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Co-infected Diseases and State Health Policy: Botswana and South Africa's Response to HIV and Tuberculosis

Margaret H. Schmidt
Lawrence University

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Acronyms

(ANC) African National Congress
(ART) Antiretroviral Treatment
(ARV) Antiretrovirals
(ASEAN) Association of Southeast Asian Nations
(AZT) Zidovudine or azidothymidine
(BDP) Botswana Democratic Party
(BNTP) Botswana National Tuberculosis Program
(BONASO) Botswana Network of AIDS Services Organization
(DOTS) Direct Observed Treatment Short-course
(GDP) Gross Domestic Product
(HAART) Highly Active Antiretroviral Therarpy
(HIV) Human Immunodifficiency Virus
(IPT) Isoniazid Preventive Therapy
(MDR-TB) Multi-Drug Resistant Tuberculosis
(NACA) National AIDS Coordination Agency (Botswana)
(NACOSA) Networking HIV/AIDS Community of South Africa
(NSP) National Strategic Plan (South Africa)
(NTCP) National Tuberculosis Control Program (South Africa)
(PEPFAR) President's Emergency Plan For AIDS Relief
(PLHIV) People Living with HIV
(RSA) Republic of South Africa
(SADC) Southern African Development Community
(SANAC) South African National AIDS Council
(STI) Sexually Transmitted Illness
(TB) Tuberculosis
(UN) United Nations
(UNAIDS) The Joint United Nations Programme on AIDS
(VCT) Voluntary Counseling and Testing
(WHO) World Health Organization
(XDR-TB) Extremely Drug Resistant Tuberculosis

Chapter 1: Introduction

Diseases have significantly influenced societies in negative and positive ways through various periods in history, challenging groups to respond appropriately in the best interest of their people. The rise of the human immunodeficiency virus (HIV)/ acquired immunodeficiency syndrome (AIDS) has presented numerous social, economic, and political challenges globally due to high rates of infection. Barnett and Whiteside argue that:

> HIV/AIDS has succeeded in joining people around the world in a common consciousness about its threats and implications. It is the only disease to have a dedicated United Nations organisation- UNAIDS-charged with the single aim of confronting it. It is the first epidemic where the long-term implications could be recognised as they happen.[1]

The formidable international focus on the pandemic has enabled growth in social and medical research throughout the global community. However, due to the structure of the virus and the way in which HIV/AIDS attacks the immune system, it is also crucial to consider the effects of opportunistic infections in conjunction with the spread of HIV/AIDS.[2]

With a compromised immune system, *Mycobacterium tuberculosis,* colloquially known as tuberculosis, becomes a greater threat to the infected individual. According to the World Health Organization, "The risk of developing tuberculosis (TB) is estimated to be between 21-34 times greater in people living with HIV than among those without HIV infection."[3] Furthermore, 350,000 HIV positive patients died from tuberculosis in 2010.[4] While tuberculosis has

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[1] Tony Barnett and Alan Whiteside, *AIDS in the Twenty-First Century: Disease and Globalization* (New York: Palgrave and Macmillan, 2006), 4.

[2] An "opportunistic infection disease caused by a microbe that does not usually cause disease. It occurs in unusual circumstances, such as when the host's immune system is weakened." as cited in Tony Barnett and Alan Whiteside, *AIDS in the Twenty-First Century: Disease and Globalization* (New York: Palgrave and Macmillan, 2006), G:10.

[3] Guidelines for intensified tuberculosis case finding and isoniazid preventive therapy for people living with HIV in resource-constrained setting. World Health Organization, 2011.as cited in World Health Organization, "World Health Organization HIV/TB Facts 2011," *HIV and Tuberculosis*, http://www.who.int/en/

[4] Ibid.

significantly influenced societies for centuries, the only current method of treatment and prevention is the use of antibiotics and in some instances a combination of antibiotics. Contracting HIV/AIDS heightens the risk of having a deadly opportunistic infection, such as active tuberculosis, increasing the need for a focused response to combat the risk of co-infection alongside HIV prevention and treatment strategies. In particular, it is necessary for health policies on the state level to respond with a strong focus on halting these co-infectious diseases.

The Policy Question:

The HIV/TB co-infection burden on patients requires a larger response from the national policy arena. Tuberculosis is the foremost opportunistic infection responsible for death in HIV/AIDS patients[5]; thus, the "WHO recommends the implementation of collaborative HIV/TB activities to decrease the burden of HIV/TB."[6] While the World Health Organization suggests that, based on biological evidence, these two diseases be combatted together, only some states most affected by HIV/AIDS have national policies similar to WHO recommendations. In turn, this raises questions about how health recommendations are translated into state policies.

Health policy nonetheless is a challenging political process to understand. Gill Walt argues that "[t]he extent to which health commands any attention on the government's policy agenda therefore depends to some extent on the skills of the minister to argue for competing claims on government's budget, and to put across the needs for, and implications of, a new

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[5] World Health Organization, "World Health Organization HIV/TB Facts 2011," HIV and Tuberculosis, http://www.who.int/en/.

[6] Ibid.

direction of health policy."[7] This particular political reality describes how it is the bureaucracy's job to argue for alterations in state disease policy. While contemporary literature argues that health should be viewed as a security issue, policy arenas do not address health as issues such as border security. Illnesses are often perceived as scientific and social problems requiring internal and external research to be fully addressed. To fully address health concerns with policy, state politicians have to demonstrate that the health problem requires a political response. This argument assumes that the health bureaucracy's desire to create policy on specific health issues drives the state's incorporation of disease treatment plans. Walt, however, does not address the idea that the fight on HIV/AIDS is a global project with influences beyond sovereign states.[8] Individual states, especially many high burden states, are unable to learn effective means to treat a given disease, whether social or scientific, thus requiring international influences to aid in the learning process.

The Biological Mechanisms

Scientific and social evidence drives alterations in health policy fashioned by the World Health Organization, seen as an agent of learning for many states. Moreover, the scientific evidence is available to policy makers in epidemic states, including Botswana and South Africa. Since the 1980s, the global scientific community has been able to unearth the understanding about how HIV evolves, influencing national treatment. The explanation of the scientific mechanisms of HIV and TB offer a strong insight into why these diseases require dual treatment.

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[7] Gill Walt, *Health Policy: An Introduction to Process and Power: People, governments, and international agencies-who drives policy and how it is made* (Johannesburg: Witwatersrand University Press, 1994), 86.

[8] Sovereignty is "the idea that a state has a government that exercises authority over its territory" as cited in Joseph S. Nye Jr., *Understanding International Conflicts: An Introduction to Theory and History* (New York: Pearson Longman, 2009), 292.

Beginning with HIV, the virus enters an individual, or "host," through the exchange of bodily fluids including blood, semen, vaginal secretions, and breast milk.[9] Once the virus has entered the host, the virus begins the incubation period which is when "the number of pathogens is growing, and there is no disease until a given population threshold is reached."[10] As the pathogens spread, HIV searches for specific proteins called CD4[11] proteins, found on the edges of helper-T cells, which respond to invading pathogens and the creation of antibodies.[12] Once HIV finds the CD4 proteins the virus surrounds the proteins. After this occurs:

> [A] series of events begins that allows the virus to enter the host cell's cytoplasm. The virus then releases its genetic material, and viral replication begins. Newly produced progeny virus leaves the infected cell and the cell is killed. Normally T cells survive for years, but after HIV infection, most infected cells die within a day or two.[13]

From this point the virus continues to multiply and inhibit the helper-T cells' ability to respond to any infection. With the immune system constantly fighting to stay alive, and with the help of antiretrovirals, pathogens are able to enter and harm the body. With a compromised immune system it is difficult for the body to have an innate, or initial response to an invading pathogen.

With little to no response from to an invading pathogen tuberculosis is able to be more successful in spreading in a host. Tuberculosis enters an individual through air droplets passed through the process of breathing.[14] Upon entrance, the droplets containing the bacteria travel to

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[9] Center for Disease Control and Prevention, *HIV Transmission*, http://www.cdc.gov/hiv/resources/qa/transmission.htm

[10] Bruce V. Hofkin, *Living in a Microbial World* (New York: Talyor & Francis Group, 2011), 271.

[11] CD4 proteins are measured to determine how serious the infection is and how many helper-T cells have been destroyed by the virus as cited in WebMD, *HIV, AIDs, and the CD4 Coun*t, http://www.webmd.com/hiv-aids/cd4-count-what-does-it-mean.

[12] Hofkin, G:6.

[13] Hofkin, 309.

[14] Neil W. Schluger and William N. Rom, "The Host Imunne Response to Tuberculosis," *American Journal or Respiratory and Critical Care Medicine* 157, no. 3 (1998): 679. http://ajrccm.atsjournals.org/content/157/3/679.long.

the lungs where the acid coated cells remain. These particular "cells are thus very hardy and difficult to destroy. They are resistant to many toxic chemicals as well as the phagocytic activity of immune system cells."[15] Once the bacteria enter the lungs, there are a variety of paths that the immune system can create, depending on its ability to respond to the invasion:

> The initial host response can be completely effective and kill all bacilli, such that the patient has no chance of developing tuberculosis at any time in the future; the organisms can begin to multiply and grow immediately after infection, causing clinical disease known as primary tuberculosis; bacilli may become dormant and never cause dis- ease at all, such that the patient has what is referred to as latent infection, manifest only by a positive tuberculin skin test; or the latent organisms can eventually begin to grow, with resultant clinical disease, known as reactivation tuberculosis.[16]

Active tuberculosis causes respiratory distress and if untreated, with a variety of antibiotics depending on the strain's resistance to particular medicines, leads to the deterioration of the lung health.

Now consider how an HIV positive patient's immune system would respond to tuberculosis, whether coming from a dormant form of tuberculosis or through recent contraction. If an HIV positive patient has lower CD4 counts, this means that his/her body is less able to fight off an invasion due to the fact that the method of reporting an invasion is damaged. Without the support of antiretroviral treatment and antibiotic treatment, the patient will be unable to combat the disease. In the case of the HIV positive patient, there is a much higher risk of death from tuberculosis if untreated in conjunction with a regimen to combat HIV from spreading. These biological implications illustrate an ardent demand for public health policy to appropriately require these diseases be treated contemporaneously.

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[15] Hofkin, 56.

[16] Schluger and Rom, par 5.

Research Methodology

Considering the scientific foundations and the World Health Organization policies, the following explains how Botswana and South Africa's health policy will be investigated. The question of, "Why do Botswana and South Africa not have national policies focusing on treating HIV/TB co-infection when the World Health Organization recommends that integrated treatment programs are necessary?" will be investigated through a most-similar-systems, small-N case study design. In addition, a mixed method of qualitative and quantitative research will be used to help answer the question.

The use of a small-N case study design paired with the most-similar-systems method of comparison that engages states with similar foundations will be used to investigate the policy differences between Botswana and South Africa. A most-similar-system comparison "reduces the number of 'disturbing' variables to be kept under control."[17] This means that the comparison limits the potential lurking variables to explain a situation. Yet, managing to find a strong comparison can be tedious if one wants to compare a large amount of cases. A small-N case study allows for a small number of cases to be closely investigated. For this study, the use of a most-similar-systems design investigating Botswana and South Africa will be used due to the prevalence of the two diseases in each state, the varied response of the national legislatures, and their cultural and social similarities.

The comparison method will be investigated using both qualitative and quantitative methods. Qualitative evidence will come from a variety of primary and secondary sources, including policy reports, articles written on the political structure and the policy making arena,

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[17] Donatella Della Porta,, ed. and Michael Keating, ed., *Approaches and Methodologies in the Social Sciences: A Pluralist Perspective* (Cambridge: Cambridge University Press, 2008), 214.

and health reports from the states. The use of these particular sources allows for a strong description of how policy decisions are made in Botswana and South Africa. Moreover, looking at the evidence through international regime theory, as opposed to security theory, will allow for a stronger assessment of policy translation. Statistics will be added to enhance the narrative explained through the printed sources. Infection rate statistics and funding data will be used as primary sources for quantitative evidence from databases such as the World Bank, The United States President's Emergency Plan for AIDS Relief (PEPFAR), The Global Fund to Fight AIDS, Tuberculosis, and Malaria, and government expenditure reports. The use of correlation and regression methods will further attempt to understand the interconnection of budget rates and infection rates in making policy decisions. By using a mixture of qualitative and quantitative methods the answer to the policy discrepancy will emerge as both types of evidence complement each other to create a strong and complete picture.

The above methodology was created over a series of experiences from both my study abroad experience and classwork. While living in Botswana on the ACM Botswana: Immersion in Southern Africa program in the spring of 2011, I attempted to investigate the role of stigma of HIV in policy creation. However, due to strict government research regulations, my request was denied to explore this topic by the Ministry of Health. While continuing with a different project, the public health course and political science course at the University of Botswana helped me to discover the question of policy making and the interconnection of HIV and tuberculosis treatment. After spending five months studying and immersed in Botswana's politics, the question of HIV/TB co-infection policy emerged. During the fall of 2011, I was able to create a research plan in Government 500: Research Methods in International and Comparative Politics

to research and answer this question. The evolution of this question and creation of a research guide in the seminar class helped to establish the above small-N, most-similar-systems design to pose and evaluate the question on HIV/TB co-infection treatment.

Botswana and South Africa as Cases:

The cases of Botswana and South Africa offer valuable insight into the posed question due to the nature of these states and the impact that HIV/AIDS has played in their recent history. Authors of larger HIV/AIDS investigations, including Barnett and Whiteside, have used the same comparison when explaining HIV, thus making these states a valuable comparison.[18] These two states often lend themselves to an easy comparison especially due to the fact that both Botswana and South Africa are located in the region that, "holds the global record for the most reported cases, highest incidence of the disease, and the highest death rate as a consequence of the disease."[19] Considering the similarities between the states and the difference in policy outcome the comparison will be presented as a most-similar-system comparison based on economic strength, cultural similarities, and HIV and tuberculosis influence, while having differing policy responses.

As other authors have used the similarities between Botswana and South Africa it is also important to understand these two states in context of the African continent. As seen below, these two wealthy states in Africa have similar amounts of infectious disease and life expectancy as other states, and in turn face problems found throughout the continent. This highlights the fact

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[18] Tony Barnett and Alan Whiteside, *AIDS in the Twenty-First Century: Disease and Globalization* (New York: Palgrave and Macmillan, 2006), 130-137.

[19] Myfundi, Global distribution of diseases: TB, HIV/Aids, cholera and malaria, http://myfundi.co.za/e/Global_distribution_of_diseases:_TB,_HIV/Aids,_cholera_and_malaria.

that, while Botswana and South Africa have been able to create economic growth, that they are unable to prevent HIV/AIDS and tuberculosis from impacting their civilians. Understanding how Botswana and South Africa fit into the continent as a whole enables one to understand the presented question

Botswana and South Africa in Context of the Continent

Categories	Botswana	South Africa	Africa
Gross Domestic Product (GDP)	$30.09 billion	$422 billion	$1.09 billion (average)
Population	2,098,018	48,810,427	853,600,000
HIV Infection	24.8% of adults (2011)	17.8% of adults (2009)	11.4% of adults (2004)
Tuberculosis Infection	503 (incidence/ 100,000 people) (2010)	981 (incidence be 100,000 people) (2010)	29% of Global Burden.
Life expectancy (average)	55.74 years	49.41 years	53.8 years
Colonial Experience	British Protectorate	British Colony	Varied
Political System	Parliamentary Republic	Republic	Varied
Response to International Norms	Very responsive	Slow in responding	Dependent on each state

(The following information provided by CIA Factbook, Statistic Brain,& the New England Journal of Medicine[20])

Botswana and South Africa share a border southern Africa with robust diplomatic and economic ties. Botswana is considered to be an economic miracle due to the well negotiated program to mine diamonds found in Jwaneng area. Diamonds enabled Botswana to become a

[20] The New England Journal of Medicine. Tuberculosis in Africa- Combatting an HIV-Driven crisis.http://www.nejm.org/doi/full/10.1056/NEJMp0800809; UCLA. HIV/AIDS in Africa and US National Security.http://www.international.ucla.edu/africa/grca/publications/article.asp?parentid=107610.;United States CIA Factbook. Botswana. https://www.cia.gov/library/publications/the-world-factbook/geos/bc.html;United State CIA Factbook. South Africa. https://www.cia.gov/library/publications/the-world-factbook/geos/sf.html.

wealthy state in the southern region with the ability to create general policies to help with the development of the state. South Africa, on the other hand, has not only benefited from natural deposits of gold and diamonds, but a durable manufacturing sector that exports to many states in the South Africa Development Community (SADC). Economic inefficiency does not inhibit the ability of these states to provide health care, unlike other states in the region.

Beyond economic success, both states share cultural similarities due to their relative location. Ethnic similarities are found with the Tswana population, predominately in Botswana, but also across the border in northern South Africa. Further, both states reportedly have social constraints on combating HIV; for example the use of condoms was a massive project undertaken in both of these states. Also traditional beliefs around sexual relations and trust of partners has been cited by anthropologists, including Mark Hunter's Love in the Time of AIDS. Historically, both states at one point were part of the British Empire, while in different capacities, creating similar developed societies and parliamentary political structures. These cultural similarities enable an easy comparison, especially with the social influence of epidemic diseases. In addition, Botswana's and South Africa's epidemics have grown exponentially due to a variety of social and cultural constructs. Due to the cultural similarity between the two states, the epidemics exponentially grew from the influence of migrant labor, the adverse response to the use of condoms, mother to child transmission, and limited male circumcision.[21] Both Botswana and South Africa have large amounts of intended migrant labor[22] due to their endowments of gold and diamonds. Males with families would travel to the mines and leave their families in the

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[21] Mark Hunter, *Love in the Time of AIDS: Inequality, Gender, and Rights in South Africa* (Indianapolis: Indiana University Press, 2010), 25-35.

[22] Migrant labor in Botswana and South Africa refers to individuals who leave their homes and go to the mines, in their state,for wage labor. After a period of time working, they return to their villages for their families.

rural homesteads.[23] Males would spend extended periods of time at these mines engaging in prostitution and other sexual relationships and then return to their home villages to be with their families.[24] For these men, "[t]he risk of HIV infection and transmission is high, and eventually, by extension, the risk to women is high."[25] Migrant labor thus increased the accessibility of the HIV virus to many individuals, spreading the disease quickly. In conjunction with male migration, the use of condoms and altering view of relationships during the early phases of AIDS helped spread the disease exponentially. Hunter's investigation found that individuals with multiple partners would not use a condom with their primary partner, for example, the parent of one's child.[26] Gender roles further add to the use of condoms and whether or not women feel as though they can ask for their partner to use a condom. Discrepancies in condom use in social settings also aided the epidemics ability to spread in both of these populations.

Beyond condom use and migrant labor, mother to child transmission influenced the growth of the infection rate. Mother to child transmission is only curbed with the use of medication during child birth and not breastfeeding the newborn.[27] To ensure that neither of these actions occur, medication and formula are required. These particular programs, however, started after the virus had already massively infected the population. Further, science has argued that male circumcision helps decrease the transmission of the virus. In South Africa, in particular, the practice of male circumcision was stopped under British rule and only reintegrated into programs

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[23] Mark Hunter, 38.

[24] Ibid, 44-47.

[25] Rebecca L. Upton, "'Women Have No Tribe': Connecting Carework, Gender, and Migration in an Era of HIV/AIDS in Botswana," *Gender and Society* 17, no. 2 (2003): 319.

[26] Mark Hunter, 136-137.

[27] International HIV & AIDS Charity, *HIV & AIDS in Botswana*, http://www.avert.org/aids-botswana.htm.

as late as 2010.[28] Considering these particular social settings, the HIV virus was able to rapidly spread through the population, making Botswana and South Africa some of the states with the high HIV/AIDS infection rates in the world.

Not only do these states have some of the highest rates of HIV and TB in the world, both states are located in the region with the overall highest incidence of HIV and TB on the planet. Politically both of these states admit that HIV and TB play a major role in the daily living of their citizens and general health goals on a national level. Considering the influence of HIV infection, Barnett and Whiteside cite that these two states "have the second highest levels of adult prevalence (35.8% of adults are infected in Botswana), and the largest number of infected people in any country, 6.29 million in South Africa."[29] High HIV rates have led to a rise in opportunistic infections, including tuberculosis. According to the Global Report on Tuberculosis Control, South Africa is considered to be a high burden area for HIV and TB, while Botswana is not listed as a high burdened area.[30] However, in terms of the WHO report, when determining who is considered high burden, they are going off limited information, due to that fact that states do not hold nationwide surveys into the prevalence of HIV and TB. Further, Botswana has a population of only roughly two million which, in comparison to the other listed states, is greatly smaller in the amount of tuberculosis cases. Considering that a large proportion of both societies are infected by HIV and TB, it is reasonable to believe that these states would implement policy to limit the social and economic impacts of the disease through treatment policies. Even with

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[28] International HIV & AIDS Charity. *HIV & AIDS in South Africa*. http://www.avert.org/aidssouthafrica.htm

[29] Barnett and Whiteside, 131.

[30] World Health Organization (WHO), "Global Report on Tuberculosis Control," WHO/CDS/2011, (Geneva: WHO, 2011): 13.

such high prevalence, neither state has yet to fully adopt a cohesive policy requiring both diseases to be treated together.

