimbabwe, the reasons to determine the best possible solutions to resolving this issue. The purpose of the study was to "establish the trend, rate, and level of brain drain in Zimbabwe" while investigating the events that motivate professionals to leave the country or desire to return to the country. This study is important because understanding the causes and effects of brain drain in Zimbabwe will allow policy-makers to brainstorm and create policies and programs that will combat this phenomenon and reduce its severe negative impact. The relevance of this to my research is that Haiti, like Zimbabwe, is a developing country that has and continued to suffer in many similar ways.

The data collected regarding brain drain observed trends from 1990 to .... and incorporated visits to South Africa, Botswana, Canada, the United States, and the United Kingdom, the most common emigration destinations for Zimbabwean individuals. In order to fully grasp the impact of brain drain researchers gathered demographic info on variables such as socioeconomic status, gender, age, profession, and skills. An important part of the research took into account three types of brain drain: (1) primary external brain drain, where professionals leave their native country for overseas host countries, (2) secondary external brain drain, where professionals leave their native country for other countries in the same geographic region, and (3) internal brain drain, where individuals work in occupations outside of their field of expertise or move from public to private sectors.

Researchers studied socioeconomic statuses, determining the causes of these conditions, and then created questionnaires that were distributed to individual Zimbabwean people who had lived outside of the country for more than six months, private institutions and non-governmental organizations (NGOs), 13 universities and colleges, and public sector organizations including ministries. They also conducted group discussions, brainstorming sessions, and interviews in the United States, the United Kingdom, Botswana, and South Africa. These are the places that most Zimbabweans are documented to migrate to after leaving their home country.

There were several important findings that appeared from the conduction of the study. Some of the findings include the fact that most of the educated people who have left Zimbabwe have been teachers and nurses because of budget cuts to education and healthcare and most of the questionnaire participants received Baccalaureate degrees. The largest motivator for leaving Zimbabwe seemed to revolve around issues within the labor force, while the most common reasons for leaving included low salaries, exchange rate, and greater career opportunities. A majority of them had intentions to eventually return to Zimbabwe or had a desire to do so. Age played an important part in their decision as those who were middle aged were more uncertain as to whether they would or had a desire to return because they had families, while younger and older respondents showed more of an intent and desire to return.

Several conclusions were made based on the aforementioned findings as well as the research and information gathered from the study. The researchers arrived at the conclusions that Zimbabweans are unjustly discriminated against when they leave their home country in search of better opportunities and that placing more legal concerns on this issue may not be very beneficial. Although teaching and nursing are the two areas that are most affected by the Zimbabwean brain drain, another factor is, brain drain is still a significant issue for professions where the small number of skilled professionals leaving are those who have the most skills and knowledge in their respective fields of expertise. Many of the proposed recommendations given in the report were in relation to policies that could potentially reduce the extensive brain drain in Zimbabwe such as ...

### ***International migration, remittances and labor supply: the case of the republic of Haiti.***

Jadotte (2006) first makes note of early migration patterns in waves—the first wave involving migration from Haiti to Cuba and the Dominican Republic in the early 1900s, and the second wave including emigration during the Francois Duvalier regime of the 1960s. He refers to the fact that the aggregate monetary income for remittances in 2007 was about \$1,200 billion dollars, establishing and confirming the fact that remittances are of large significance to the Haitian economy. The issue faced in this paper is that there is little substantial information on the tenor and evaluation of the ramifications of international migration and remittances on Haiti's economy. The importance of remittances comes from the fact that they increase the quality of life of the recipients by allowing them to use the money for purposes such as food, education and healthcare and they contribute to the increase in capital of the inherited country. However, some downsides are that they can reduce women's income in the remittance-receiving households and it can have an affect on how working people behave because they may become idle or dependent on the remittances (5).

Jadotte conducted an analysis of international migration by looking at the number of relatives in a household that live abroad and of remittances by looking at whether households receive remittances. He used a Haitian Living Conditions Survey (HLCS) administered to about 7,200 homes with questions that focus on relatives of the household that do not live in Haiti and whether the household obtains remittances (7). Over 25 percent of households receive remittances, some of which count for a significant source of income. It seems that regardless of income, the percentage of household individuals with a post-secondary education is below one percent. However, in terms of migration, there is a positive correlation between income and the level of migration in addition to the percentage of those who receive remittances. Approximately two percent of people who live in houses with migrant relatives abroad have a post-secondary education and the same applies for houses that collect remittances.