While Botswana and South Africa face the same public health crisis, they have used different political means to address the situation. As of January of 2012 Botswana released TB/HIV policy guidelines describing how the integration of the disease programs are to be finalized. The guidelines "respond to a demand from all stakeholders involved in the care of dually infected patients for guidance on how best to develop and implement HIV/TB collaborative activities."[31] These particular activities have been active since 2005, when the Ministry of Health began coordinating the integration of the National HIV Program and National Tuberculosis Program. With a focus on addressing co-infection, Botswana stands far ahead of South Africa, which, instead of integration guidelines, has National Strategic Plans that hopes to increase the availability of co-infective treatment throughout the state. South Africa's strategic plans outline how the government, alongside non-governmental organizations, should offer comprehensive services for patients with HIV, other sexually transmitted illnesses, and tuberculosis. Kgalema Motlanthe, the South African National AIDS Council Deputy President remarked that he is "confident that we are ready to build on the above achievements. Once again, our strength lies in our unity."[32] The South African government is using the five year national strategic plan strategy, outlining multiple goals, including changing health and poverty, to create coordinated efforts between the government and non-governmental organizations. Using a most-similar-system method, the variables of culture and economics are ruled out as explanations for the differences

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[31] Ministry of Health Botswana, *Botswana TB/HIV Policy Guidelines* (Gaborone: Republic of Botswana, 2011), 4.

[32] South African National AIDS Council, *National Strategic Plan on HIV, STIs and TB: 2012-2016* (Pretoria: Ministry of Health, 2012), 9 . http://www.sanac.org.za/index.php/nsp-2012-2016/national-strategic-plan.

in the policies in these states. Considering the similarities and differences between these two states, Botswana and South Africa offer a valuable comparison to investigate the translation of international policy norms into state policy with the co-infected diseases of HIV and tuberculosis, as health policy and not a security issue.

Studying Botswana and South Africa offers a chance to understand how the developing world integrates international norms to policy. The use of international relations techniques, comparative politics, and public policy methodology will be used to fully answer the posed question of HIV/TB co-infection policy.

The following chapter reviews the literature of public policy on incrementalism and punctuated equilibrium theory and international regime theory. Chapter Three will apply international regime theory to the World Health Organization and the policy recommendations created over the last few years. Chapters Four and Five will investigate how Botswana and South Africa's policy have developed and changes through international policy translation. Chapter six will discuss the similarities and differences between the cases and offer a method to understand policy translation more generally.

Chapter Two: State and International Policy Theories

Before delving into the exploration of Botswana and South Africa's reaction to HIV and TB, it is necessary to understand how policies are assembled in states and on the international level; however, state and international policy formulation are not interconnected in policy theory literature. Since these theories are not interconnected, this chapter investigates international regime theory and the public policy models of incrementalism and punctuated equilibrium theory. Understanding these theories and models separately will help to understand each of the cases through the employment of international and state models. Considering disjointed models, the following section explores the major models used in this investigation.

State Policy Theories: Incrementalism and Punctuated Equilibrium Theory

Incrementalism is a public policy model that argues that policies in a state do not change instantly, but slowly change through small policy adjustments for both states and international organizations. Lindblom, referenced in Gill Walt's book, "describes the policy process as one of disjointed incrementalism or muddling through."[33] What is meant by "muddling through"? Lindblom expands describing the muddling through as "the process of negotiation, bargaining and adjustment between different interest groups (or partisans) to influence policy."[34] From this statement Lindblom argues that different politicians argue for different changes and as the groups slowly begin to agree, specific changes are implemented, and over time the policy as a whole is

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[33] Gill Walt, *Health Policy: An Introduction to Process and Power: People, governments, and international agencies- who drives policy and how it is made* (Johannesburg: Witwatersrand University Press, 1994), 49.

[34] Ibid, 49.

altered. Slow alterations can be followed based on the stage of the policy making process in which a given group or state is currently engaged.

While incrementalism offers valuable insights by creating stages, incrementalism is "views the policy process as a device (a heuristic, as it were) to help disaggregate an otherwise seamless web of public policy transactions, as was too regularly depicted in political science."[35] Looking at how policy is perceived and how policy alterations are presented enables this model to be placed onto different systems of government in a variety of states, and not just the American political system. In turn, this is a model that allows political scientists to move away from the study of institutions and into the discovery of how policy is made through decision making and agreements.[36] Understanding how this model is intended to be used allows one to implement the incrementalist model with a defined stages. Gill Walt references the basic stages that Kingdon presents which are:

1) setting of the agenda;
2) the specification of alternatives from which a choice is to be made;
3) an authoritative choice among those specified alternatives; and
4) the implementation of the decision.[37]

Considering these stages, one can apply the model readily to any given policy alterations in a given state and determine where in the policy creation process a given policy is located. Understanding the stages will enable a stronger understanding of how the policy has moved over time.

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[35] Peter Deleon, "The Stages Approach to the Policy Process: What Has It Done? Where Is It Going?," as cited in Paul A. Sabatier, edit., *Theories of the Policy Process* (Boulder, Colorado: Westview Press, 1999), 24.

[36] Ibid, 22.

[37] Gill Walt, 45.

While some authors argue that policy alterations work through small incremental changes, there is another argument that changes come from large jumps, referred to as punctuations. Baumgarnter and others observe that, "[p]olitical processes are often driven by a logic of stability and incrementalism, but occasionally they also produce large-scale departures from the past."[38] The easiest way to envision punctuations is through budget changes, where suddenly one year a particular program receives a substantially larger amount of funding than previous years. However, in context of the entire annual budget:

> Because we expect budgets generally to change very little, but occasionally to change a great deal, we hypothesize that annual budget changes will be distributed leptokurtotically. That is, their univariate distribution should have a large slender central peak (representing a stability logic), weak shoulders (representing the difficulty in making moderate changes), and big tails (representing episodic punctuations).[39]

Essentially, the entire budget will appear to be a traditional bell curve with specific programs receiving more money. However, a more effective way to discover punctuations is through looking at data in one program over time. From this perspective an individual is able to see if there was a year in which funding increased, focusing on a point of investigation. Discovering dramatic changes provides a focal point to understanding policy reshaping in conjunction with the model of incrementalism.

If punctuations and incrementalism help define policy alterations, what explains going from a period where there is general agreement and then large jumps in funding, rate of a dole, or other forms of measurable jumps? Connie Gersick describes the policy period as having three distinct phases: an equilibrium phase, a barrier breaking phase, and a revolutionary phase. Each

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[38] James L True, Bryan D. Jones, and Frank R. Baumgartner, "Punctuated-Equilibrium Theory: Explaining Stability and Change in American Policymaking," as cited in Paul A. Sabatier, edit., *Theories of the Policy Process* (Boulder, Colorado: Westview Press, 1999), 97.

[39] Ibid, 108.

phase explains the movements leading up to a punctuation. The equilibrium phase is when "the system's basic organization and activity patterns stay the same; the equilibrium period consists of maintaining and carrying out these choices."[40] Essentially this idea matches up with the concept that incrementalists follow. But, how does a group of people break away from the systematic, institutionalized pattern of small changes over extended periods of time? Gersick references Tushman and Romanelli who suggested that "even if a system overcomes its own cognitive and motivational barriers against realizing a need for change, the 'networks of interdependent resource relationships and value commitments' generated by its structure often prevent its being able to change."[41] In turn, policy makers have to alter their cognition, motivation, and obligation in order to establish norms outside the traditional means of policy making to fashion a drastic policy change. Furthermore, decision makers will have to overcome the uncertainty behind making dramatic changes.[42] With these conditions being met, Gersick argues that the next phase is the revolutionary phase. During a revolutionary phase, the systems that are internally routed structures are briefly shaken. Two ways in which Gersick argues that the systems are shaken is from "(1) internal changes that pull parts and actions out of alignment with each other or the environment and (2) environmental changes that threaten the system's ability to obtain resources."[43] Based on this action groups refocus and create different solutions to established problems that are measured through punctuations. The departure enables new players, in

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[40] Connie J. G. Gersick, "The Revolutionary Change Theories: A Multilevel Exploration of the Punctuated Equilibrium Paradigm," *The Academy of Management Review* 16 no. 1 (1991): 16.

[41] Tushman, M., & Romanelli, E. 1985. Organizational evolution: A metamorphosis model of convergence and reorientation. In L. L. Cummings and B. M. Staw (Eds.), Research in organizational behavior, vol. 7: 171-222.Greenwich, CT: JAIPress. 77 as cited in Ibid, 18-19.

[42] Ibid, 18.

[43] Ibid, 21.

particular new members, within a given policy making realm to alter the system in a way a lifetime worker may not.[44] After revolutionary periods fashion new methods of approaching problems, the group shall either adopt the new method or resort to the old method of decision making based on the perceived success of revolutionary period program. A given program will thus return to a period of equilibrium.

Understanding how punctuated equilibrium theory works with incrementalism, there are a variety of examples given in the history of American politics that use a combination strategy. Baumgartner and Jones discuss how monopolies and small groups within the larger political system transform the view of the need for a nuclear program. In particular, the idea of public portrayal is crucial to the influence of a monopoly creating punctuations; they argue that, "[t]he degree to which problems are tightly linked to images is related to the degree to which a single arena of policymaking exerts monopolistic control over a policy."[45] Baumgartner and Jones look at the historical development of "the nuclear power industry in the United States, government and industry leaders were able to create an impressive and seemingly all-powerful subgovernment favoring the industry as it grew and developed after World War II."[46] Due to a favored industry perpetuating the need for a strong nuclear power in conjunction with contemporaneous world events, the specific committees discussing the growth were able to allocate larger amounts of money towards programs through altered public opinion. In this sense, this is a new method of how to understand nuclear allocations through punctuations in policy ideas. Further, "[c]hanges in policy images facilitate changes in venue assignment. Changes in

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[44] Ibid, 23.

[45] Frank R. Baumgartner, and Bryan D. Jones, "Agenda Dynamics and Policy Subsystems," *The Journal of Politics* 53 no. 4 (1991): 1049.

[46] Ibid, 1045-1046

venue then reinforce changes in image, leading to an interactive process characterized by positive feedbacks, which can lead to dramatic results."[47] In conjunction with Gersick's phases, the nuclear power advocates successfully broke through the barriers to enter a revolutionary period, which was later accepted as the new norm of decision making with nuclear power.

Another American example which highlights the use of tobacco monopoly overcoming the actions of health based initiatives to maintain the ability of the companies to make a profit. Givel investigates the period from 1993 to 2000 when health advocates began championing the idea that tobacco should be reduced due to particular health risks. The tobacco industry was opposed to tax increases on sales of their product for financial reasons and openly agreed to "comprehensive state anti-tobacco programs favored by the tobacco industry."[48] While health based advocates continued to change the image of smoking in the public, due to the strength of the tobacco monopoly and lobbying resources, they were "able to generally keep state tobacco taxes low and counter significant regulatory threats to tobacco sales."[49] Thus, while there was a punctuation in the desire to increase taxes based on the image and health side, the tobacco firms were capable of combatting the punctuation and were not required to alter their strategies to prevent the harmful implementation of policy toward the tobacco industry.[50] In this particular case, the punctuation was the public opinion falling out of favor with the tobacco company. However, due to the strength of the particular business, the tobacco company was able to use

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[47] ibid, 1068.

[48] Michael S. Givel, "Punctuated Equilibrium in Limbo: The Tobacco Lobby and the U.S. State Policy Making form 1990 to 2003," *The Policy Studies Journal* 34 no. 3 (2006): 414.

[49] Ibid, 405.

[50] Ibid, 415.

institutionalized tactics to prevent a massive policy change. Policy in this sense was forced to change slowly due to the factors of the punctuation alinging with incrementalism.

While there are many examples of punctuation-equilibrium theory in conjunction with incrementalism in American political science, is it possible to use these strategies in a global sense? Baumgartner answers in the affirmative, saying that, "different countries will display certain common characteristics based on the limitations of human cognition and that these similarities will be more prominent that whatever institutional differences may also be present."[51] The United States government is fashioned to react with punctuations from exogenous forms, and parliamentary systems, which are used in Botswana and South Africa, are supposed to reflect the opinion of the majority party.[52] Thus, applying both incrementalism and punctuated-equilibrium theory onto the cases of Botswana and South Africa's policy development of co-infection policy is valid, due to the fact that the parliamentary system is supposed to respond to the desires of the citizens. Further, it is important to remember that while there are benefits to the use of punctuated equilibrium theory, however, it will not help us make specific predictions for particular policy issues."[53] Essentially, in order to apply the above techniques, a historical approach will be required and subsequently will not attempt to create predictions as these models are limited by their structure, in conjunction with international recommendations.

Knowledge of incrementalism and punctuation equilibrium theory will help understand the process of state policy creation. Now there is a need to understand how norms are created in a world of global interdependence, which is best described through international regime theory.

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[51] Frank R. Baumgartner, et al., "Punctuated Equilibrium in Comparative Perspective," *American Journal of Political Science* 53 no. 3 (2009): 604.

[52] Ibid, 605.

[53] James L True, Bryan D. Jones, and Frank R. Baumgartner, 112.

International Policy Theories: International Regime Theory

Growing global interdependence has significantly altered world politics and how issues of security, economic stability, and health are constructed and subsequently implemented in various policy realms. With the increase in interconnectedness, world issues are not solved solely through the United Nations but through a variety of governmental entities. Robert Keohane and Josephe Nye, in their discussion of politics in an arena of dependence claim that, "[i]nternational organizations help to activate potential coalitions in world politics."[54] Activating coalitions enables political entities and government representatives to come together and discuss issues beyond their domestic boarders. In doing so, information and collaboration assist in the establishment of new political regimes aimed at enhancing global plans to combat against issues including HIV/TB co-infection.

In order to investigate the role of global regimes it is important to establish a cohesive definition of a regime. Stephen Krasner describes regimes as, "sets of implicit or explicit principles, norms, rules, and decision making procedures around which actors' expectations converge in a given area of international relations."[55] In particular, principles, norms, rules, and decision making procedures are decided upon in order to establish a method to combat a specfic political issue. Krasner further defines what each of the individual units of a regime consist of:

> Principles are beliefs of fact, causation, and rectitude. Norms are standards of behavior defined in terms of rights and obligations. Rules are specific prescriptions or

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[54] Robert O. Keohane and Joseph S. Nye, *Power and Interdependence* (New York: Longman, 201): 31.

[55] Stephen D. Krasner, "Structural Causes and Regimes as Intervening Variables," *International Organizations* 36, no. 2 (1982): 186.

> proscriptions for action. Decision-making procedures are prevailing practices for making and implementing collective choice.[56]

Considering these units, regimes fashion a political system which, "tak[es] place entirely outside the jurisdictional boundaries of sovereign states."[57] A regime consists of international representatives of sovereign states interacting and fashioning a system to discuss and formulate recommendations on issues in the global arena. Now with the understanding of the components involved in a regime it is crucial to understand how regimes emerge in world politics.

Regimes, like other political institutions, are entities that require groups of representatives or states to come together and develop a structure to incorporate principles, norms, rules, and decision making procedures; however, most rational actors would not enter into an institution that risks harming the state. Keohane argues that, "[r]egimes are developed in part because actors in world politics believe that with such arrangements they will be able to make mutually beneficial agreements that would otherwise be difficult or impossible to attain."[58] Since regimes are initiated in order to achieve a mutually beneficial outcome states, in considering their own stance in global politics, that regimes emerge from an agreed upon use of collaboration. Further, in considering individual reasons for the creation of regimes "[t]he most prominent in this volume are egoistic self-interest, political power, norms and principles."[59] Entering into a regime enables individual states to improve their standing in global politics and gain advantages of other states in combatting political problems that are difficult to influence

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[56] Ibid, 186.

[57] Oran R. Young, "Regime Dynamics: The Rise and Fall of International Regimes," International Organizations 36, no. 2 (1982): 277.

[58] Robert O Keohane, "The Demand for International Regimes," *International Organizations* 36, no. 2 (1982): 334.

[59] Krasner 1982, 195.

without outside guidance. Individual states, in turn, are able to be active members in regimes that enable them to obtain resources outside domestic resources, in hopes of aiding in a global initiative to conquer an issue, including HIV/TB co-infection.

Beyond an individual desire of states to enter into regimes, Young explores three processes by which the development of regimes occurs in international politics; through spontaneous, negotiated, and imposed orders, regimes become salient forms of political decision making. Spontaneous orders are instances where many representatives through cooperation are able to create conventions that members states will be able to follow.[60] While these types of agreements are not understood with cooperation models, there is an inherent cohesiveness of social conventions from these collaborative regimes. From spontaneous orders, it is difficult to understand the reasons behind their emergences, however, they are able to enhance contributions to "the welfare of large groups in the absence of high transaction costs or formal restrictions on the liberty of the individual participant."[61] In turn, while these orders' genesis are not as calculated as other types, the benefits for individual actors enable the continuance of the decided upon conventions and processes.

Unlike spontaneous orders, negotiated orders require participants to discuss and come to a consensus in terms of norms, principles, rules, and decision-making processes.[62] Through this type of organization, different parties are able to create institutions that engage all members and thoroughly contemplate the specific details of the regime structure to ensure information flow and proactive actions. Due to the method by which negotiated orders are achieved, these orders

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[60] Young, 282-283.

[61] C. A. Kiesler and Sara B. Kiesler,Conformity (Reading,Mass.:Addison-Wesley,1969. as cited in Ibid, 283.

[62] Ibid, 283.

are prevalent in the international political system.[63] In understanding the international political arena, bargaining models help to describe the actions that take place and subsequently help to explain the final decisions of the group. Negotiated orders give many actors, from a variety of places on the international power spectrum, to engage and formulate a regime to guide and shape prevalent issues.

Finally, imposed orders serve as a method for dominant powers to establish desired requirements of regimes, that in turn help perpetuate their norms and principles. In these orders, there is a clear distinction between the hierarchy of states. Thus, "[o]vert hegemony occurs when the dominant actor openly and explicitly articulates institutional arrangements and compels subordinate actors to conform to them."[64] For regimes that emerge from this process there is often an underlying sense that the four elements replicate norms and principles of the powerful state initiating the order. Hira mentions that, "[s]ome analysts suggest that a hegemonic power is needed to maintain as well as create international regimes."[65] Imposed orders play into the power roles in international politics, however, there are alternative avenues to achieve cooperation and development of structures that enhance global efforts in issues such as health. Through these three processes of orders the creation of regimes, alongside enhancing mutually benefits, one is able to outline regime creation of any kind.

While the above discussion explains the method of regime emergence, regimes are not stagnant entities that do not evolve and change with time, similar to copious issues in world politics. First, not all regimes are perfect from the beginning and they "harbor internal

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[63] Ibid, 283.

[64] Ibid, 284.

[65] Anil Hira and Theodore H. Cohn, "Toward a Theory of Global Regime Governance," International Journal of Political Economy 33 no. 4 (2003-2004): 9.

contradictions that eventually lead to serious failures and mounting pressure for major alterations."[66] Changes enable the regime to function better and subsequently achieve the desired goals as prescribed in the discussion of the organization. Further, alterations in the power structure of the international order influence regime change.[67] As with power changes on a domestic level, the focus and goals of a particular regime are susceptible to adaptation based on new desired goals of leaders. According to Young, "[c]hanges in the characteristics of the international system will alter the opportunity costs to actors of various courses of action, and will therefore lead to changes in behavior."[68] Finally, the most important influence comes from exogenous forces. Technological innovation massively alters how specific problem areas are tackled.[69] For example, vaccinations for particular communicable diseases have enabled regimes to take new stances and create new processes for combating the disease, as seen with the eradication of smallpox. From this regimes learn how to integrate new elements and global changes into the given regime. Hass defines learning as "merely means solving the problems of imperfect markets more efficiently."[70] Appreciating the fact that regimes are fluid and capable of change helps to communicate why states choose to be active and involved members in organizations focused around a global topic.

States are sovereign actors in world politics and are awarded the power to dictate actions that the state will take to preserve themselves; however, states interact on the international scale

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[66] Young, 291.

[67] Ibid, 292.

[68] Keohane, 329.

[69] Ibid, 294.

[70] Ernst B. Haas, "Words Can Hurt you; Or, Who Said what to Whom about Regimes," International Organizations 36, no. 2 (1982): 233.

in organizations. Why are regimes attractive to states? One key advantage to regimes is the available information and the flow of information that emerges from cooperation. With a variety of states engaging in research and policy recommendations states are able to decide and learn what would be best in their individual area. Haas says, "[l]earning itself is part of the interplay between studying and doing. It depends on what bits of consensual understanding exist at any one time about the links between politics, culture, and biology; and we know that the bits keep changing."[71] For instance, medical development cannot be supported by all states in the same capacity. If a lesser-developed-state is able to gain information from a state on treatment of malnutrition without extensive experimentation, the benefits are extraordinary. In turn, states are able to gain new information through extensive communications, and are thus able to create policy that reflects the new information to the benefit of the state's citizens.[72] Without the information, individuals would continuously be replicating similar experiments and repeating previously discovered negative outcomes. The element of information sharing is a major advantage that states use when involved in regimes and this information is further established through cooperative means.

Cooperation is advanced through regimes by the inherent methods by which they are formed from agreed upon ideas and processes to make decisions and interpret information. Due to this fluid nature, interests designed in the regime are able to be altered and "will result in different processes and in a variety of regimes that will be considered rational by the actors-at least for a while."[73] With the availability of cooperation from the establishment and ability to see

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[71] Haas, 208.

[72] Duncan Snidal, "Coordination versus Prisoner's Dilemma: Implications for International Cooperation and Regimes," *The American Political Science Review* 79 no. 4 (1985): 931.

[73] Haas, 241.

interest change, states are able to ensure input to benefit their stance domestically. Further, as Duncan Snidal explores in his article, "Coordination versus Prisoner's Dilemma: Implications for International Cooperation and Regimes," the game play is able to be altered by extending the time, number of players, and number of opportunities to cooperate. Regimes not only create opportunities to cooperate or defect but also, "achieve intermediate levels of cooperation in circumstances in which they are unwilling to risk complete cooperation."[74] The ability to expand the options of cooperation helps to enable all states to contribute to the extent that their resources allow. In this sense, even less-developed-states are able to contribute to the regime without being forced to contribute beyond their means. In this sense, regimes offer strong cooperation infrastructure, empowering all states to engage in international political issues.

Finally regimes allow for an establishment of patterns of global governance. Anial Hira discuses how regimes are capable of establishing channels to govern particular problems. Hira intentionally "points out that the interactions and interrelationships between global actors occur not just on the state level, but across borders from the local and subnational levels as well."[75] Due to a highly globalized world, looking at issues beyond domestic borders is necessary for complete comprehension. Regimes, having established information transmission and cooperation as key elements for states to participate, lend themselves to being agents of forming global governance. Further, Keohane adds that, "[r]egimes can make agreement easier if they provide frameworks for establishing legal liability (even if these are not perfect); improve the quantity and quality of information available to actors; or reduce other transactions costs, such as costs of

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[74] Snidal, 928.

[75] Hira, 11.

organization or of making side-payments."[76] With information and cooperation, regimes are able to formulate methods of how particular issues should be approached and place all actors in a better, agreed upon, technique to combating a problem. For example, the members of the Association of Southeast Asian Nations (ASEAN) created a regional regime that formed in order to tackle the historical problem of drug production and use in the region.[77] As a group, states were able to engage with participants with similar problems to find suitable solutions. Governance in these area required collaboration due to the fact that drug trafficking requires crossing borders. Governance, thus, is another advantage, alongside cooperation and information sharing, to engaging in regimes.

While there are benefits to being part of regimes with a variety of focuses, such as trade and economic growth, not all regimes are the only ones in that particular issue area. Alter explores the concept of overlapping and nesting regimes in the context of the transatlantic banana dispute, which had no clear decisive body to determine whether or not certain producers received benefits not available to all banana producers.[78] But what is the concept of nesting versus overlapping regimes. As Alter defines nesting as referring "to a situation where regional or issue-specific international institutions are themselves part of multilateral frameworks that involve multiple states or issues. Institutions are imbricated one within another, like Russian dolls."[79] Nesting is a way smaller regimes are created from larger ones. In this sense, it is easier to establish a small regime when a larger one already exists, removing the hurdles of negotiation.

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[76] Keohane, 338.

[77] Ralf Emmers, International Regime-Building in ASEAN: Cooperation against the Illicit Trafficking and Abuse of Drugs," *Contemporary Southeast Asia* 29. no 3 (2007): 510.

[78] Karen J. Alter, and Sophie Meunier, "Nested and overlapping regimes in the transatlantic banana trade dispute," *Journal of European Public Policy* 13, no. 3 (April 2006): 362-363.

[79] Ibid, 363.

Overlapping, on the other hand, emerges when a conflict falls across different agreements from regimes, bilateral agreements, and other state based agreements.[80] Overlapping, in the case of the banana dispute was important because it was crucial to determine who contained the legal legitimacy to judge and alter the trade conflict. Overlapping and nested regimes influence how actions are taken, especially when it involves using the decision-making process.

Understanding how regimes emerge, work with each other, and why such agreements are beneficial to states, and looking at specific types of regimes outside trade and legal regimes will help to understand how health is viewed in this body of literature. The Association of Southeast Asian Nations (ASEAN) focuses on combatting the use and distribution of illicit drugs in the region. Jack Donnelly in his article set out to "examine the issue of international human rights in order to illustrate the utility of the concept of international regimes in noneconomic contexts."[81] In terms of the human rights regime, it was a United Nations centered regime, whose norms and decision-making processes were determined with the UN and by the UN Charter and Universal Declaration of Human Rights.[82] As with other states, the human rights regime is based on state based individuals bringing the desires of their representative state to the table. Crucial to this particular regime is that fact that this is an overlapping regime. Discussing the human rights regime it is necessary to look at the "several 'lower level' regional and single-issue human rights regimes, which might be considered as largely autonomous but relatively coherently 'nested,' (sub)regimes."[83] By having subregimes, various human rights issue are able to be

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[80] Ibid, 363.

[81] Jack Donnelly, "International Human Rights: A Regime Analysis," *International Organizations* 40, no. 3 (1986): 599.

[82] Ibid, 605-606.

[83] Ibid, 620.

discussed and focused on as opposed to only the rights considered to be the most important. Human right regimes open up discussion to how many issues are tackled within a regime that has no clear method of regulation. If human rights can be debated and engaged in a regime setting, how about health issues?

Health, however, does not appear to have been placed into regime theory on its own; instead, health based issues are placed and discussed in analyses of trade and intellectual property regimes. One discussion of a health related topic in regime literature appears in an article discussing the Nestle boycott. In this instance, the company was accused of marketing infant formula in an areas where the use of formula posed potentially fatal risks to children who were raised on formula versus breast milk.[84] From a public health perspective, the risks of "illiteracy, poverty, contaminated water, and the absence of facilities to sterilize and refrigerate transformed a product relatively safe in the First World into a potentially hazardous substance of the Third."[85] However, it was not a health regime that stopped the Nestle company, but a conglomeration of international organizations and transnational corporations that halted the company's actions. In turn, the business codes determined by companies in conjunction with the WHO and UNICEF, fashioned a code which, when Nestle defied, became an instance to challenge a company to change their actions. Thus, a health regime, potentially centered around the WHO, only had limited influence in ending the Nestle boycott.

Another example of a health issue being placed into the analysis of another type of regime is patents for drugs in the global intellectual property regime. The particular issue of drug

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[84] Baby Milk Action, *Background to the Nestlé Boycott*, http://shell.ihug.co.nz/~stu/milk.htm.

[85] D. Surjano et al., "Bacterial Contamination and Dilution of Milk in Infant Feeding Bottles," *Journal of Tropical Pediatrics*. 1979. as cited in Kathryn Sikkink, "Codes of Conduct for Transnational Corporations: The Case of the WHO/UNICEF Code," *International Organization* 40, no. 4 (Autumn 1986): 820.

patents and affordability is a key argument in how communicable diseases are treated around the world. For example, "[s]pecial emphasis is placed on the relationship between global rules on granting and regulation of pharmaceutical patents and developing countries' response to the HIV/AIDS epidemic."[86]While drugs are imperative in the HIV/AIDS epidemic, the developed world that invests time in creating and producing drugs wants to ensure they will have the patent rights are recognized on an international scale. For example, the United States became a key player in enhancing the enforcement of Trade-Related Aspects of Intellectual Property Rights.[87] In this sense, without the developed world being able to receive fiscal benefits from drugs, their companies will be unable to provide affordable and stable pricing for necessary medication.[88] Once again a health based conflict being altered and fixed in a non-health related regime; moreover, in a regime that is focused around trade and economic balance in North-South relations.

Policy norms allow for individual states to gain information but the issue of funding particular polices often comes into consideration when adopting new norms. Donors often provide necessary financial resources to states to implement new programs; however, donors are not impartial in the political realm and hold political influence in the recipient state.[89] Donors are outside political actors which, "include international or multilateral agencies, such agencies

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[86] Kenneth C. Shadlen, "Patents and Pills, Power and Procedure: The North-South Politics of Public Health in the WTO," *Studies in Comparative International Development* 39, no. 3 (Fall 2004): 77.

[87] Ibid, 79.

[88] Ibid, 89.

[89] Susannah Mayhew, "Donor Dealings: The Impact of International Donor Aid on Sexual and Reproductive Health Services," International Family Planning Perspectives 28, no 4. (2002): 220.

belonging to the UN family, and bi- and multilateral donors."[90] While the donor agencies attempt to alter the course of the policy through donations, there is the risk that donor programs encourage policies that are not appropriate for the individual state, even through they are contingent with international norms.[91] In response to this conundrum, the Declaration on Aid Effectiveness was passed in 2005 to increase the "sensitivity among donors to the need to recognise how policies are made and implemented on the ground, rather than the usual 'best practice' mechanisms suggest in New York or Geneva."[92] While new leaps to have effective funding have arisen, donors still influence the policy decision making process through monetary influences and subsequent restrictions on spending the funds. Considering donorship along side government funding enables an understanding of policy shifts.

The above discussion describes the prevailing literature and thoughts behind how regimes work, change, and in turn influence global politics. However, regime theory analysis has not been implemented on health based issue areas. Even though regime theory has not been placed on a large health based organization, The World Health Organization (WHO) stands as a potential regime to be the center of health issues in world politics. Furthermore, in a world that is consistently hearing of new emerging diseases, how can there not be a set up of a regime with nested regimes? In looking at the dates of most of the above articles, their publications were in the 1980s and 1990s, with one exception. One explanation for why health has not been analyzed in regime literature is the fact that currently health is situated in literature on global security.

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[90] Pieter Fourie, Diana Perche, and Ria Schoeman, "Donors Assistance for AIDS in South Africa: Many Actors, Multiple Agendas," *Strategic Review for Southern Africa*. (1 Nov 2010): 96.

[91] Susannah Mayhew, 221.

[92] Pieter Fourie, Diana Perche, and Ria Schoeman,95.

In reviewing literature on health policy there is a shift from cooperation, for example regimes, towards formulating health as a security issue that needs to be tackled in the same manner as nuclear warfare. Security scholars have investigated the expansion of the security field, and commenting that, "[e]ven as the quest for security has become far more salient than it seemed to be during the early days of the post-Cold War period, it has become far more complicated than it was during the Cold War itself."[93] Furthermore, in a post-9/11 world, security has emerged as a strong salient issue in political science literature, especially with the growing threat of bioterrorism. In turn, there is a greater focus from both the political and public sectors on health issues around the world. Moreover, the growing attention has added the element of fear into the health realm, similar to fears of the Union of Soviet Socialist Republics becoming a stronger military power than the United States during the Cold War. Durbak and Strauss comment that:

> [T]he challenges of making reality-based decisions for the security of global public health are daunting in a climate of fear... An additional component for realistically assessing a situation is the reduction of corruption and mendacious behaviours that is fostered in a climate of fear[94].

No longer is healthy living and the prevention of diseases seen as part of a living organism on the earth, but a possible mechanism for which enemies can inhibit security and the right to life. By using pathogens to induce fear, international security scholars have begun to question whether cooperation-based solutions will actually contribute to a global community capable of

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[93] Dan Caldwell and Robert E. Williams Jr., *Seeking Security in an Insecure World* (New York: Rowman & Littlefield Publishers, Inc., 2006), 1.

[94] Christine K. Durbak and Claudia M. Strauss, "Securing a Healthier World" as cited in Felix Dodds and Tim Pippard, ed., Human and Environmental Security (London: Earthscan, 2005), 131.

responding to various health threats, which are a hazard to social stability. This scholarly shift has sparked research into the connection of health care failures and violent conflict.

Regime theory offers the ability to understand how cooperation and policy recommendations are integrated in order to combat communicable disease on a global level. Simply saying that health is a security issue does not answer the question of how states eventually adopt international policy norms. Thus, if international politics are able to establish norms and methods by which states should hypothetically address domestic issues, why is there is no discussion on how these recommendations enter into policy making agendas in individual states? Emmer's discussion of ASEAN points out that cooperation did not translate down into action due to particular issues in individual states, in turn, placing the objectives of ASEAN as an ideal, and not action. Even in his discussion, he determines that the problems are due to corruption, domestic pressure, lack of resources, training, internal politics, and weak institutions.[95] While all of these issues, in his argument, harmed the ability of the policy recommendations to become implemented law, he fails to discuss how the recommendations entered the policy realm in the individual states.

In order to understand how regime recommendations become policy it is necessary to explain first how the WHO is an international regime in the same way that the World Trade Organization is for trade. Secondly, investigating how policy recommendations are reported and entered into the policy agenda of individual states will give a new way to answer the question of why HIV/TB co-infection policies are not national policies in Botswana and South Africa.

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[95] Ralf Emmers, 507.

With an understanding of punctuated equilibrium theory, incrementalism, and international regime theory, the exploration of policy translation can begin with a strong literature foundation. The following section addresses the World Health Organization as an international regime, followed by an extensive look at the norm changes in HIV/TB policy reports. Considering the above discussion on the theory, one can determine and apply international regime theory on the WHO and the organization's response to HIV and tuberculosis.

Chapter Three: The World Health Organization as a Regime

The following section investigates the role of the World Health Organization as an international regime. The previous section outlined the means by which an international regime is to be defined, and this method will be utilized to argue that that the WHO is indeed an international regime. Subsequently, the norms of policy recommendations with HIV and tuberculosis are discussed to illustrate the change in recommendations on the international scale.

The Emergence of the World Health Organization

As the international community shifted from the League of Nations to the United Nations system, there was a desire to create a stronger focus on economic and development issues. In 1946, the Constitution for the World Health Organization was adopted in New York City, entering a new phase with a global focal point of diseases and health generally.[96] The development of the organization lead to a shift from the concept of regional health agreements. One example of these health agreements was the Pan-American Sanitary Organization in the Americas.[97] The regional health administrations were focused on regional issues; however, they were unable to solve health problems because health issues required global support. For example, the smallpox eradication process required that the United States and the Soviet Union work together to provide the medication and financial support to completely eradicate the disease.[98] The particular emergence of the WHO, as Sharp declared in 1947, was "likely to be a

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[96] Walter R. Sharp, "The New World Health Organization," *The American Journal of International Law* 41, no. 3 (1947): 509.

[97] Ibid, 516.

[98] Erez Manela, "A Pox on Your Narative: Writing Disease Control into Cold War History." *Diplomatic History* 34 no. 12 (April 2012)*:* 302.

landmark in the history of international cooperation for public health and medicine."[99] Cooperation expansion through health issues expanded the role of each individual state in fighting global pandemics.

The expansion of individual state's involvement in global disease provided both positive and negative abilities for states in terms of achieving their state's interest in health. One of the massive benefits was the concept of information sharing among the states. Information sharing "provides tangible evidence that nations have found it mutually advantageous to extend their collaboration on world health in a systematic and regularized manner."[100] The contemporaneous sharing of information enables the World Health Organization to construct coherent policy recommendations suitable in a variety of socio-political situations. While the availability of information sharing is plausible, Allen argues that there may be some difficulties in finding consensus among states. He argues that the consensus in combating diseases "is vulnerable to those deep political and ideological cleavages that affect the whole range of international relations."[101] International relations for one particular issue are interconnected with relationships and actions spawning from other issue arenas. The health aspect adds to an arena where more politics will emerge, and in turn, will be influenced by other national interests of states.

Considering the potential benefits and downsides of the consolidation of regional health agencies, the recent history has shown that the World Health Organization has provided immense support, especially in policy recommendation and creation. Policy creation is fashioned through a variety of meetings and investigations which maintain "a steady information flow, and keep the

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[99] Walter R. Sharp, 509.

[100] Charles E. Allen, "World Health and World Politics," *International Organization* 4, no 1 (1950): pg 31.

[101] Ibid, 43.

issue on the policy agenda."[102] However, the policy arena does not tack general health as an issue but by focusing on individual diseases. For example, as early at the late 1980s individuals writing about AIDS demanded that immediate focus on surveillance was necessary.[103] As the demand for global cooperation grew the World Health Organization responded by "directing and coordinating the global effort against AIDS. Multinational organizations such as the European Economic Community have supported AIDS control in developing countries, as have many international assistance agencies."[104] These coordination measures focused on one disease created a sub-regime within the greater health regime focusing on AIDS. In turn the facilitation of AIDS defense and treatment turned the program into a nested issue. Thus, AIDS became an intricate part of striving for greater health of the global populous. The nested issue of HIV/AIDS led to a massive amount of research, both scientific and social, to create policy recommendations for individual patients. Nested disease programs are key parts of the World Health Organization and influences global policy as an international regime.

The World Health Organization as a Regime

In terms of international politics, the UN system has provided a variety of important methods of sharing information and discussing particular problems that spread beyond individual state borders through international regimes.[105] The World Health Organization is referred to as being a part of the UN system, meaning that the ideas and formulation of this organization is in

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[102] Gill Walt, 149.

[103] Peter Piot and others, "AIDS: An International Perspective," *Science: New Series* 239, no 4840 (1988): 573.

[104] Ibid, 579.

[105] Gill Walt, 152.

line with the desires of the United Nations Charter. The UN Charter in Article 55 introduces the ideas that the general well-being of citizens is crucial to facilitating "peaceful and friendly relations among nations based on respect for the principle of equal rights and self-determination of peoples."[106] In particular the Charter calls for the promotion of:

> 1. higher standards of living, full employment, and conditions of economic and social progress and development;
> 2. solutions of international economic, social, health, and related problems; and international cultural and educational cooperation; and
> 3. universal respect for, and observance of, human rights and fundamental freedoms for all without distinction as to race, sex, language, or religion.[107]

Health and social problems remain at the forefront of thought of the United Nations developers, moving away from the purely security focused League of Nations. In the following years, however, the World Health Organization was created to work within the system established in the charter to promote global health initiatives.

The World Health Organization is indeed a key player in the United Nations system, however, the WHO is an international regime with key principles, norms, rules, and decision making procedures. The Constitution of the World Health Organization helps to define these features. In the opening part of the document, specific principles are stated, including the ones presented below:

- Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.
- The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition.
- The health of all peoples is fundamental to the attainment of peace and security and is dependent upon the fullest co-operation of individuals and States.

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[106] United Nations, *United Nations Charter* (San Francisco: UN, 1945), Article 55, http://www.un.org/en/documents/charter/index.shtml.

[107] Ibid, Article 55, Sections 1-3.

- The achievement of any State in the promotion and protection of health is of value to all.
- Unequal development in different countries in the promotion of health and control of disease, especially communicable disease, is a common danger...
- Governments have a responsibility for the health of their peoples which can be fulfilled only by the provision of adequate health and social measures.[108]

These principles reveal an organizational desire to ensure health, in all forms, to all individuals. These principles act as goals that, through cooperative measures, the organization will strive to achieve. The above principles address the need for a global response to communicable diseases. Due to the way that most diseases are passed from human to human, there is no way for an individual state to combat a disease without the help of international neighbors. Further, the concept of "unequal development" is important in addressing global diseases. Taking into consideration the variation among medical facilities throughout the globe is necessary because there is no way to transplant the best medical treatment without a system of sustainable development. The treatment of diseases must include the consideration of non-development medical facilities. The above principles help define this international regime that focuses on implementing methods for treating disease on a global scale with the understanding of international differences.

The constitution not only includes an outline of the principles of the regime but also includes rules of how membership and decisions will be facilitated. The rules first establish the membership of the WHO. Articles 3 and 4 explain that membership is universal, meaning "open to all States."[109] While every state is entitled to membership, each state is required to make "a

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[108] International Health Conference, *The World Health Organization Charter (*New York: WHO, 1946), 1, http://www.who.int/governance/eb/constitution/en/index.html.

[109] Ibid, 3.

financial contribution based on the UN formula of population size and gross national product."[110] These articles establish that the members will be financially involved with the actions of the WHO and ensure that all states are donating an appropriate amount of money to the organization. Beyond membership, Articles 9 through 13 establish the structure and meeting times of the organization. In terms of the structure, there is "a) The World Health Assembly...; b) The Executive Board...; c) The Secretariat" and these groups shall consist of delegates from member states.[111] Further, each state will have a delegation consisting of no more than three people.[112] Establishing these rules ensure that members have consistency and understand the structure of the organization. The fashioned structure allows for the procedures for decision making to be consistent and flow to create suitable recommendations to member states.

The procedures for decision making are also outlined in the constitution, in conjunction with the structure of the organization. Articles 21 through 23 describe the ability of the Health Assembly to "adopt regulations concerning":

> (a) sanitary and quarantine requirements and other procedures designed to prevent the international spread of disease;
> (b) nomenclatures with respect to diseases, causes of death and public health practices;
> (c) standards with respect to diagnostic procedures for international use;
> (d) standards with respect to the safety, purity and potency of biological, pharmaceutical and similar products moving in international commerce;
> (e) advertising and labelling of biological, pharmaceutical and similar products moving in international commerce.[113]

The assembly thus can work with member states to ensure that proper technologies are being transported from states that produce the technology to the underdeveloped states. Importantly,

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[110] Gill Walt, 131.

[111] International Health Conference, 4-5.

[112] Ibid, 5.

[113] Ibid, 7.

pharmaceuticals can be discussed, helping to lower the cost, and to spread the recommendations of successful treatment methods to all member states. Beyond the assembly, Article 28 outlines the role that the Board plays in decision making for the organization. One of the most important roles is "to act as the executive organ of the Health Assembly."[114] As the core group of the organization, the Board is able to make decisions in emergency decisions, plan agendas, and discuss agreements and regulations.[115] The organization is thus similar to the General Assembly and the Security Council in the United Nations. The interaction of the Board and the Assembly are dictated by the members and form a consistent method to making decisions on global health issues.

The decision making procedures ensure that the rules are followed and the principles are at the focal point of decision making. The fourth element to international regimes are the norms that are created through the principles, rules, and decision making. In terms of the WHO, the norms emerge through the policy recommendations for each disease. Over time, these policies shift, based on scientific and social research of what works in treating the various diseases. The norms of HIV and tuberculosis will now be explored to illustrate the change from treating the two disease separately to treating the co-infection together. The policy changes remain the focus of norms within the international regime of the World Health Organization.