The results of the analysis show the chances of migration are not significantly affected by education level and are lower in farming- or fishing-involved households. Yet, chances are higher in semi-urban and rural areas and are positively affected by households with livestock and landholding. Most Haitians who migrate out of Haiti move primarily to the U.S., the Dominican Republic, and Canada.

### ***Predicting risk factors associated with forced migration: an early warning model of Haitian flight***

Shellman and Stewart collaborated in an attempt to build an “early-warning model of Haitian flight” based on the prediction of five main risk factors: (1) government and rebel behavior toward each other (2) the Haitian economy-inflation (3) the U.S. economy-inflation (4) U.S. wages, and (5) U.S. foreign policy action toward Haiti. Another key factor taken into consideration was Haitian migration to the U.S. This research is important because knowledge and prediction of potential risk factors would allow policy-makers to plan for tragic events. The study was conducted longitudinally with a focus on weekly migration patterns, which was beneficial in examining migration by allowing for numerous observations, providing a better interpretation of what causes migration, and “providing more useful predictions for policy-makers”.

The authors argue that “migration is a function of various domestic and international political, economic, and cultural factors” (Shellman and Stewart 2007). Economic and foreign policy measures were added to the models of the changes in government and rebel behavior toward each other because of the argument that a poor economy influences the behaviors of both. Shellman and Stewart essentially theorize that U.S interaction and foreign policy will influence government and rebel behavior and decisions, although the influence could possibly be positive or negative. It is theorized that violent and hostile behaviors motivate people to leave their native country.

Weekly data from the U.S Coast Guard on the capture of illegal Haitian immigrants travelling by boat, from 1994 to 2004, was used in place of the absence and unavailability of annual Haitian migration and refugee data. Shellman and Stewart use various methods to validate their data. Economic data was computed with the use of Consumer Price Indexes for Haiti and the U.S., and wages for the U.S. were calculated for its economic observance.

The results show that inflation has a negative effect on rebels, who react more violently, and no effect on the government, which is also the case with behaviors in foreign policy; in terms of the rebel-government relationship, high interaction results in less hostility while low interaction increases hostility; the Haitian government is more hostile to the rebels when inflation and U.S. foreign policy are considered. Adverse U.S. foreign policies, rather than reciprocal foreign policies, toward Haiti galvanize migration for refuge to the U.S.

### ***Haiti Asks Expat Professionals to Return and Help***

Written four months after the tragic earthquake that plagued Port-au-Prince, the capital of Haiti, and surrounding areas, the article addresses the concerns and efforts of government minister Edwin Paraison in stimulating Haitian emigrants in host countries such as France to return to Haiti to aid in the reconstruction of Haiti. His goal was to “promote the government’s mobilization plan to entice professionals back, with offers of good salaries, housing, and transportation.” The return of Haitian professionals would make a positive difference in advancing reconstruction efforts and a slight remedy in Haiti’s brain drain. McKenzie states that the UN and the Haitian government are working together to provide incentives such as payment to attract professionals to help. Watching as their colleagues leave to work in Haiti would inspire more Haitian professionals to provide personal aid.

## **Research Questions and Methodology**

### ***Purpose of Study and Research Questions***

As mentioned before, the problem with brain drain is that many of the proficient, educated individuals who leave the country, often in search of better living opportunities, do not return. As a result, their communities and country are left deprived of quality workers needed to improve conditions and the community is left at a disadvantage for which it must struggle to find a replacement or solution for the absent, but necessary work. Thus, the purpose of this study is to examine and determine how brain drain impacts Haiti by identifying the factors within Haiti that influence brain drain, how brain drain has affected politics, economics and education, and how relative political events have stimulated Haiti’s brain drain.

### ***Data Collection and Sources***

The primary method used to collect data and analyze the literature was the use of the Google search engine, which included the Google Scholar and Google Books sections, was initially used as a resource to find articles, papers and general information on brain drain. This proved to be quite useful as numerous relative sources were found from the websites of important organizations such as the World Bank, the International Monetary Fund, and the United Nations. These sites were directly searched for sources and available statistical data tables on migration and remittances. The University of Maryland library research port was used to locate books and online databases, including General/Multi-disciplinary databases such as Academic Premier, EBSCO and JSTOR. Various search terms or phrases used to locate desired sources were “brain drain,” “human capital,” “human capital flight,” “migration,” and “Haiti”. U.S. Census Data was searched, but no pertinent data was found. No relevant statistical information could be found from the Haitian Institute of Statistics and Informatics, an agency under the Ministry of Economy and Finance. Little information was found from the website of the Haitian Embassy.