HIV Policy Norms:

The World Health Organization has been an active group in responding and integrating research into coherent recommendations to help individual states combat the HIV epidemic.

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[114] Ibid, 8.

[115] Ibid, 9.

Scientific innovation and social science research has allowed for changing norms to strengthen the response to the epidemic. Analysis of the various treatment recommendations over the past 13 years reveals how dynamic the WHO is in responding to new evidence in successful treatment measures.

The initial stages of treatment recommendation for HIV was through surveillance, similar to surveillance for other STIs (Sexually Transmitted Illnesses). In starting surveillance, this norm was intended to "provide practical guidance for ministries of health to obtain surveillance data on STIs to directly facilitate disease control efforts at national, regional and local levels."[116] The surveillance program included case reporting, STI prevalence assessment and monitoring, antimicrobial resistance monitoring assessment of syndromes, and special studies on the particular manifestations of the illness in the state.[117] These particular strategies included expanding to regions with HIV epidemics to understand what populations are most affected by the virus. While these plans did not include recommendations on how countries should treat the disease, predominately due to the price of antiretroviral drugs in the late 1990s. Surveillance, moreover, would allow for classification of the HIV epidemic in the state as low grade, concentrated, or generalized.[118] Further this would involve adding HIV prevalence to studies of STIs for stronger understanding of the disease implication in any individual state.[119] Thus, during

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[116] World Health Organization and Joint United Nations Programme on HIV/AIDS, *Guidelines for Sexually Transmitted Infections Surveillance: UNAIDS/WHO Working Group on Global HIV/AIDS/STI Surveillance* (Geneva: WHO, 1999), 1, http://www.who.int/hiv/pub/guidelines/en/index.html.

[117] Ibid, 26-27.

[118] Ibid, 29. Classifications located in Appendix (INSERT NUMBER)!

[119] Ibid, 28.

the initial phases of the HIV pandemic the route of surveillance was highly recommended to states, and in particular developing states.

Following the initial states of surveillance, the 2000 report on surveillance required narrowing down and determining the societal behaviors that enable the spread of the disease. The report states that, "[s]trengthened systems, dubbed 'second generation surveillance systems', aim to concentrate resources where they will yield information that is most useful in reducing the spread of HIV and in providing care for those affected."[120] The "second generation" surveillance would enable individual states to:

- Better understanding of trends over time
- Better understanding of the behaviours driving the epidemic in a country
- Surveillance more focused on sub-populations at highest risk of infection
- Flexible surveillance that moves with the needs and state of the epidemic
- Better use of surveillance data to increase understanding and to plan prevention and care.[121]

With a focused view on the social and behavioral elements of the disease, education in these areas could be properly fashioned and implemented. It is crucial to remember that during this time drug development for HIV anti-retrovirals was only just beginning with few drugs available for patients. Further, these drugs were only being made available to citizens in low-income states. Thus, upgraded surveillance programs and educational programs became the means to help states attempt to prevent the spread of HIV.

By 2002, however, the World Health Organization released a new recommendation that focused on the use of anti-retrovirals in all states. While the first wave of anti-retrovirals became available to patients with HIV in wealthy states in 1996, these drugs still remained out of the

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[120] World Health Organization and Join United Nations Program on HIV/AIDS. *Second generation surveillance for HIV: The next decade* (Geneva: WHO, 2000), 1. http://www.who.int/hiv/pub/guidelines/en/index.html.

[121] Ibid, 2.

price range of people suffering from the disease in developing states. In order for the introduction of ARV treatments, there needs to be "a clear public health approach that promotes the rational and safe use of these powerful and precious medicines."[122] Developed states used public health approaches that ensured the safety of those using the ARV treatments to ensure that the cocktails (or mixture of three drugs) were being appropriately distributed and followed. In order to ensure other states followed such a pattern, the WHO outlined a particular set of diagnosing and ARV implementation protocols in adults and children:

> • WHO stage IV of HIV disease (clinical AIDS), regardless of the CD4 count;
> • WHO stages I, II or III of HIV disease, with a CD4 count below 200/mm3;
> • WHO stages II or III of HIV disease with TLC below 1200/mm3." [123]

These stages are used to determine how seriously infected the patient was, and based on CD4 counts, would determine whether or not to commence the ARV treatment. States were to use these stages and implement ARV treatment through the best of their abilities. Thus, surveillance was no longer the way to address the HIV/AIDS pandemic. From this point on, anti-retroviral treatment became the major policy push for states to implement from the WHO.

Once the movement toward ARV treatment was recommended, in 2005, the WHO stressed the need for the evaluation of national ARV programs. While it was important for the states with national ARV programs, "[i]t [was also] crucial to know how countries are meeting the agreed goals and objectives and how local levels (districts, regions or provinces, and health facilities) are monitoring progress and identifying any problems that they encounter."[124] The

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[122] World Health Organization, *Scaling Up Antiretroviral Therapy In Resource- Limited Settings: Guidelines for a Public Health Approach* (Geneva: WHO, 2002), 8, http://www.who.int/hiv/pub/guidelines/en/index.html.

[123] Ibid, 10.

[124] World Health Organization. *National AIDS Programmes: A guide to indicators for monitoring and evaluating national antiretroviral programs (*France: WHO, 2005), 2, http://www.who.int/hiv/pub/guidelines/en/index.html.

WHO wanted states to understand their programs' faults and alleviate them ensuring that the programs are working to help the populations that desperately need anti-retroviral treatment (ART). Based on information given from health facilities, and the patients seen in these areas, states would be able to make the appropriate changes, in conjunction with a focus on highly infected populations and populations with co-infection of other disease.[125] While this particular publication did not dramatically alter the way HIV/AIDS was to be treated, revision and alterations are necessary in order to improve any program involving a virus spread effortlessly from one individual to another.

In 2009, another revision statement was released to ensure that the appropriate patients were receiving anti-retroviral treatment, including both first and second round treatments. The reason for the revision was based on the following principles:

> 1. Do no harm
> When introducing changes preserve access for the sickest and most in need.
> 2. Ensure access and equity
> All clinically eligible people should be able to enter treatment services (including ART) with fair and equitable distribution of treatment services.
> 3. Promote quality and efficiency
> Ensure delivery of the highest standards of care within a public health approach so as to achieve the greatest health impact with the optimal use of available human and financial resources.
> 4 .Ensure sustainability
> Understand the long-term consequences of change with the vision of providing continued, life-long access to ART for those in need.
> In this context, the individual rights of PLHIV should not be forfeited in the course of a public health approach.[126]

States were again encouraged to ensure the equality and further focus on targeting the disease where response was most needed. In order to do so, states were required to make sure that

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[125] Ibid, 7-8.

[126] World Health Organization. *Rapid Advice: Antiretroviral therapy for HIV infection in adults and adolescents (*Geneva: WHO, 2009), 4, http://www.who.int/hiv/pub/guidelines/en/index.html.

individuals were not being used as statistics in altering public health policies. Subsequently in 2011, the WHO reinforced the idea that, "[t]he health sector encompasses organized public and private health services, ministries of health, nongovernmental organizations, community groups, professional associations, industries, research institutions, as well as other institutions that directly input into the health-care system."[127] Not only should the government be focusing on combatting health issues, but the economic and governmental processes as a whole. Anti-retroviral treatment was pushed to be continued with contemporaneous engagement from other financial and social resources. Considering these particular recommendations, ART was further urged in areas that may not have the strongest programs available to citizens.

Tuberculosis Policy Norms:

Similar to how HIV programs and norms altered over time, the tuberculosis recommendations also incrementally changed as scientific and social research recommended alterations. In a 1988 report from the World Health Organization, the organization outlined the key focus points of controlling tuberculosis, which included social and epidemiological terms as defined:

> -social: to relieve human suffering by reducing morbidity and mortality cause by tuberculosis;
> -epidemiological: to progressively reduce the tuberculosis in the community by breaking the chain of transmission of infection.[128]

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[127] World Health Organization, *Planning Guide For The Health Sector Response To HIV/AIDS* (Geneva: WHO, 2011), 7, http://www.who.int/hiv/pub/guidelines/en/index.html.

[128] Jerzy Leowski, *The Role of Short-Course Chemotherapy in National Tuberculosis Control Programmes in Developing Countires* (Geneva: WHO, 1988), 4. http://www.who.int/tb/publications/en/index.html.

Through these focus points the WHO further recommended that tuberculosis must not only be a program prompted by health officials but by community members.[129] Community awareness of how the disease is spread was one method that was encouraged for all communities. Without the community encouraging medical treatment the program would have a hard time surviving. The WHO encouraged the medical community to use isoniazid treatment in developing countries because the success in patients in other states.[130] This treatment is supposed to be given and watched by medical professionals who are trained and able to assess the appropriate amount of medication based on the severity of the disease. Developed and developing states proceeded to use the chemotherapy methods to treat tuberculosis until the DOTS program was presented.

In 1995, after various experimental trials of the program, the Direct Observed Treatment Short-course was presented as the way to combat tuberculosis in high burdened states. The DOTS program included five major elements of the treatment of tuberculosis patients:

> 1. Sustained political and financial commitment. TB can be cured and the epidemic reversed if adequate resources and administrative support for TB control are provided.
> 2. Diagnosis by quality ensured sputum-smear microscopy. Chest symptomatic examined this way helps to reliably find infectious patients.
> 3. Standardized short-course anti-TB treatment (SCC) given under direct and supportive observation (DOT). Helps to ensure the right drugs are taken at the right time for the full duration of treatment.
> 4. A regular, uninterrupted supply of high quality anti-TB drugs. Ensures that a credible national TB programme does not have to run anyone away.
> 5. Standardized recording and reporting. Helps to keep track of each individual patient and to monitor overall programme performance.[131]

This particular program shift created a decrease in the use chemotherapy but also shifted focus to adherence to a treatment plan. First, the financing and government support ensured that smear

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[129] Ibid, 6.

[130] Ibid, 7.

[131] WHO, *What is DOTS?*, http://www.searo.who.int/en/Section10/Section2097/Section2106_10678.htm.

microscopy was employed for patients who presented with any signs of tuberculosis, both latent or active. Instead of using the chemo-based isoniazid, multiple drugs would be used to combat the tuberculosis, due to the fact that most cases of tuberculosis are drug resistant to certain medications. Maintaining the drug supply is necessary to make sure that patients are able to effectively combat the disease. In doing so patients are able to be treated and states are able to understand the problem within their state. Implementing the DOTS program was considered to be the most effective way for states to tackle tuberculosis, and maintain information on the disease to be given in global reports.

Based on global reports of TB and the scientific understanding of how TB interacts with HIV, the WHO program began to create recommendations of how to integrate HIV positive patients into tuberculosis treatment. In the 1998 report the WHO and UNAIDS recommended to governments that:

> 1) Preventive therapy should be part of a package of care for people living with HIV/AIDS.
> 2) Preventive therapy should only be used in settings where it is possible to exclude active tuberculosis cases and to ensure appropriate monitoring and follow up.
> 3) Information about tuberculosis including preventive therapy should be made available to people with HIV.
> 4) Preventive therapy should be provided from within settings that include established voluntary counselling and testing (VCT) services for HIV.
> 5) The priority for TB control programmes continues to be the detection and cure of infectious tuberculosis cases.
> 6) The procurement and supply of tuberculosis drugs must be regulated by national authorities, in order to prevent the development of drug resistance."[132]

The preventative therapy was recommended during the early periods of norm creation of tuberculosis treatment. In turn, HIV patients were to receive the chemo-based treatment and non-

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[132] World Health Organization and UNAIDS, *Policy statement on preventive therapy against tuberculosis in people living with HIV* (Geneva: WHO, 1998), 3, http://www.who.int/tb/publications/en/index.html.

HIV patients the drug treatment. As stated in part 6, this was to inhibit the development of drug resistance, which was becoming a growing problem. Why this change? Based on trials with the multi-drug DOTS approach and the isoniazid, the trials found that DOTS was a more effective way of treating tuberculosis. The DOTS program became the leading recommendation from the World Health Organization with the STOP TB Program.

As the DOTS program was adopted by a variety of states, the problem of Multi-Drug Resistant tuberculosis (MDR-TB) arose in a variety of states, including South Africa and Russia. The emergence of MDR-TB was blamed on lack of oversight and implementation of the DOTS program. Suddenly, the WHO had to make recommendations that could be established in all medical arenas to prevent the increase in drug resistant tuberculosis. The WHO argued that, "[p]revention of MDR-TB is achieved through the implementation and/or expansion of TB control under adequately structured programmes."[133] This particular report drew attention to the fact that drug resistance was becoming a growing problem. With the emergence of resistance the DOTS-Plus program was created, varying the drugs used, including ones never used on TB before, to combat the bacterium that had evolved rapidly.[134] As the tuberculosis burden continued to be a problem that increased with the emergence of HIV, this led to a strengthened desire for a program that became interconnected with HIV treatment.

The Interconnecting Norms of HIV and TB Treatment:

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[133] Scientific Panel of the Working Group on DOTS-Plus for MDR-TB, *Guidelines for Establishing DOTS-Plues Pilot Projects for the Management of Multidrug-Resistant Tuberculosis (MDR-TB)* (Geneva: WHO, 2000), 10. http://www.who.int/tb/publications/en/index.html.

[134] Ibid, 11.

Based on scientific research and outcomes in developed states, the WHO created a treatment policy recommendation to integrate HIV and TB treatment. The growing co-infection burden of HIV and TB called for the statement "that HIV prevention and care should be a priority concern of TB programmes and TB care and prevention should be a priority concern of national HIV/AIDS control programmes."[135] No longer would these diseases be pursued individually by separate doctors, but together in one treatment facility. Further, special consideration would be necessary for HIV positive patients with active TB. This would be based on the ability of an HIV positive patient to sustain a drug treatment and fight the disease, measured by the CD4 count. Based on the previous research from the 2000 WHO report, the use of isoniazid treatment would continue to be used in HIV patients where applicable.[136] Outside the hospital environment, community involvement in the co-infection community would be necessary for the success of the program. This particular report helped alter the path of HIV and TB, combining these two diseases from 2003 on.

In 2004, the World Health Organization subsequently released a clinical report on how to treat the two diseases together, aimed at medical facilities that had not yet adjusted to fusing the treatments. First, the report discussed how an HIV positive patients is ten times as likely to contract and be diagnosed with active tuberculosis.[137] Medical facilities will have to ensure that the DOTS program and chemotherapy treatments are available to all patients. Also, hospitals need to assure that:

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[135] Stop TB Department. *TB/HIV: Guidelines for Implementing Collaborative TB and HIV Programme Activities* (Geneva: WHO, 2003), 15, http://www.who.int/hiv/pub/guidelines/en/index.html.

[136] Ibid, 17.

[137] Stop TB Department. *TB/HIV: A Clinical Manual Second edition* (Geneva: WHO, 2004), 37, http://www.who.int/hiv/pub/guidelines/en/index.html.

> [E]ffective TB case-finding and cures, these interventions include: measures to decrease HIV transmission (e.g. promotion of condoms, treatment of sexually transmitted infections); highly active antiretroviral therapy (HAART); TB preventive treatment; and antibiotic prophylaxis against HIV-related bacterial infections."[138]

This clinical report stressed the need to begin to negotiate the two diseases together. Integration would not be instantaneous, yet the clinical outline became a manual to help physicians be able to understand the desired method of co-infection treatment

As the year continued, the World Health Organization adjusted and refined the collaborative measures for HIV and tuberculosis. Tuberculosis was not the only respiratory ailment that HIV patients could contract. Based on this fact, it became necessary to report on co-management to decipher whether or not the respiratory infection was tuberculosis or another disease such as pneumonia. The report created a step by step method to treating tuberculosis based on sputum samples, antibiotics, watching the patient, and deciding when it was appropriate to pursue a first line TB regimen.[139] The co-management document also explained a variety of situations in which a patient may be diagnosed with either TB or HIV. Further, the document pushed for HIV testing in tuberculosis patients, and TB testing in HIV positive patients. As this interconnection was further hammered home, research continued to establish the connection between the two diseases.

Recently the WHO has released a report that focuses on the growth of research into the HIV/TB co-infection treatment. The current report argues that the 2004 report was somewhat incomplete and thus it became necessary to alter the policy guidelines. As stated "[u]pdated

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[138] Ibid, 41.

[139] World Health Organization, *Tuberculosis Care with TB-HIV Co-management: Integrated Management of Adolescent and Adult Illness (IMAI)* (Geneva: WHO, 2007), 13, http://www.who.int/hiv/pub/guidelines/en/index.html.

policy guidelines were therefore warranted to consolidate the latest available evidence and WHO recommendations on the management of HIV-related TB for national programme managers, implementers and other stakeholders."[140] Based on the 2012 report, "[a] national coordinating body for collaborative TB /HIV activities should have clear and consensus-based terms of reference. The important areas of responsibility are:

- governance and coordination at national and sub-national levels;
- resource mobilization;
- provision of general policy and programme direction for the management of activities;
- capacity-building including training;
- ensuring coherence of communications about TB and HIV;
- ensuring the involvement of civil society, nongovernmental and community organizations.[141]

In order to create and implement these policies in a given state, it is necessary for government to set goals in conjunction with those established in the Millennium Development Goals.[142] Further, individual states should work to find the best practices for their individual citizens.[143] This is important because states suffer from different institutional and financial problems. Moreover, in order to achieve the goals, the previous initiatives are to be focal points for policy makers.

As the norm development reveals, HIV and tuberculosis have become diseases that can no longer be separated if both are to be controlled on a global scale. This particular norm change suggests that high burden areas such as Botswana and South Africa should adopt these medical recommendations on a national scale. The norm changes explored above will be addressed in the cases, in conjunction with public policy models, to investigate why Botswana has been more

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[140] World Health Organization. *WHO policy on collaborative TB/HIV activities: Guidelines for national programmes and other stakeholders* (Geneva: WHO, 2012), 8, http://www.who.int/hiv/pub/guidelines/en/index.html.

[141] Ibid,15.

[142] Ibid, 30.

[143] Ibid, 30.

willing to adopt these norm changes while South Africa has not embraced the international norms.

Chapter 4- Botswana

Botswana is commonly referred to as the gem of Africa with it's economic success with diamonds; However, HIV/AIDS has negatively impacted the life expectancy of the average adult. The disease rate "fell from 65 years in 1990-1995 to less than 40 years in 2000-2005, a figure about 28 years lower than it would have been without AIDS."[144] In response, the government adopted a national anti-retroviral program that was initiated at Princess Marina Hospital, located in Gaborone.[145] The program enabled thousands to receive the anti-retroviral treatment, expanding the life expectancy of the average Motswana.[146] As explained in Chapter 1, the HIV spread of the disease was rapid and varied due to migrant labor and stigma of condom use. Coming from these particular challenges, Botswana has a very successful anti-retroviral program and tuberculosis program, which are in the process of integration. The program's success has now been considered the African model to be used in other states.[147]

What made the Botswana model effective? The government of Botswana has played an active role in fighting the virus and adopting policy norms dictated by the World Health Organization. Botswana has consistently taken the policy recommendations and created appropriate programs for the people in Botswana. The following explores how Botswana has successfully adopted these norms through their policy making arena.

Botswana's Political Structure

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[144] International HIV & AIDS Charity, *HIV & AIDS in Botswana*, http://www.avert.org/aids-botswana.htm.

[145] Ibid.

[146] The singular reference to an individual who is a citizen of Botswana.

[147] International HIV & AIDS Charity.

Botswana's policy making arena is a parliamentary system that is common in southern Africa; the system is a "multi-party parliamentary system, an executive presidency, and executive machinery dominated by a cabinet of ministers chaired by the president."[148] This multi-party system is considered one of the most stable democracies on the continent. Botswana however has an "advantage [that] lies principally in its largely homogeneous Tswana population... In more than forty years of independence, it has never had a change of government, and it has been ruled by one dominant political party."[149] While the BDP has maintained a majority since independence in 1967, under Seretse Khama, the country has continued to elect parliament members that have been responsible for electing the five presidents of the country.[150] Considering the parliamentary system and the sustained ruling of the Botswana Democratic Party (BDP) the figure 4.1 explains how policy is approved, in particular health polices with recommendations from the WHO. The key element here is that the representatives of Botswana present the information from various meetings to the Ministry of Health. By entering the bureaucracy the reports can then be discussed and considered. The process by which the WHO report goes from being a recommendation to a policy is somewhat complicated, and not as simple as voting yes or no.

The policy discussion first begins with the second tier on the chart between the president, bureaucracy and various non-governmental organizations. The president is chosen from the

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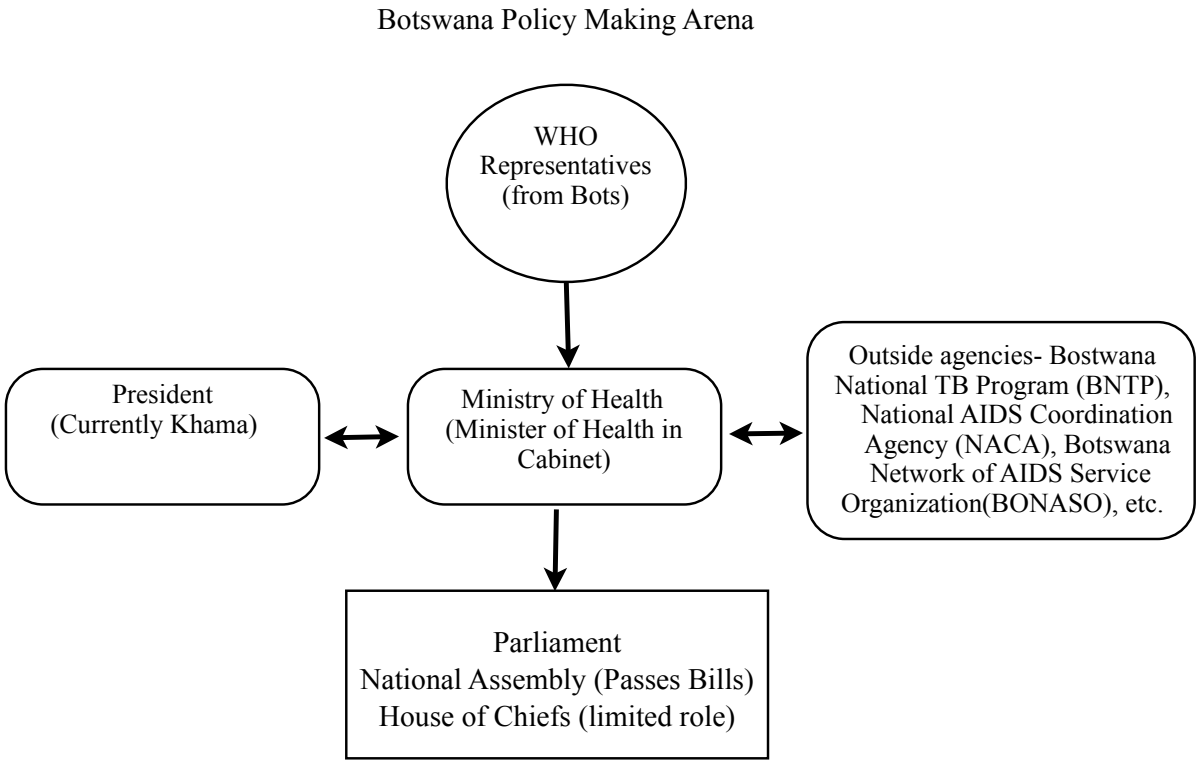
[148] Neil Parsons, *Botswana History Pages: Politics*, http://ubh.tripod.com/bw/bhp10.htm.

[149] Olayiwola Abegunrin. *Africa in Global Politics in the Twenty-First Century* (New York: Palgrave Macmillian, 2009), 93.

[150] These five presidents are Setestse Khama from 1966 to 1980, Joni Masire 1980-1998 (Quett Ketumile was acting president during the first part of July in 1980, after Khama died), Festus Mogae from 1998-2008, and currently Ian Khama as presented on Wikipedia, *List of heads of state of Botswana, http://en.wikipedia.org/wiki/List_of_heads_of_state_of_Botswana.*

Figure 4.1



members of parliament with the slight notation that candidates for parliament, "must declare for whom they will vote at the time of their nomination. Since they are nominated by their party, this means they must pledge themselves to the party's candidate for president."[151] Party lines are clearly drawn based on these alliances, which also influences who may be appointed to a cabinet level position. Once the president is elected, the president appoints his desired cabinet members, however, unlike in other states, approval is not required from parliamentary members.[152] Understanding the relationships between cabinet members, or ministers, and the president helps inform the policy process. Presidents in Botswana have the ability to sway the direction of

[151] Jon D. Holm and Staffan Darnolf, "Democratizing the Administrative State in Botswana," as cited in York Bradshaw and Stephen N. Ndegwa ed., *The Uncertain Promise of Southern Africa (*Bloomington, IN: Indiana University Press, 2000), 127.

[152] Ibid, 127.

policy, especially crucial issues including HIV.[153] The president meets with the cabinet member and discusses how the policy recommendation can be altered to be appropriate for Botswana. With such focus, the minister then uses resources both governmental and non-governmental to create a policy suitable for the state.

Once a policy is fashioned suitable for the state, the legislation is then filtered to the parliament, in particular the National Assembly. The National Assembly holds the ability to approve policies, create laws, and approve budgetary measures and tax increases and decreases.[154] This part of the bicameral parliament is where recommendations from ministers are approved and implemented in the state. What is the role of the second house of parliament? The House of Chiefs is considered the less powerful house whose "power [is] to advise the Assembly and the president on matters that relate to the interests and organization of the country's tribes."[155] In particular, the House of Chiefs is designated to protect the role of the tribal and traditional society in Botswana.[156] Thus the power to influence the state policy comes with the National Assembly. John Holm argues that, "[t]he Parliament's role in national policy making is a fairly passive one,"[157] and has been known to accept policies from ministries without confrontation based on Tswana culture of public agreement.[158] There tends to be common approval of recommendations within parliamentary decision making.

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[153] Ibid, 127.

[154] John D. Holm, "Botswana: A Paternalistic Democracy," as cited in Larry Diamond, ed. *Volume Two: Democracy in Developing Countries: Africa* (Colorado: Lynne Rienner Publishers, 1988), 186.

[155] Ibid, 187.

[156] Newell M. Stultz, "Parliaments in Former British Black Africa," as cited in Mario E. Doro,. and Newell M. Stultz, ed., *Governing in Black Africa: Perspectives on New States* (New Jersey: Prentice-Hall Inc., 1970), 145.

[157] Holm, 187.

[158] John D. Holm and Staffan Darnolf, 125.

HIV/AIDS Policy Formulation and Tuberculosis Integration in Botswana

Botswana's consistent parliamentary system has enabled Botswana to be one of the strongest developing states in responding the HIV/AIDS epidemic. In 1993, for example, Botswana adopted a multi-sectional response to the epidemic, combining economic, social, and scientific measures to prevent the further spread of the disease. Further, the adopted policy created the National AIDS Council:

> [W]hose membership will include senior officers from the various government ministries involved in HIV/AIDS, representatives of key non-governmental organisations (including persons with HIV/AIDS), representatives of the private sector, and private individuals who have demonstrated a high level of interest, concern and dedication regarding the national HIV/AIDS situation.[159]

This council ensured the oversight and furthering the ability of HIV policy to help prevent the spread of the disease and the stigma associated with it. This particular policy also implemented an education based program and surveillance system including the promotion of condom usage. The education based program continued into the early 2000s until the World Health Organization started to highly recommending anti-retroviral treatment.

As global rates of HIV increased the World Health Organization began to see the benefits of ART, and that this recommendation was necessary in Botswana. After the first cases of HIV were reported in 1985, there was a dramatic increase in the infection rate among adults in Botswana during the 1990s, presented in Figure 4.2.[160]

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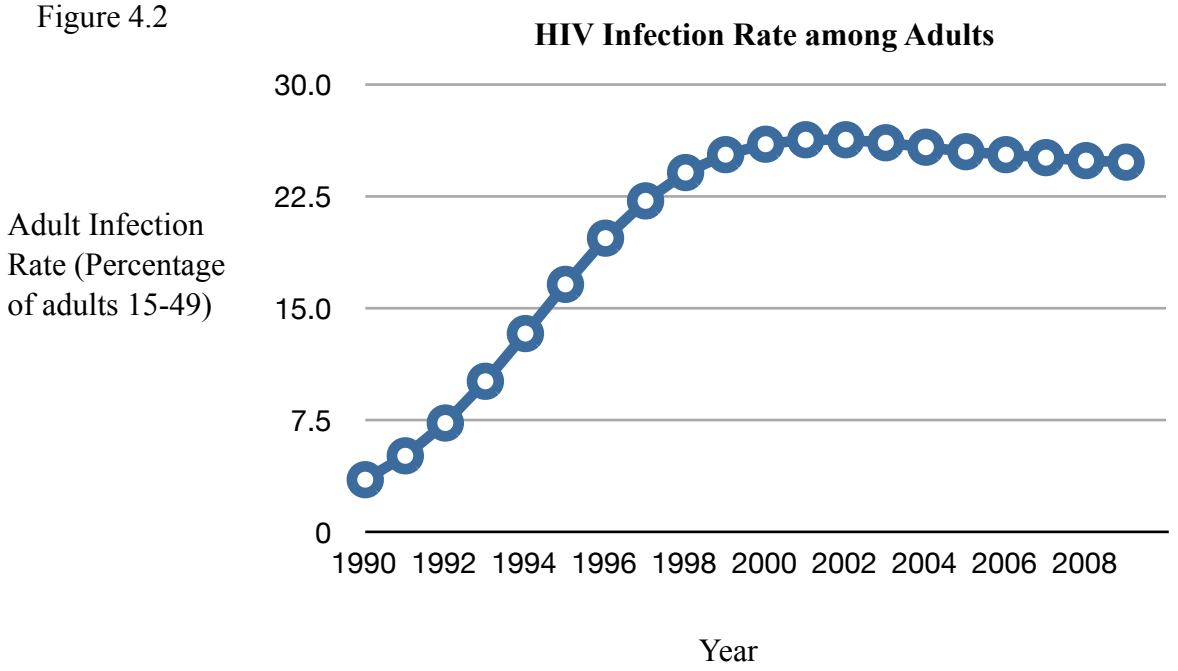
[159] Ministry of Health, *Botswana National Policy on HIV/AIDS (Approved and Adopted by Government)* (Gaborone: The AIDS/STD Unit: 1993), 10.

[160] International HIV & AIDS Charity, *HIV & AIDS in Botswana*, http://www.avert.org/aids-botswana.htm.

Figure 4.2



According to the World Bank, by 2000 26 percent of the adult population in Botswana was infected with HIV.[161] Due to the massive increase in HIV prevalence "there was a major shift in policy, with Botswana becoming the first African country to introduce free ARV treatment to its population"[162] At this point the World Health Organization was investigating and commencing the shift in policy norms to introduce a nation wide ART. Botswana was considered to be a pioneer, and subsequently donors, who had left in 1995 due to the wealth of the state of Botswana, began to help fund the national wide ART program.[163] While Botswana became the poster child of the ART program, this particular shift was guided by the WHO scientific discussions on the successful experience of anti-retrovirals in the developed world. In particular President Festus Mogae is given credit for the strong support and rallying of the policy. In this

[161] The World Bank, *Data*, http://data.worldbank.org/. presented in Appendix A:1.

[162] Suzette Heald, "Abstain or Die: The Development of HIV/AIDS Policy in Botswana," *Journal of Biosocial Science* 38, (2006): 32.

[163] Ibid, 35-36.

sense, Mogae followed in the footsteps of his predecessors in being a dominant head of state.[164] The parliament, ministry of health, and President Mogae encouraged the passage of this policy to enhance the well being of the state against the particular threat of HIV. By 2004, the combination of social and scientific methodology helped inhibit Botswana's infection rate from continuing to exponentially increase. In an audit from 2004, Botswana's National AIDS policy included:

> [The] prevention of HIV/AIDS/STI transmission; reduction of personal and psycho-social impact of HIV/AIDS and STIs; mobilisation of all sectors and of all communities for HIV/AIDS prevention and care; provision of care and support for the infected and/or affected; and reduction of the socio-economic consequences of HIV/AIDS and STIs.[165]

Like the combination of anti-retroviral drugs used in a cocktail for HIV patients, the government pursued an active, multilateral attack on the virus. As the 2000s continued, few political alterations would be as dramatic and would not match the success of the national program.

Although Botswana excelled in implementing a national ART program, Botswana still continued to treat HIV and tuberculosis as separate medical conditions with separate treatments. In the 2007 Tuberculosis Programme Manual, HIV patients are given separate treatment recommendations than HIV negative patients were given. However, the government of Botswana had accepted many of the recommendations of the WHO including the DOTS program and isoniazid preventative treatment. As the Director of Public Health Matsae Balosang wrote in the preface that:

> [T]he national guidelines on the management of tuberculosis with the help of the World Health Organization and the BOTUSA Project of the US Centers for Disease Control and

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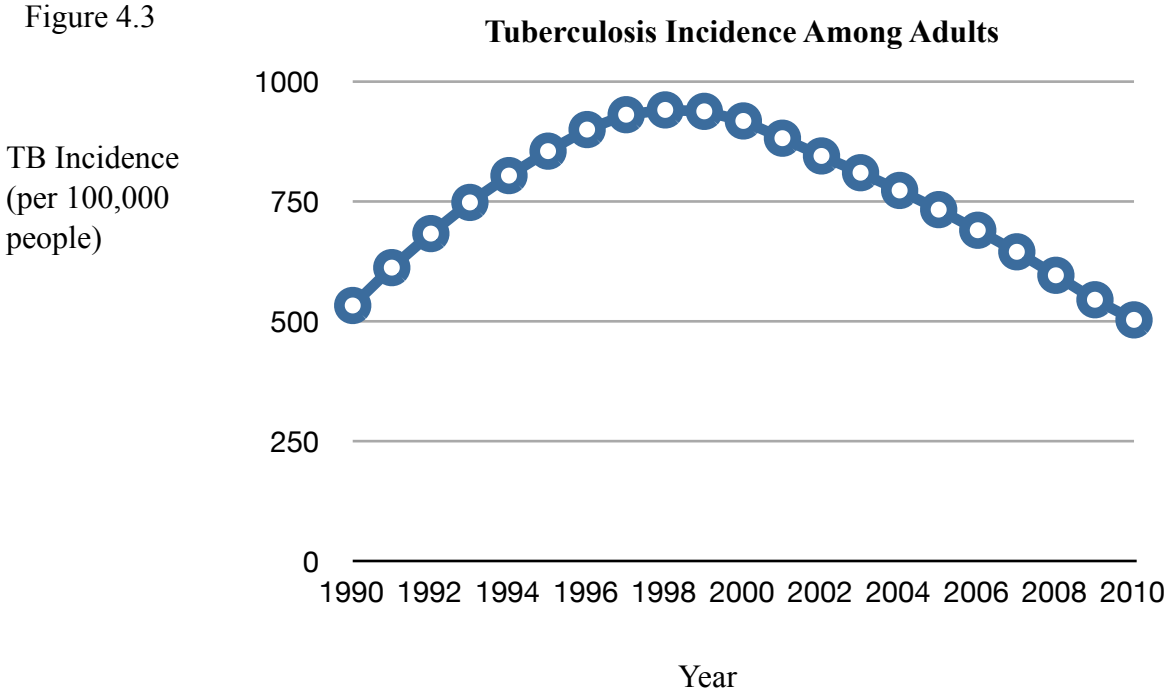
[164] Ibid, 40.

[165] Nompumelelo Zungu-Dirwayi ed., and others, *An Audit of HIV/AIDS Policies: In Botswana, Lesotho, Mozambique, South Africa, Swaziland, and Zimbabwe* (Cape Town: HSRC Publishers, 2004), 21.

> Prevention, with critical input from experts worldwide. The fundamental principle underlying the material in this manual is that it is evidence-based.[166]

In this document, the director points out that international norms for treating tuberculosis play a major role in decision making in public health initiatives. In 1993, while the DOTS program was still in development, Botswana implemented the program, and helped to ensure that the treatment became the national method of treatment.[167] The program became the main form of tuberculosis treatment and surveillance which, as presented in Figure 4.3, helped decrease the tuberculosis prevalence in Botswana.

Figure 4.3



[166] Republic of Botswana Ministry of Health, *National Tuberculosis Programme Manual: Sixth edition* (Gaborone: Ministry of Health, 2007), 5.

[167] Ibid, 14.

Botswana was able to also execute the use of Isoniazid Preventive Therapy (IPT), which was recommended in 1998 by the WHO and UNAIDS.[168] Backed not only by the WHO, UNAIDS, but also through BOTUSA, a Center for Disease Control program in the United States, research about the strength of preventative treatment was conducted and adopted by the national government. Based on research, "IPT can make a critical contribution toward reducing the burden of TB disease among people with HIV. IPT is a low-cost, relatively simple intervention that can save tens of thousands of lives."[169] Following norms helped the populous in Botswana, yet, the treatment of HIV and TB were still not integrated and would not be fully connected until years later. While the program integration was not automatically initiated like previous WHO recommendations, Botswana slowly worked towards this norm adoption.

So how were medical professions in Botswana to respond to a patient infected with both HIV and tuberculosis? Tuberculosis patients were still to follow the prescribed treatment of DOTS or the preventative treatment; however, "[f]or HIV-infected patients who have active TB, and who are not yet on HAART, treat the TB first."[170] While evidence proved that treating the diseases together improved the chances of stoping active TB, due to a strengthened immune system, Botswana floundered and did not integrate the programs immediately. A potential explanation for this was that Botswana saw remarkable results in the use of the DOTS program in inhibiting tuberculosis infection rates and therefore did not see the need to fully integrate the diseases. Further, as stated in the 2010 budget speech given by the Minister of Finance, the

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[168] Ibid, 18.

[169] Javid Syed, *As With HIV Treatment, Botswana Leads the Way With TB Prevention*, http://www.thebody.com/content/art56239.html

[170] Botswana Ministry of Health, *Botswana National HIV/AIDS Treatment Guidelines: 2008 Version* (Gaborone: Ministry of Health, 2008), 60.

"Government has started outsourcing some of the HIV/AIDS interventions through increased engagement of the Private Sector and Civil Society Organisations."[171] The focus during this period, after the global economic recession, was to encourage a variety of support from within society to combat HIV. As Botswana continued to face the two diseases separately, Botswana has taken an incremental approach to integrating the diseases.

While the WHO recommended that integration occur in 2004, in Botswana this required the creation of a committee, known as the National TB/HIV Advisory Committee, to oversee the massive medical change. Integration would not be a simple process due to the fact that programs "evolved separately," meaning there were few points of connection between staff and facilities.[172] While the integration process began in 2005, state officials claim that as of 2012:

> Botswana is well positioned to address the TB/HIV epidemic. Strong political commitment to combating HIV/AIDS combined with resource allocation, has led to one of the most successful HIV programs globally. This provides a very strong platform on which to build collaborative TB/HIV activities.[173]

The understanding of what is necessary to increase the activities has enabled the Ministry of Health to fashion policy guidelines pushing towards the complete amalgamation of the programs. The policy guideline stresses the key focus on creating a TB/HIV Technical Working Group (TWG), expanding "joint planning, supervision, budgeting, resource mobilization and resource... and wider implementation of TB infection control in health care and other settings."[174] Further, the "harmonizing" of the programs requires strength in training for both diseases and increased

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[171] O.K. Matambo, *2010 Budget Speech: Transforming Our Economy After the Crisis: 2010 and Beyond* (Gaborone: GPPS, 2010), 24.

[172] Ministry of Health Botswana, *TB/HIV Collaborative Policy Guidelines* (Gaborone: Ministry of Health, 2012), 9.

[173] Ibid, 10.

[174] Ibid, 14.

medical information. These realizations, unfortunately, were not seen in the WHO recommendations in 2004. Botswana thus had to incrementally create a method of integration without the prescription of an international regime.

While the WHO proved to be a crucial asset in health policy formulation for Botswana in past experiences, the HIV/TB integration required the bureaucracy to make slow changes over time to coordinate the programs. As Lindblom described, the various governmental agencies, including the Botswana National Tuberculosis Program (BNTP) and National AIDS Coordination Agency (NACA), had to muddle through the difference and negotiate adjustments in their programs.[175] In this instance, incrementalism helps to answer the question of why Botswana, which traditionally accepted the international norms of health, was slower to react and subsequently why only now the policy guidelines are working through the National Assembly. Further, the coordination of various organizations focusing on these two diseases required a massive amount of time. The method of coordination was finally outlined in the 2012 policy guidelines through a framework that included training, treatment facilities, and methods of reporting. The integration of these particular facets of the Botswana program for HIV and TB, thus required an extended period of time with small changes to eventually lead to the grand policy change. The program development thus required the parliamentary system and the bureaucracy to use a slower method of policy adoption than previous years.

Statistical Answer: Botswana Infection Rate and Funding Correlation?

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[175] Ibid, 49.

The progression of the policy changes appear to be incremental and a further investigation into the funding of the program provides another example of incremental change through budgeting. Governments and funding agencies can increase the promotion of treatment facilities and behavior education of different diseases. Susannah Meyhew argues that, "[d]onors (usually) are not neutral, philanthropic givers of gifts. Donors are subject to national and international political interests."[176] The following section takes statistics from government budgets, global aid, and infection rates of HIV and TB to determine whether or not there is a correlation between infection rate and budgeting.

Considering the relationship between infection rate and funding can further enhance the understanding of policy translation. One expects that if the infection rate of a disease increases, the that funding for health initiatives would also increase. Why would this be the expected relationship? In order to fight diseases, a variety of funding is needed to cover the costs of drugs, hospital equipment, employees in the hospital, and other expenses. Below a selection of the relationships are evaluated below and the rest are located in Appendix A.