### ***Data Analysis Strategies***

The analysis for each of the three research questions was similarly conducted. For the first research question, the three main areas of focus were economic, healthcare and education. As a result, readings on brain drain in reference to these topics from government, organizational, or institutional websites were given precedence in terms of importance, especially those sources with information or data specific to Haiti. The relationship of the readings to each other, as well as the similarities and differences in the findings of the readings, were considered to give an idea of how the economy, healthcare, and education in Haiti have or may influence the magnitude of the brain drain that has been experienced in the country for years. Various readings note that the effect of the economy on brain drain is a major reason for the migration of skilled individuals because of the lack of sufficient job or career opportunities available.

### ***The same method that was used to analyze the internal factors was also used to analyze***

Earlier this year in January, Haiti suffered from a tragic 7.0 magnitude earthquake, which further exacerbated the poverty-stricken developing country. As a result of this earthquake, a suggestion was made that some of the literature analyzed should involve the relationship between brain drain and natural disasters, particularly because of the 2004 Tsunami that wreaked havoc and destruction on several countries in the Indian Ocean.

Timelines of historical events in Haiti were reviewed from various websites to ensure that the information and dates were reliable. Viewing timelines would aid in the identification of political events that may have impacted brain drain in Haiti. In terms of political events that were analyzed, the research focuses on the forced removal of the former president of Haiti Jean-Bertrand Aristide and the Duvalier regime that occurred under the rule of former President Francois Duvalier, followed by his son Jean-Claude Duvalier. The readings regarding these two events explained what happened, although not specifically in terms of brain drain. However, in analyzing these events, consideration was given to what occurred during those presidencies and how, given the research, reading and analyses done, they affected brain drain.

### ***Strategies for Minimizing Bias and Error***

To ensure that the research remained as objective as possible, precedence on references was given to scholarly papers and articles that were written by researchers or that were sponsored by organizations such as the World Bank and the International Monetary Fund; these organizations specialized in and continue to do research on brain drain. Secondary Preference was given to by the Verifying information that is commonly repeated in multiple sources and relying on research papers and relevant studies to ensure that information from secondary sources is accurate. Multiple databases were used, with the application of various search methods, to find desired information and data.

### ***Ethical Considerations***

There were no ethical considerations of concern with this research because it was written from a historical perspective and did not involve the thoughts and opinions of participants.

### ***Limitations***

As previously stated, a major limitation to this research was the lack of reliable information that was available regarding migration in Haiti, especially in terms of statistics. This is a general problem that arises when attempting to collect quantitative data on migration.

## **Findings, Conclusions and Recommendations for Future Research**

### ***Findings and Conclusions***

Brain drain is a topic of which there are many conflicting views on the costs and benefits, even though most researchers agree that it does more harm than good. Its global impact influences many aspects of society and vice versa. In Haiti, although many factors influence brain drain, the economy, healthcare and education seems to have the most significant role in how brain drain has and continues to develop.

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**Research Question 1:** What are the internal factors that contribute to brain drain from Haiti?

The largest factor that influences brain drain is the economy, followed by two other imperative factors that were focus points in this research, healthcare and education. In a world propelled by globalization where many societies are capitalistic, having an economy that can actively compete in the global market through the importation and exportation of goods is imperative. Much of the economic hardship that Haiti has experienced has been as a result of misuse and corruption of funding by the government and elites. This has created an inability for the country to use and allocate its finances to important systems such as the workforce, education and healthcare. Professionals such as doctors, nurses, teachers, engineers, and architects do not receive reputable wages in comparison to other countries. The results of several studies show that brain drain has a negative impact on Haiti and that if not for remittances, money returned to Haitian citizens from friends and family in the Haitian Diaspora, the condition of Haiti's economy would be abominable.

Migration to countries such as the United States has continually increased at least over the past 20 years. In addition to the state of the economy, the deprivation of adequate healthcare in a country where there is no universal healthcare for its occupants is another reason that skilled migrants are leaving Haiti to live elsewhere. The opportunities to excel and advance in specialized fields appear to be few and far between. The occurrence of the January 12 earthquake brought to the world's attention the fact that Haiti does not have enough doctors, nurses, hospitals, resources and medicine to treat many of the ill people who need aid.