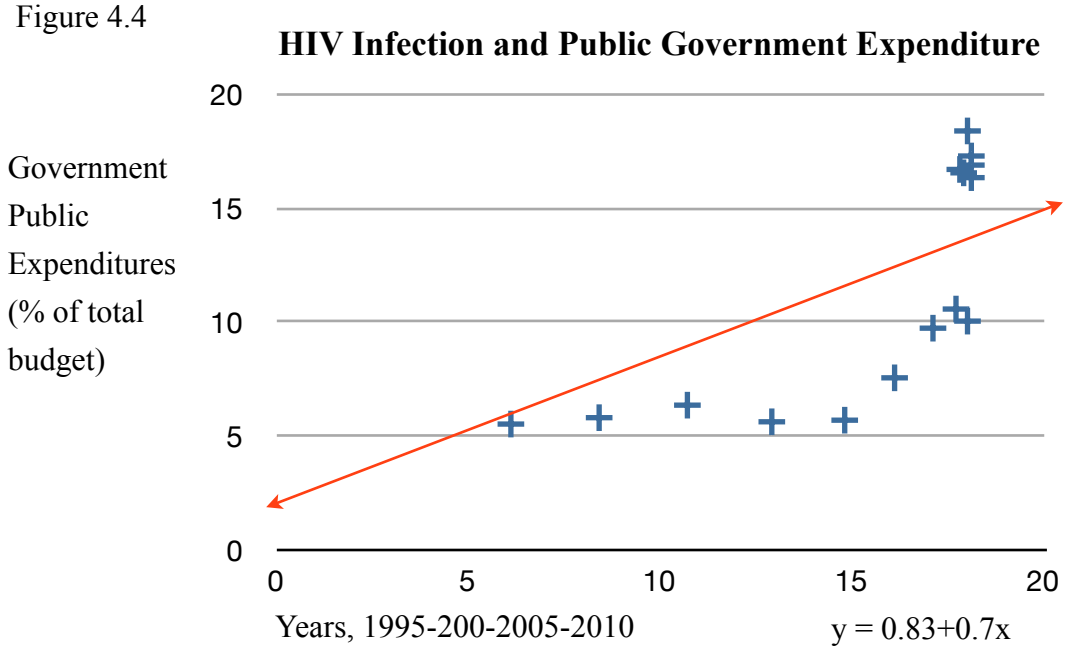
Governmental Funding

Botswana's government has played an active role in creating programs to fight against HIV and tuberculosis to better the health of its citizens. Government funding enables public, state hospitals to gain the necessary supplies to help an infected patient fight an infectious disease. Looking at Botswana's public health expenditure and HIV infection rate, there is a strong correlation between the increases of infection among the adult population and an increase

[176] Susannah Mayhew, "Donor Dealings: THe Impact of INternational Donor Aid on Sexual and Reproductive Health Servicesm" *International Family Planning Perspectives* 28, no 4. (2002): 220.

of government public health expenditure. Figure 4. 4 presents the graphical form of this particular relationship.

Figure 4.4

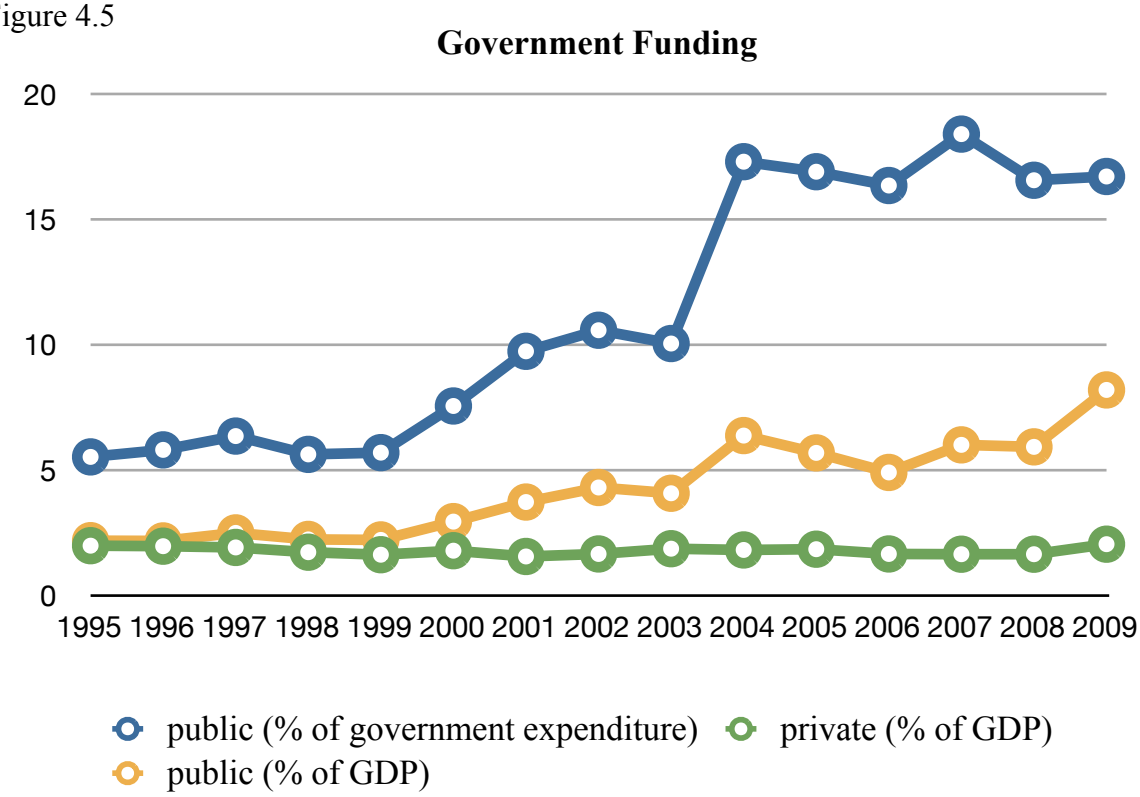


The above correlation has an r value[177] of 0.74 meaning there is a strong positive correlation between the HIV infection rate and public government expenditure. The government of Botswana appears to increase the spending as the infection rate increased. This particular instance matches up with Botswana's historical pattern of increasing resources as needed. To gain a further understanding of this correlation involves looking specifically at the funding overtime. Figure 4.5 reveals that between 2003 and 2004 there was a massive increase in the amount of funding toward health expenditure. However, this was not a one time instance as punctuation theory expects, but a large increase that sparked further incremental increase. The financial data expands upon the idea that Botswana is more willing to accept international norms

[177] The value r is the linear correlation coefficient, describes the type and strength of the correlation of the data. As described in Neil A.Weiss, *Elementary Statistics: Fourth Edition*. (New York: Addison Wesley Longman Inc., 1999), 230.

due to the fact that in 2004, the World Health Organization was further pushing for national anti-retroviral treatment. Moreover, the donors who began to return to Botswana, in the late 1990s, increased the monetary support of the program. For HIV there is a clear increase in support during the second half of the 2000. Is this particular measure consistent with tuberculosis?

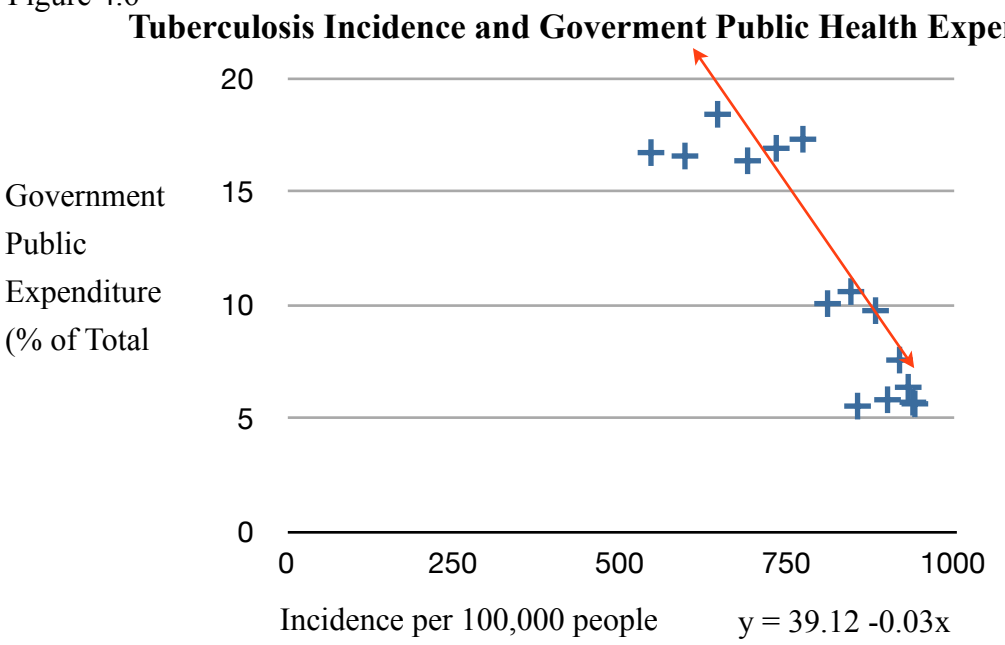
Figure 4.5



Tuberculosis is not as new a problem as HIV, yet tuberculosis in Botswana has increased as HIV prevalence has increased. When a correlation regression line was imposed on tuberculosis and public government expenditure there was a strong negative correlation of -0.89. This r value could mean one of two things: 1) that the government of Botswana could have cut funding to tuberculosis as the rate increased, or 2) that the Botswana's tuberculosis rate was beginning to slow as funding did not change. In considering the integration program it is likely

that tuberculosis patients were being more readily treated and that the infection rate was actually declining due to medical efforts.

Figure 4.6



According to the provided material, it appears that in terms of budgeting for HIV and tuberculosis, the government has increased government health funding with the increase of HIV infection, but decreased funding with the tuberculosis rise of infection. This points to incremental increases and changes over time, including the integration of the two disease programs in the state. While the tuberculosis numbers may not point to a positive relationship, one must consider that the relationship were tested off a statistic based of the public health expenditure that was taken from a measure of percentage of GDP.[178] Further, it is necessary to note that the tuberculosis incidence rate has decreased since 1998, which is contingent with the introduction of the DOTS program in Botswana on a national level. Considering these factors, Botswana's governmental budgeting follows the concept of incrementalist model through budgetary and

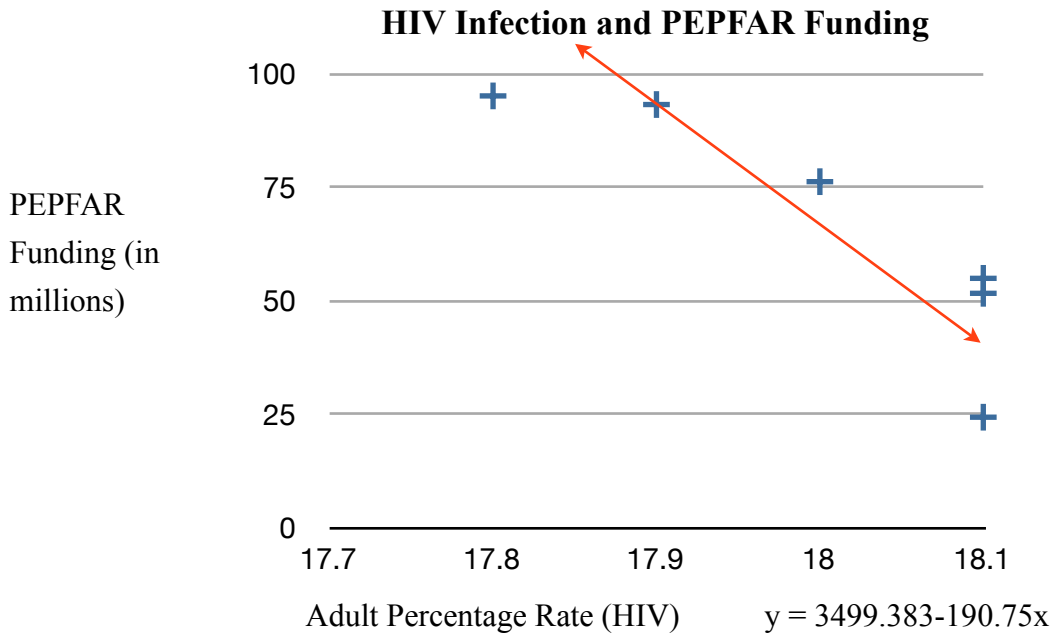
[178] Index Mundi, *Botswana- health expenditure*, http://www.indexmundi.com/facts/botswana/health-expenditure.

infection rate measures to explain the national policy to treat the two diseases under one national policy.

International Donors

Another side of explaining this particular situation is to look at funding statistics. The following looks at PREFAR and the Global Fund for AIDS, Tuberculosis, and Malaria's funding to the state of Botswana. First, while the American PREFAR fund has only been in existence since 2004, Botswana has been a recipient due to the high infection percentage of adults.[179] PEPFAR is a fund provided by the United State government to help states with high rates of

Figure 4.7



HIV in the world. Further, it is a, "historic commitment is the largest by any nation to combat a single disease internationally, and PEPFAR investments also help alleviate suffering from other

[179] PEPFAR described in chapter 1.

diseases across the global health spectrum."[180] Botswana receives funding for HIV programs to help address the HIV infection in the state (as presented in figure 4.7). The relationship between HIV adult infection rate and PEPFAR funding produced an r-value of -0.88. In this instance it appears that Botswana received less funding as infection rate increased. However, by the time that PEPFAR began to fund high burden countries, Botswana's infection rate had begun to plateau.[181] The government in 2003 significantly increased the budget on public health endeavors. The PEPFAR funding, thus would have aided in the integration process that began in 2005. While the relationship is negative, this shows that there is a relationship between the infection rate and funding that argues funding is decreased with infection rates decreasing. For Botswana this would not be unusual due to the fact many of Botswana's donors stopped funding the state due to the wealth of the state. However, PEPFAR is a bilateral aid source coming from the United Staes, subject to state budget cuts. Thus, HIV support in this instance does not help understand the incremental process of transition.

In turn, looking at the Global Fund support will also help to answer the connection between funding and infection rate. The Global Fund to Fight AIDS, Tuberculosis, and Malaria was created in 2002 to provide support for states attempting to remove these three disease from their states.[182] Performing a correlation regression line on tuberculosis and Global Fund support reveals a strong negative correlation with an r value of -0.95, meaning as the tuberculosis incidence increases there is less funding (Figure 4.8). This particular test however does not

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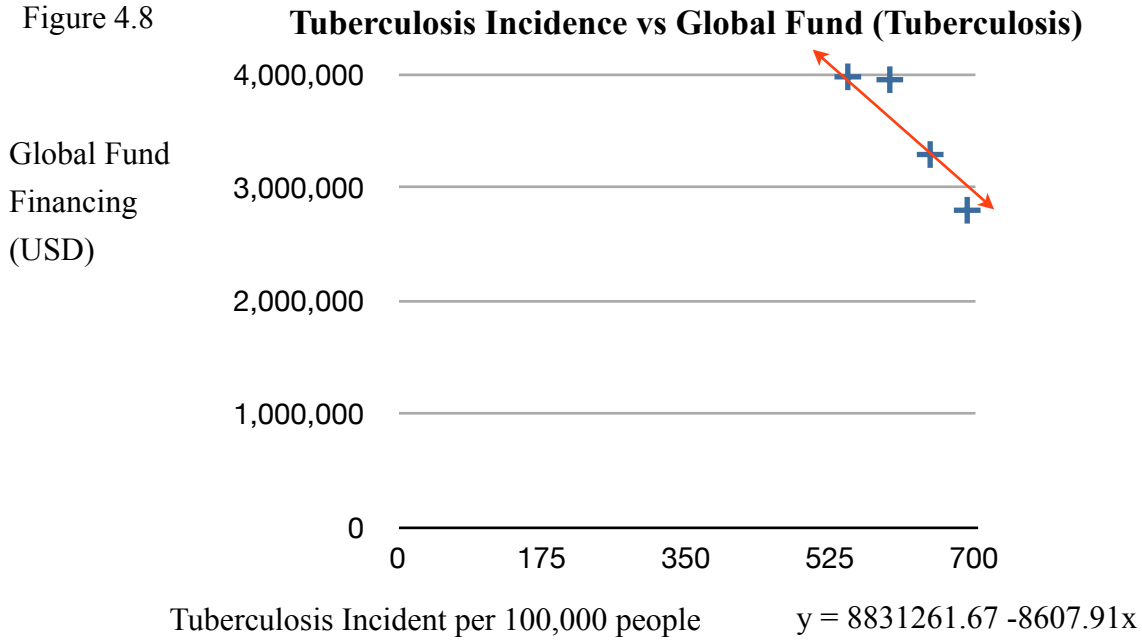
[180] Office of U.S. Global AIDS Coordinator and the Bureau of Public Affairs, U.S. State Department, About PEPFAR, http://www.pepfar.gov/about/index.htm.

[181] See Figure 4.2

[182] The Global Fund to Fight AIDS, Tuberculosis and Malaria, *About the Fund*, http://www.theglobalfund.org/en/about/.

include the change over time with the disease. Botswana has actually received more funding in

Figure 4.8



recent years, but the incidence of infection has decreased massively, in turn, creating a negative correlation. The funding from the Global Fund helps to ensure that the program integration is successful in conjunction with other international funding and governmental financing.

While the following correlations may not point clearly to an answer to the slow policy change, it is clear that Botswana has received a greater amount of funding as these diseases have persisted in the state. Further, the slow budgetary changes are contingent with the incremental policy changes made through the Ministry of Health. Incremental budget changes appear to increase how medical alterations are influenced.

Conclusion: Botswana Follows International Norms, but Needs Incremental Policy Changes

Botswana, although responding to most of the World Health Organization recommendations, has made incremental changes to integrate the National AIDS Program and

National Tuberculosis Program. Accepting these policy recommendations can be difficult for states, especially since they maintain their sovereignty over political decisions. Thus, Botswana follows a particular pattern of incrementalism in order to translate international norms into state policy. Botswana has widely accepted medical advice from other states for tuberculosis and HIV separately. By creating strong programs for the diseases separately, Botswana was able to curb the HIV infection and decrease the incidence of tuberculosis. The separate programs became strong independent program that required restructuring of the health system and nationals and organizations to ensure they would work together.

The budget correlations shows that for HIV, the government has responded as the infection rate has gone up, however, in the case of tuberculosis there is a negative relationship, meaning as the incidence has gone up, the funding has come down. However, as shown in figure 4.3, the tuberculosis rate has been coming down during the integration process. In this sense while the relationship between the incidence rate and funding is negative, this relationship does not indicate causation and much be considered with the historic foundations.

Government and donor funding helped the integration and increased medical treatment that was required for Botswana to initiate the co-infection policies. While the funding relationships reveal the same negative pattern as tuberculosis, the same falling incidence rate can help explain this non expected outcome. Considering the work of the government, for both policy creation and harvesting international donations, Botswana has been able to use the money to a drop in tuberculosis, and in a few years probably the HIV infection rate.

While the rates of HIV and TB are still very high in Botswana, the government is taking international norms and forming them into appropriate state policy. However, the bureaucracy

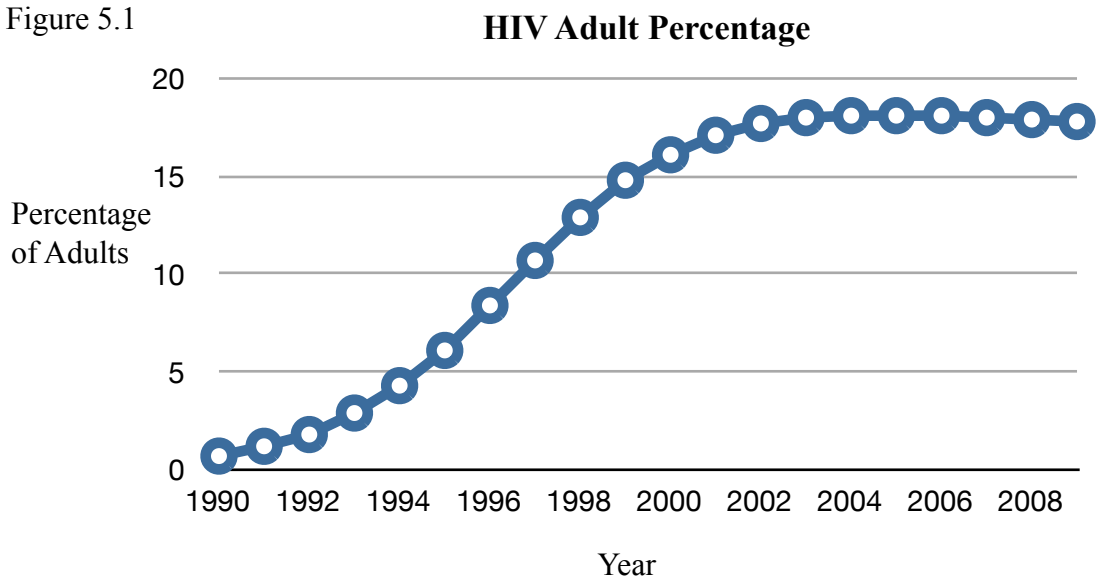
and policy making infrastructure was required to work through the integration of the HIV and TB policies, not just simply adopting a new policy. While WHO policy integration seems instantaneous, the individual states, such as Botswana, must attend to the extensive process of integrating the programs, which Botswana is continuing to do with the goal of being fully integrated in the near future.

Chapter 5- South Africa

South Africa, unlike Botswana, was unable to adopt international norms towards HIV and tuberculosis co-infection treatment. The epidemic claimed its first victims in 1982, during the ending stages of the apartheid.[183] While the apartheid government began to construct a response to the virus, the massive political change inhibited the ability to the state to respond in a cohesive manner during the early stages of the infection. The historical transition from apartheid to a racially integrated democracy in 1994 offered a new structure for a populous that survived a variety of social and political segregation. With the historic election:

> The non-racial democracy is in its infancy and still requires nurture and development. The next state, according to the government, is to work toward social transformation, that is, to enable the great mass of disadvantaged South Africans to participate in the embryonic democracy by providing them with the skills and economic wherewithal and the social services they need to become contributing citizens.[184]

Figure 5.1

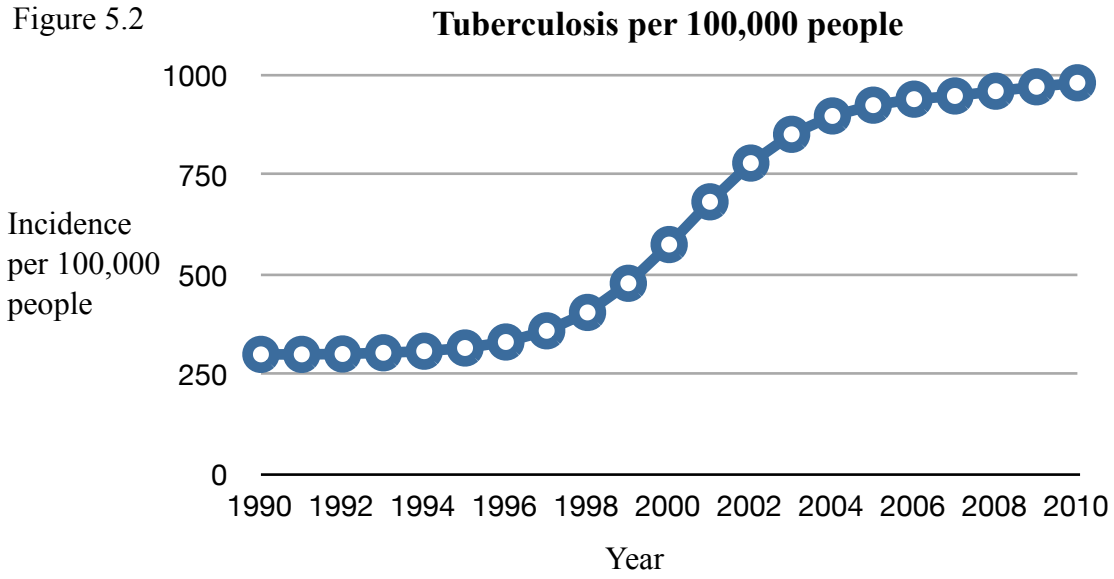


[183] Pieter Fourie, Diana Perche, and Ria Schoeman, "Donors Assistance for AIDS in South Africa: Many Actors, Multiple Agendas," *Strategic Review for Southern Africa*. (1 Nov 2010): 94.

[184] Keneth W. Grundy, "South Africa: Transition to Majority Rule, Transformation to Stable Democracy," as cited in Bradshaw, York. and Ndegwa, Stephen N. ed. *The Uncertain Promise of Southern Africa (*Bloomington, IN: Indiana University Press, 2000), 43.

The new democracy led by the African National Congress (ANC) had to rise to the challenge of reintegrating the colored and white population while stimulating economic growth and combating poverty, as explained in chapter 1, the society was also being infected with a rapidly spreading communicable disease.

Figure 5.2



On top of these particular challenges, the new government was challenged by a rapidly increasing virus, as shown in Figure 5.1. The tuberculosis incidence rate increased in the same pattern as HIV, along with other opportunistic infections.[185] The complex nature of the disease being spread throughout the population caused the government to take action through the creation of the Networking HIV/AIDS Community of South Africa (NACOSA) in 1991, and later the South African National AIDS Council (SANAC) in 2000.[186] Through this process the need arose for greater sustainable development in health services to address the HIV and

[185] See Figure 5.2

[186] Nompumelelo Zungu-Dirwayi, ed. and others, *An Audit of HIV/AIDS Policies: In Botswana, Lesotho, Mozambique, South Africa, Swaziland, and Zimbabwe* (Cape Town: HSRC Publishers, 2004), 27.

tuberculosis co-infection problem.[187] The following chapter investigates how the structure of policy making arena and policy development reveals that South Africa has had a more difficult time introducing international norms into their national policies on HIV and tuberculosis.

South Africa's Political Structure

South Africa's political structure became an integrated democracy in 1994 when the first open elections were held proclaiming Nelson Mandela the new president of the state, altering the new policy making arena. The new constitution established a bicameral parliament with a president and cabinet who runs the bureaucratic departments. The interconnection of the parliament to the president and members of parliament creates a government that is dominated by one party, in this case the ANC. While party dominance is clear in the policy making process, each section of the government is awarded specific powers in the constitution.

The legislative body in the constitution says that the parliament will consist of the National Assembly and the National Council of Provinces. The National Assembly is made up of members elected by the general public and subsequently represent the people. They represent their constituents by "choosing the President, by providing a national forum for public consideration of issues, by passing legislation and by scrutinizing and overseeing executive action."[188] This is the body that approves and discusses legislative measures to be taken up in South Africa. The National Assembly elects the president and the president then chooses members of the cabinet from the National Assembly.[189] Further, the National Council of

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[187] Salim S. Abdool Karim, "HIV infection and tuberculosis in South Africa: an urgent need to escalate the public health response," *Lancet* 12, no. 374 (2009): 921. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2803032/.

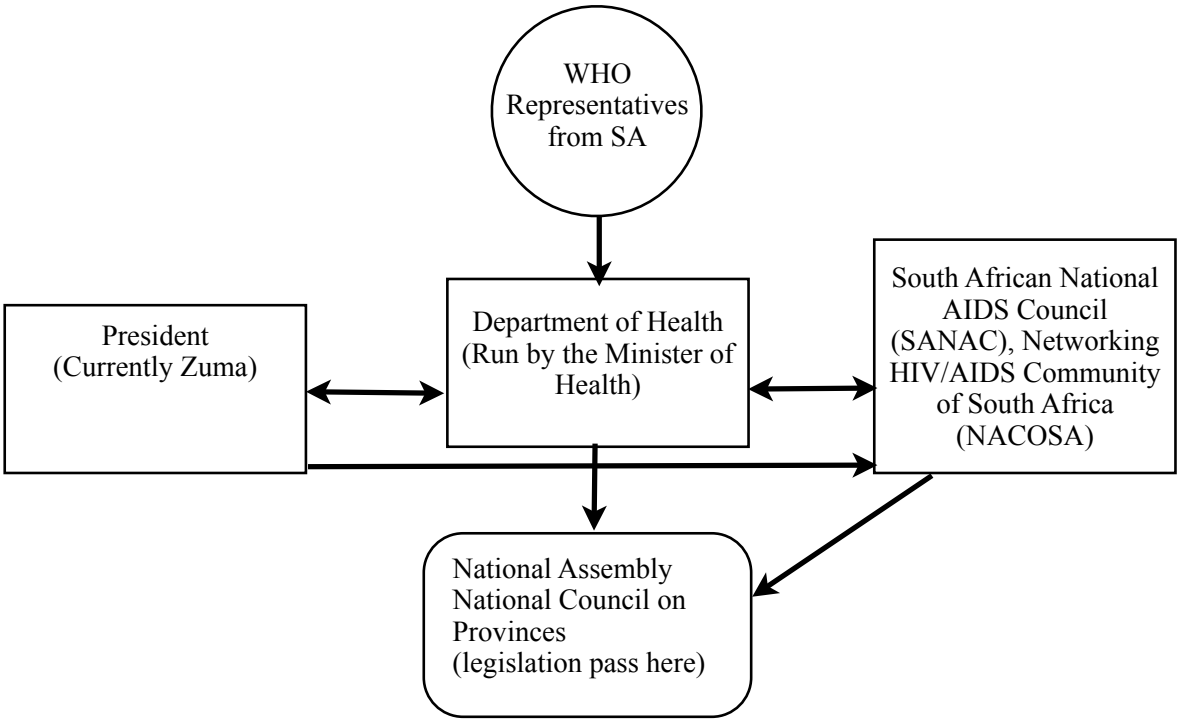
[188] Chapter 4 of the Constitution for the Republic of South Africa on Government Communication and Information System (South Africa), National legislature (parliament), http://www.info.gov.za/aboutgovt/parliament/index.htm.

[189] Ibid.

Provinces which works to engage the national government's policy on the provincial level. The National Council of Provinces participates "in the national legislative process and by providing a national forum for public consideration of issues affecting the provinces."[190] These legislative bodies are able to pass legislation on a variety of issues, including health services; moreover, these legislative measures are often influenced by the research of the bureaucracy of the departments run by the cabinet members. The constitution lays out the functions by which policies are to be adapted, however, the structure is susceptible to overarching strength of the executive branch.

Figure 5.3

South Africa Policy Making Arena



[190] Ibid, Chapter 4.

Nelson Mandela was the first president under the new constitution and had the overwhelming job of creating a program to reintegrate the society. As president he had "to carve out a worldview for South Africa was to move the ANC away from its traditional populist and socialist ideas through a series of inhouse party discussions," and show that the government was dedicated to the development of an integrated society.[191] The ANC thus worked to create The Reconstruction and Development Program that was tasked with "[m]eeting the basic needs of the people essentially implied the provision of jobs, houses, water, electricity, transportation, nutrition, health care and social welfare."[192] President Mandela's successor, Thabo Mbeki was heavily involved in the construction and implementation of the program. As the program progressed the discussion of HIV became more crucial, especially with the discussion over anti-retroviral treatment; however, this decision was further, argued during Mbeki's term as president.

Mbeki's experience working with high policy deliberations of a variety of politics helped him during his term as president of South Africa. Mbeki, having learned how to work with the ANC, was able to integrate his ideology into the policy making realm. A newspaper in South Africa, *The Star*, reported that, "he works behind the scenes, patching together alliances of disparate ANC factions to produce a power base."[193] This strength was exemplified when Mbeki began to question the connection between the HIV and AIDS virus and the toxicity of anti-retrovirals. He "first voiced his skepticism about conventional explanations of the aetiology of

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[191] Olayiwola Abegunrin. *Africa in Global Politics in the Twenty-First Century* (New York: Palgrave Macmillian, 2009), 152.

[192] Heather Deegan, *The politics of the New South Africa: Apartheid and After* (New York: Pearson Education, 2001), 117.

[193] Mondli Makhanya, 'Mebeki: Ruthless politician or inefficient successor to Mandela?, *The Star*, 24 December 2001. as cited in Tom Lodge, *Bus Stops for Everyone: Politics in South Africa from Mandela to Mbeki* (Indianapolis: Indiana University Press, 2002), 247.

AIDS in February 2000... By this time, Mbeki's hostility to chair the South African medical establishment was quite evident."[194] The skepticism lead to a lack of focus on research and engaging in the international community in terms of combating the disease on a national level. In particular Lodge believes that historians will look critically at this particular element of his tenure[195], due to the fact that this investigation into whether or not HIV caused AIDS, placed South Africa behind other states in the region in responding to the disease. Later in his term, Mbeki and his cabinet worked to create an anti-retroviral program suitable for South Africa. South Africa, after this policy hiccup, has slowly begun to create national policies to provide critical support for all HIV programs and tuberculosis integration.

HIV and Tuberculosis Policy Formulation in South Africa

South Africa's policy construction for HIV and AIDs has been less productive in some decades and very responsive in others. AIDS claimed its first two victims in South Africa in 1982 and the government made few attempts to address the disease. One of the first moves the state took was in 1987 when "the government of the RSA (Republic of South Africa) responded to HIV/AIDS by issuing regulations that had the effect of adding AIDS to the list of communicable diseases. [Those] suspected or actually suffering of AIDs could be quarantined."[196] In this instance, South Africa, like most of the world, was just beginning to learn about the

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[194] Tom Lodge, *Bus Stops for Everyone: Politics in South Africa from Mandela to Mbeki* (Indianapolis: Indiana University Press, 2002), 257.

[195] Ibid, 255.

[196] Nompumelelo Zungu-Dirwayi, ed. and others *An Audit of HIV/AIDS Policies: In Botswana, Lesotho, Mozambique, South Africa, Swaziland, and Zimbabwe* (Cape Town: HSRC Publishers, 2004), 27.

characteristics of HIV/AIDS. As information about how the disease was spread and infected individuals emerged, the newly integrated democracy was able to respond.

In conjunction with international norms, including the World Health Organization, and the Center for Disease Control, the newly formed NACOSA (at that time it was named the National AIDS Convention of South Africa) was able to construct a national plan for the state. The 1994 national plan contained 3 main objectives to be adopted and guiding forces for new legislation:

> 1. Prevention of HIV through a range of activities, which included education programmes, communication and information, mass media campaigns, distribution of condoms, improving accessibility to early detection and effective treatment of STDS.
> 2.Reducing the transmission of STI and HIV through appropriate care, treatment and support for those infected.
> 3.Mobilising local, provincial, national and international resources against HIV/AIDS.

These goals proved to be strong goals, however, the political leaders of the ANC lacked information on the problems within the state. The Minister of Health at the time, Dr. Nkosazana Dlamini-Zuma, "[w]as insufficiently informed by the institutional and social realities of South Africa,"[197] including overestimating the economic and human resources available to combat the disease. Due to the lack of understanding, the goals of the program were revisited in 1997, with a new expansion on attempting to address the program.

The new focus in 1997 was on how to ensure the government played a more active role in fighting the disease and enable the on the ground work in medical facilities to be successful. The key revisions to the initial plan included:

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[197] Anthony Butler, "South Africa's HIV/AIDS Policy, 1994-2004: How Can It Be Explained?," *African Affairs* 104, no. 427. (2005): 593.

> The need to heighten political leadership and public commitment (including assigning a special leadership role to the Deputy President); to ensure prioritisation of responses to the epidemic; Adopting a more inclusive approach to HIV/AIDS; Developing inter-departmental responses; protecting human rights of PLWHAs.[198]

These focus points became driving forces in the creation of a new plan that highlighted the above goals. Moreover, the government had to respond to the push from international groups to provide ARVs to infected members of the population. South Africa was capable of funding its own national ARV program, but in 2000 the effectiveness of the drug program came into conflict with the new president, Thabo Mbeki. As explained earlier, Mbeki "launched broadsides in 2000 against the conventional intellectual foundations of AIDS health policy, questioning the causal relationship between HIV and AIDS, and positing the potential toxicity of antiretroviral AZT."[199] Even with the opposition from Mbeki and his supporters, the creation of the HIV/AIDS/STD Strategic Plan for South Africa 2000-2005 continues with the help of SANAC to emphasize a new multipolar approach.[200]

The five year plan from 2000-2005 focused on areas of health, research, and rights of individuals living with HIV. The four major priorities were prevention, treatment, care, and support, research, and human and legal rights.[201] The focus on prevention and treatment included concepts such as preventing mother-to-child transmission, wider availability of volunteer testing, and expanded support in communities throughout the state.[202] Moreover, this document drove for the increase of antiretroviral therapy (ART) for infected individuals. While these goals were

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[198] Nompumelelo Zungu-Dirwayi, 27-28.

[199] Anthony Butler, 594.

[200] Ibid, 595.

[201] Department of Health (South Africa). *HIV/AIDS & STDs Strategic Plan for South Africa 2000-2005* (Pretoria: GCIS, 2009), 12.

[202] Ibid, 12.

presented, South Africa faced issues when paying for the program costs. Even more damaging was that there "was a dramatic and worsening shortage of human resources in the public health sector, a shortfall that has been the Achilles' heel of the biomedical paradigm."[203] In particular the amount of medical personnel in the state proved to be a hinderance to achieving all of the goals laid out in the plan.

While the goals proved difficult, in 2007 another strategic plan was created for the years 2007-2011. In this plan, the Department of Health and SANAC discussed how certain groups of the population were disproportionally affected by the disease due to a variety of reasons. The plan reported that:

> Whilst the immediate determinant of the spread of HIV relates to behaviours such as unprotected sexual intercourse, multiple sexual partnerships, and some biological factors such as sexually transmitted infections, the fundamental drives of the epidemic in South Africa are the more deep rooted institutional problems of poverty, underdevelopment, the low status of women, including gender-based violence, in society.[204]

While South Africa faced a variety of challenges with education and overall education about the disease, the strategic plan continued with the four main goals outlined in the 2000-2005 plan (which included prevention, treatment, research, and legal rights).[205] Specifically the area of treatment focused on the expansion of ART in all individuals including children.[206] The ART treatment, alongside other medical interventions, enabled the population to respond to the disease and reduce the time spent sick at home. This particular focus is also crucial in the HIV and TB

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[203] Anthony Butler, 598.

[204] Department of Health (South Africa), *HIV and AIDS and STI Strategic Plan for South Africa (2007-2011)* (Pretoria: GCIS, 2007), 11-12.

[205] Ibid, 15-18.

[206] Ibid, 14-15.

epidemic due to the fact that in order to effectively fight off the tuberculosis bacterium, one must have a strong immune system.

Considering tuberculosis protocol separately, there has been a more consistent program that was not as affected by the transition of power because of the time in which the disease began to affect South Africans. In 1996, the World Health Organization and the Department of Health in South Africa conducted a review of tuberculosis control program. Unlike the HIV program, which was struggling at the time, some of the key strengths in the findings were the "excellent human and financial resources and health infrastructure" and "acceptance by provinces of the internationally recommended Directly Observed Treatment, Short-course (DOTS) strategy incorporated in the national policy guidelines."[207] While the government had responded to the recommendation of international norms, there were weaknesses to the program including visibility of the available treatment for TB.[208] In 1996, there was a clear focus on how to treat individuals infected with tuberculosis. After this particular point the tuberculosis rate increased significantly in conjunction with HIV.[209]

In 2000, an enhanced focus on the Nation Tuberculosis Control Program (NTCP) focused on treatment of infected individuals. The Practical Guidelines report stated to medical professionals in South Africa that the, "Directly Observed Treatment Short-course (DOTS) strategy is the most effective strategy available for controlling TB, developed from the collective best practices, clinical trials and programmatic operations of TB control over the past two

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[207] Department of Health South Africa and WHO, *Tuberculosis Control in South Africa: Joint Programme Review* (Geneva: WHO, 1996), 2.

[208] Ibid, 2.

[209] See figures 5.1 and 5.2.

decades."[210] In conjunction with the reinforcement of the effectiveness of the DOTS program, there was a greater push for a strong supply of medication, sustained treatment, and a consistent method of recording infection rates.[211] In this year the key aims of the NTCP were:

> 1. To develop policies and guidelines to ensure early detection and effective treatment of TB in South Africa.
> 2. To manage the strategic implementation of the Directly Observed Treatment Short-course (DOTS) strategy to control TB.
> 3. To evaluate programme performance and provide technical support for the implementation of national guidelines.
> 4. Raise national awareness about TB so as to increase early health seeking behaviour of persons with TB symptoms.[212]

These particular goals continued as the main focus for the control program. In 2007, the Department of Health endeavored with a mission "[t]o prevent TB and to ensure that those who do contract TB have easy access to effective, efficient and high quality diagnosis, treatment and care that reduces suffering."[213] This mission was accompanied with a vision of having South Africa be burden free from the tuberculosis bacterium. However, this particular goal would require the integration of the HIV and tuberculosis programs.

Combating these particular diseases within the country is considered, "[o]ne of the greatest challenges facing post-apartheid South Africa is the control of the concomitant HIV and tuberculosis epidemics."[214] While the HIV strategic plans in 2000 and 2007 remark that co-infection of HIV and TB is crucial to fighting the disease, the government of South Africa only

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[210] Department of Health (South Africa). *The South African Tuberculosis Control Programme: Practical Guidelines 2000* (Pretoria: GCIS, 2000), 5.

[211] Ibid, 5.

[212] Ibid, 6.

[213] Department of Health, *Tuberculosis Strategic Plan for South Africa, 2007* (Pretoria: GCIS, 2007), 5.

[214] Salim S. Abdool Karim, "HIV infection and tuberculosis in South Africa: an urgent need to escalate the public health response," *Lancet* 12, no. 374 (2009): 921. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2803032/.

began to push for an integrated focus in 2008.[215] In particular, on the provincial level, the Western Cape (where integration research was prevalent) was able to successful treat co-infected individuals with ARVs and preventative therapy.[216] While advancement in the Western Cape is evident, there is still a growing problem in provinces such as KwaZulu-Natal, where hospitals are combating Multi-Drug Resistant Tuberculosis (MDR).[217] What is the response on the national level?

The National Strategic Plan for 2012-2016 responds to the provincial problems by becoming a plan to address HIV, sexually transmitted diseases, and tuberculosis. The holistic view shows that South Africa is indeed moving toward strong integration of these programs. The National Strategic Plan includes the following five goals of:

1. Halving the number of new HIV infections;
2. Ensuring that at least 80% of people who are eligible for treatment for HIV are receiving it (at least 70% should be alive and still on treatment after five years);
3. Halving the number of new aTB infections and deaths from TB;
4. Ensuring that the rights of people living with HIV are protected;
5. Halving the stigma related to HIV and TB.[218]

The increased integration is set to be delivered over the next few years. In order to achieve the variety of goals, "HIV and TB management must be mainstreamed into the core strategies of all relevant government departments in all three spheres of government."[219] In this sense, the programs will be effectively merged and overseen by the government to ensure the successful implementation of the desired programs. Moreover, the government is promising to play stronger

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[215] Ibid, 922.

[216] International HIV & AIDS charity, *HIV and AIDS in South Africa, http://www.avert.org/aidssouthafrica.htm.*

[217] Ibid.

[218] SANAC, *National Strategic Plna on HIV, STIs and TB 2012-2016 Summary* (Pretoria: GCIS, 2011), 3.

[219] Ibid, 17.

role through institution changes and transparency of the alterations made to adhere to the NSP.[220] As of early 2012, there was an initiative to integrate the program has become a massive focal point in the governmental policy making process.