Education is the third main contributor of brain drain because, as with the previous determinants, the education system is poorly constructed and implemented. Since there is not enough money to sufficiently fund education, most students who receive an education do so through private schools. Very little money is allocated to higher education and as such, many individuals who receive or seek to receive a tertiary education emigrate to countries such as the Dominican Republic, the United States, Cuba, Canada and France.

**Research Question 2:** How has brain drain impacted the overall political, economic and educational development of Haiti?

Just as the economy, healthcare and education have had an influence on Haiti, the reverse can be said for brain drain and the political, economic and educational development in Haiti. In terms of political development, it does not seem that policies are being placed to resolve the brain drain issue in Haiti and retain the country's educated professionals. There are no policies or strategies in place for Haiti to well-adapt itself to environmental changes. It is not prepared to handle natural disasters such as hurricanes, which are common in the country between June and November, or earthquakes, which do not occur as commonly. In addition, if more highly-skilled workers are leaving, they cannot offer input for policies needed to improve conditions within the country and that will foster more career and job opportunities.

Political development is relevant to economic development because the approval of the distribution of resources comes from the political leaders such as government officials. It has been shown that if there are more educated emigrants than educated workers who stay in their home country, the country will suffer a brain gain. However, if the opposite is true and there are more educated natives who remain in Haiti, the country is likely to experience a brain gain in human capital. When highly-skilled professionals leave Haiti, the output of capital that goes into the workforce is lost, which leads to a decreasing functional economy.

In the same way that education contributes to brain drain, brain drain impacts the development of the education system because there are not enough teachers and the wages for teachers is not very substantial. Furthermore, since it is not economically possible to invest highly in education, the education system remains as is and is not likely to improve unless economic conditions improve and more money is allocated to the education system as a whole. There are few, if any, prospects for those obtaining a post-secondary education to research fields of interest and updated resources and materials are not as readily available as they may be in other countries.

**Research Question 3:** How important were political events (e.g., removal of Jean-Bertrand Aristide, Papa Doc and Baby Doc Duvalier) in influencing brain drain?

Politics have been a major factor in the emergence and continuation of brain drain in Haiti and they have been very important in the influence and development of brain drain in the country. The expulsion of Jean-Bertrand Aristide may have been of some importance in the influence of brain drain in Haiti because it may have shown that there was a weak governmental structure since there was so much interference and involvement by the U.S in Haitian affairs.

The presidency of Francois “Papa Doc” Duvalier had the most significant impact on brain drain because of ongoing corruption and homicides ordered by him. Various books and articles written on show that as a result of actions taken and policies implemented during his presidency, numerous individuals fled Haiti in fear of their lives and the deterioration of their quality of life should they stay.

### Recommendations for Future Research

In continuation of this study, it is recommended that a mixed methods empirical research study be conducted to not only provide a more concrete, accurate perspective and understanding of the actual impact of brain drain on Haiti, but to also provide valuable insight that would benefit policy-makers in creating a system or policies that would reduce and combat Haiti’s brain drain.

The methods for this would include the distribution of surveys or questionnaires and a conduction of individual interviews and focus group interviews of people who are contributing factors to the brain drain phenomenon in Haiti, or in other words, Haitian professionals that were born in Haiti and received a post-secondary education there. Conducting this additional research would not only provide a more concrete, accurate perspective and understanding of the actual impact of brain drain on Haiti, but it may also provide valuable insight that would benefit policy-makers in creating a system or policies that would reduce and combat Haiti’s brain drain.

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## Appendix

### Haiti Country Profile 1990-2010

Country	Variable	1990	1995	2000	2005	2010
Haiti	Estimated number of international migrants at mid-year	19084	22203	25832	30054	34966
Haiti	Estimated number of refugees at mid-year	0	0	0	0	1
Haiti	Population at mid-year (thousands)	7108	7861	8648	9410	10188
Haiti	Estimated number of female migrants at mid-year	8478	9599	11168	12993	15116
Haiti	Estimated number of male migrants at mid-year	10606	12604	14664	17061	19850
Haiti	International migrants as a percentage of the population	0.3	0.3	0.3	0.3	0.3
Haiti	Female migrants as percentage of all international migrants	44.4	43.2	43.2	43.2	43.2
Haiti	Refugees as a percentage of international migrants	0	0	0	0	0
Country	Variable	1990-1995	1995-2000	2000-2005	2005-2010	
Haiti	Annual rate of change of the migrant stock (%)	3	3	3	3	

Source: *International Migrant Stock: The 2008 Revision Population database*. Department of Economic and Social Affairs, Population Division.