South Africa's slower response to international norms, however, comes with many skeptics of the states potential success. In a 2009 report, Karim argued that:

> South Africa is experiencing the world's worst HIV and TB epidemics. The current epidemic trajectory suggests worsening of both epidemics with substantial increases in morbidity and mortality and the devastating impact of the premature loss of lives and economic productivity. The intertwined epidemics of HIV and TB have exacerbated each other and have been further compounded by the growth of MDR-TB and the emergence of XDR-TB.[221]

Due to South Africa's slow response to begin to integrate the programs, they face much more challenging problems including Extremely Drug Resistant TB (XDR-TB). The shift in policy proves to be a chance for South Africa to shake from the shackles of previous failure in order to reestablish the integrity of those infected by the disease. However, it is crucial to remember that South Africa still faces many social challenges, such as the stigma of condom use, which may prove to be an important factor into the success of the integration program.

South Africa also falls into a pattern of incrementalism in policy changes, as explained in Chapter 2. The slow evolution of tuberculosis policy came through research, including in-state research, and discussion over the validity of science. Incremental policy changes in this investigation are seen throughout extended periods of time. However, this is due to the manner in which South Africa creates policies toward the treatment of various disease. Fashioning five

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[220] Ibid, 23.

[221] Salim S. Abdool Karim, 932.

years plans, while advantageous for obtaining desired goals, does not easily accommodate yearly changes in science or the international health regime.

While the slow evolution does not respond quickly to international norms, it may also be hindered during a planned strategic time, such as the national strategic program, by the punctuations discussed in chapter 2. Mbeki's disagreement with the flow of international norms can be viewed as a potential punctuation to the policy arena.[222] The discussion of the scientific realities of the disease and treatment created a period where it was difficult for the policy arena to continue making changes, and subsequently inhibited the changes seen during the 2000-2005 period. After this plan, however, one can observe the changes made throughout the next decade to address HIV and tuberculosis together for those who are co-infected. South Africa is thus in flux as to how quickly the government adopts international norms created from WHO policy.

Statistical Answer: South AfricaInfection Rate and Funding Correlation?

The following section uses data from a variety of sources including the World Bank, PEPFAR, the Global Fund for AIDS, TB, and Malaria, and government spending data to see if there is a relationship between infection rate and the funding of health programs. One would expect that if the infection rate increases, that the funding rate would also increase, in order to actively respond to the disease. While South Africa has had a variety of difficulties altering, looking at the relationships between the infection rates and funding will hopefully expand upon the the argument that policies shift incrementally due to the nature of fighting communicable diseases.

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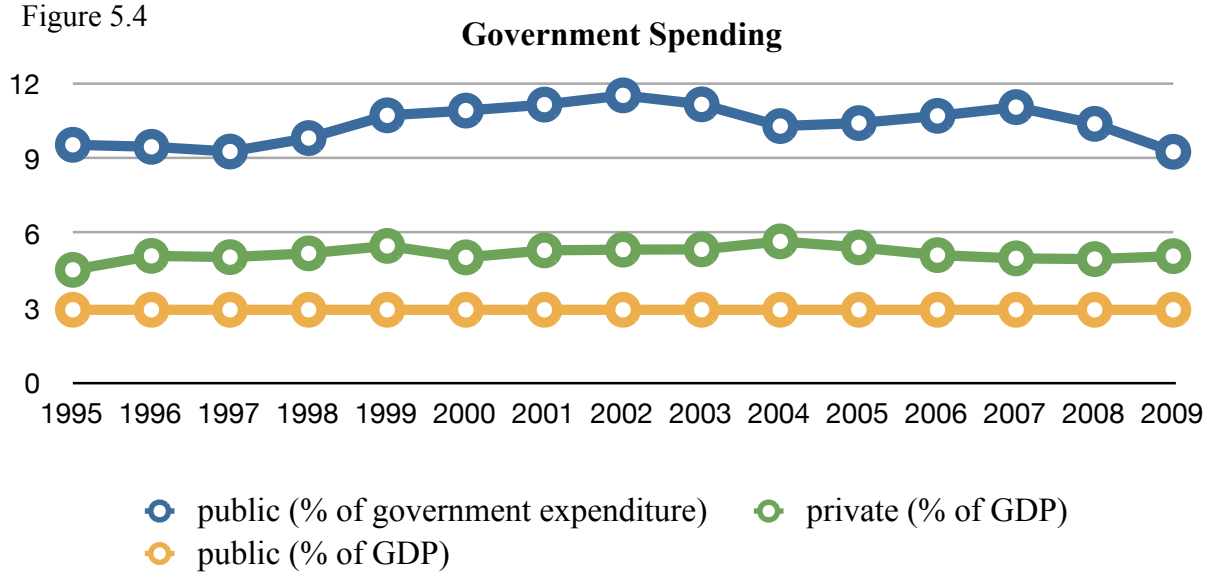
[222] See Chapter 2, page 19.

Government Funding:

The government's ability to fund health programs effectively has been a continuous concern in South Africa. Funding for health is important, especially in reaching goals such as having a strong and consistent supply of tuberculosis and anti-retroviral drugs. In viewing a funding-overtime-graph, including both government spending and non government spending, the pattern appears to fall in line with the incrementalist pattern of policy alterations, which can be seen through funding. From figure 5.4 it is clear that the government of the Republic of South Africa has continued to spend roughly ten percent of its GDP (gross domestic product) on health

Figure 5.4

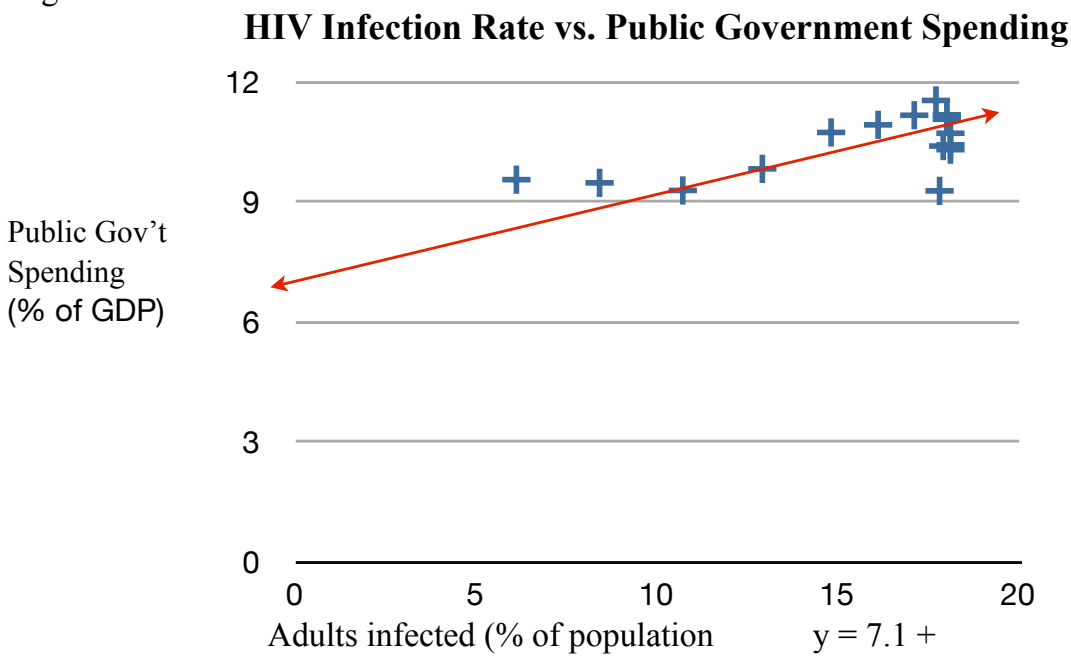


initiatives. While there are no major jumps, or punctuations, in government health funding, there still appears to be a moderate positive relationship with funding and infection rate in South Africa.

First considering the relationship between HIV infection rate and public government spending on health. The relationship between these two variables has an r value of 0.65, which reveals there is a moderately positive relationship between the variables. This relationship

matches up the South Africa's focus to increase the resources available for those infected with HIV. Moreover, while there has been fluctuation in the government spending, there is a clear focus on the government's desire to strengthen programs for the populous as revealed in

Figure 5.5.

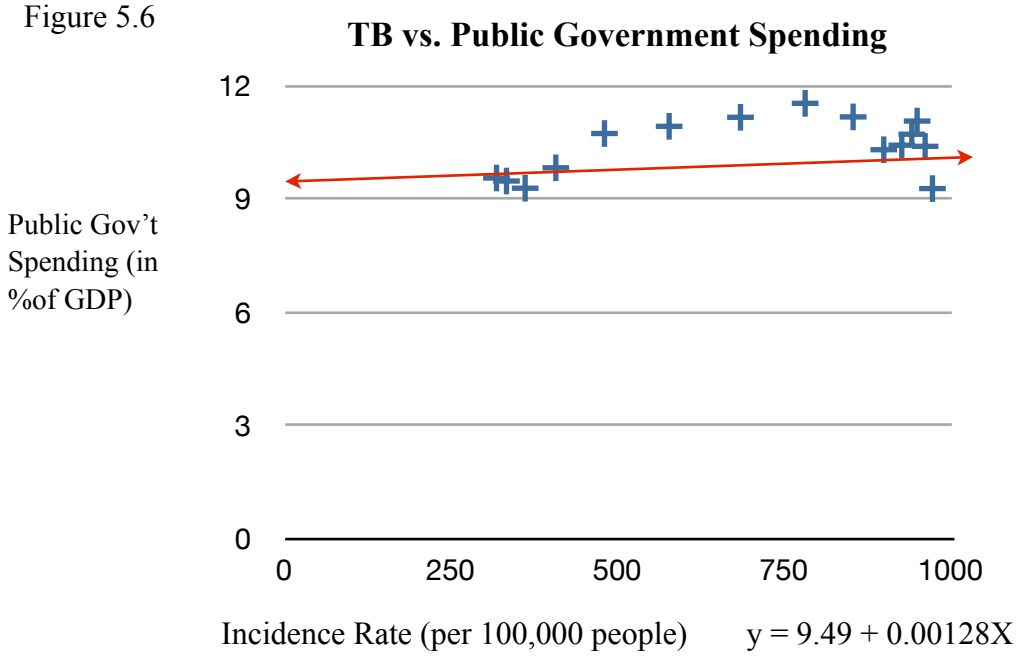


the national plans over the last twelve years. While there is a relationship between these two variables, does it also appear so when considering the tuberculosis incidence rate?

Tuberculosis incidence rate also reveals that government spending is moderately correlated to public government spending; however, the relationship is weaker than the HIV relationship. Figure 5.6 shows that the spread of points is much more varied on the lower end and higher end of incidence rate and spending. The r value for this particular relationship is 0.44, which is a moderately positive relationship this is much closer to a weak relationship. So what does this mean for tuberculosis? From this correlation and regression, it appears to have less of an influence over government spending increases than HIV.

Considering the above relationships, there appears to be evidence that as infection rates increased with these two particular diseases, the government funding also increases. This statistical insight helps to establish the pattern of incremental response, matching the history discussed in the previous section.

Figure 5.6

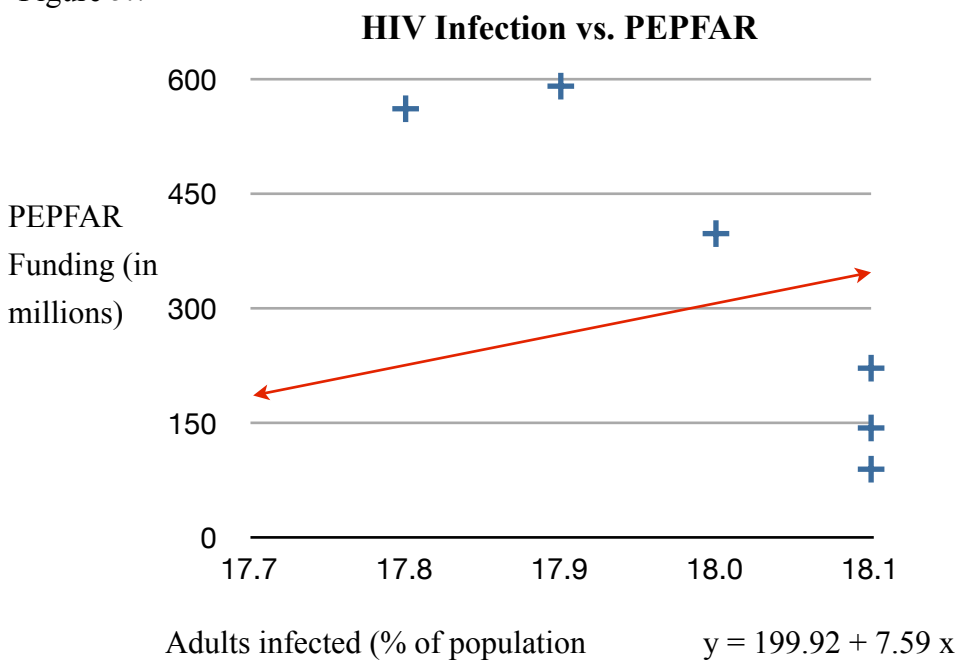


International Donors:

The government of South Africa appears to have funded programs based on the increased problem of HIV and tuberculosis in the state, but what about the influence of international donors? As discussed in chapter 2, donors have the potential to influence policy direction through funding programs that the state is unable to fund themselves. However, as previously mentioned, South Africa is considered capable of financing many of the health programs designed over the last two decades. This may help to explain why South Africa, even when considered a high burden TB country, has not asked for tuberculosis funding from The Global

Fund for AIDS, Tuberculosis, and Malaria. Due to this particular action, the following relationships are only seen with PEPFAR and HIV and the Global Fund and HIV.

Figure 5.7



Unlike the government funding examples, the relationship between HIV and PEPFAR has a strong negative relationship. With an r value of -0.93, as infection rate increases, the funding for HIV decreases. This particular relationship is opposite of what one would expect, especially in areas where there is a massive amount of people infected with an easily spread virus. Figure 5.7, while only including a limited amount of points, reveals that there is a drop off in funding. However, the infection rate only is varied over four tenths of a percentage point, potentially influencing the amount of funding from PEPFAR to South Africa's HIV programs.

Adding to the relationship between PEPFAR and HIV, the Global Fund's support for HIV programs in South Africa also has a strong negative relationship.[223] This particular relationship

[223] See in figure 5.8.

has an r value of -0.98, which is hard to argue that there is not a negative relationship. This adds that there is an exception between infection rate and funding. While both donor groups have this negative relationship, the funding as increased over time for South Africa, as

Figure 5.8

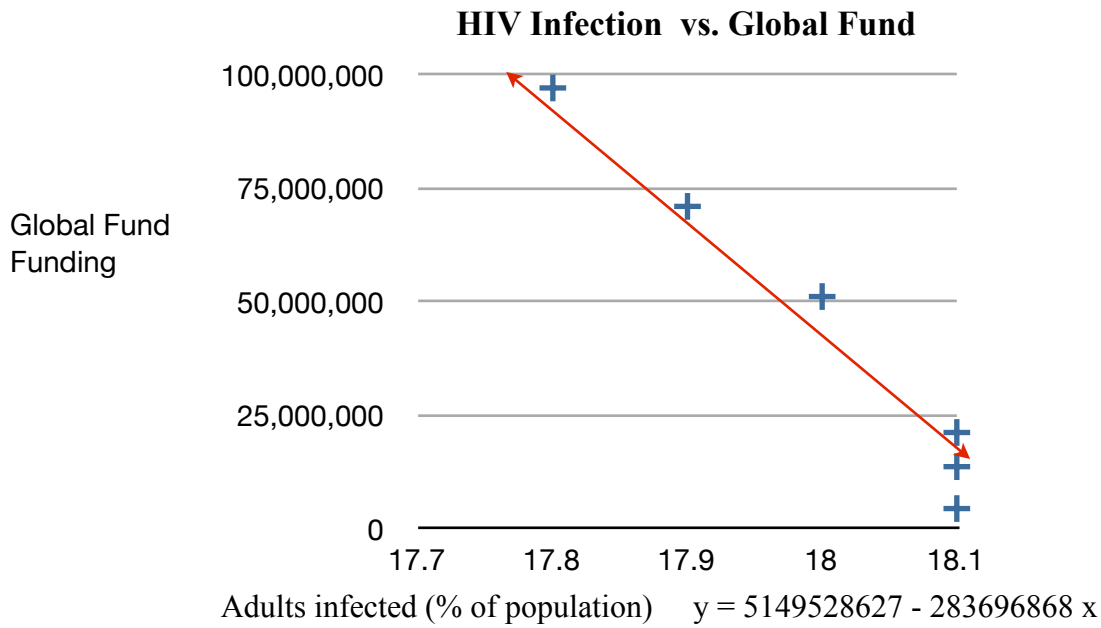


Figure 5.9

Year	Percent Infected	Funding (PEPFAR)	Global Fund (USD)
2000	16.1		
2001	17.1		
2002	17.7		
2003	18.0		
2004	18.1	89.3	4,488,872
2005	18.1	143.3	13,720,585
2006	18.1	221.6	21,250,901
2007	18.0	397.8	51,204,127
2008	17.9	590.9	71,073,173
2009	17.8	561.3	97,172,340

seen in figure 5.9. In the case of South Africa, while the funding relationship is strongly negative, it does not provide the full answer.

Thus, while the funding relationship between international donors and infection rate appears to be negative, infection rate and government funding has a positive relationship. The funding relationships in South Africa appear to be varied based on the given correlation regression lines. While this statistical analysis on funding and infection rate does not further the incrementalist argument, in looking over time at the funding, there is an incremental alteration over time, matching the policy changes in South Africa. Thus, incrementalism appears to play an important role in not only the policy making and budgeting allotments.

Conclusion: South Africa, Slow to Integrate Policy Norms

Considering both the chronological metamorphosis of the HIV and tuberculosis norm translation into state policy, South Africa has been slow to adopt the norms due to political influence from strong leaders and internal discrepancies among the infected populations. As the infection rate exponentially increased during the 1990s, there was less of a response from the government for HIV, but not tuberculosis. While the tuberculosis program was applauded by the World Health Organization, the HIV program was slow to evolve into a strong and sustainable national program. Moreover, integration of the two programs required much more understanding of the norms, as seen in the example of how the Western Cape province was able to prove that the integration program could be successful in South Africa.

Taking into consideration all of the presented information from both the qualitative and quantitative investigations, incrementalism best explains South Africa's evolution toward the commencement of HIV and TB integration in 2012. Understanding how the government went

through a variety of alterations during the beginning of the disease it is understandable that the incremental process was necessary. The new democratically elected government responded without massive punctuations in either policy changes or budget influences. In turn, South Africa is beginning to actively translate the international policy norms of HIV and tuberculosis into national state policy. This process is only beginning, it is impossible to know how long or successful the integration process will be in this state.

Chapter 6- Conclusion

Botswana and South Africa provide insight into how international policy recommendations can be incorporated into national state programs. While both cases are located in one of the most infected regions of the world, they have taken slightly different routes to integrating HIV and tuberculosis treatment. Moreover, the combination of policy investigation and statistical analysis of budgets and infection rates illuminates the translation of these individual states, and potentially other states on the African continent. Considering the similarities and differences in policy metamorphosis in the states helps to lead to an understanding of policy translation.

Similarities in Botswana and South Africa's Policy Formulations

Similarities in Botswana and South Africa reveal that governments require bureaucratic inspection and alterations to their programs to adopt international norms. What is the foundation of these bureaucratic norms? Referring back to the policy making arena, pictured in figures 4.1 and 5.3 respectively, Botswana and South Africa are similar in that the legislature is not the main organizational body fashioning the policy in either case.[224] Not only is the Department of Health/ Ministry of Health the only bureaucratic agency, but other national councils are formed to create national plans. For example, in Botswana the National AIDS Coordination Agency and the National Tuberculosis Program use their resources to help fashion programs for the populous of Botswana. Similarly, the South African National AIDS Council has become a leading member of the policy force working to create a comprehensive program for South Africa. In this particular

[224] Figure 4.1 is found on page 57 and figure 5.3 on page 78.

instance, the states have civil servants and other individuals actively working to create policy and integrate the programs into one comprehensive action. For both of these states, the bureaucratic influence is crucial in integrating the programs.

Moreover, these states are susceptible to the influence of members outside the bureaucracy questioning or propelling programs forward. In the case of Botswana, Festus Mogae was an advocate for the creation of the National ART program, "MASA."[225] Mogae used his presidential influence to advocate that the Minister of Health, a member of his cabinet, initiate the program. Conversely, in South Africa, President Mbeki negatively influenced the ART program's nationalization. His skepticism delayed the ART program by publicly arguing that the program was ineffective in treating Africans, and that ARVs were potentially toxic. These two leaders, who were chosen by the legislature, played crucial roles in when the ART programs in their states were enacted. In this case, the presidents along side the bureaucracy played major roles in determining the incremental course of action that responded to international norms.

Beyond the influence of the bureaucracy and the president, the correlations between infection rate and funding proved to be similar. HIV infection rate and funding have a positive relationship, showing that these governments responded with budget increases as the HIV virus continued to affect large numbers of people in the states. Government resources in turn were put toward the provision of HIV treatment to contain the massive increase of infected individuals. While this particular relationship is expected, funding relationships for international donorship have the opposite relationship: As the infection rate increased, the funding decreased. Importantly, however, the funding from groups such as PEPFAR and the Global Fund did not

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[225] International HIV & AIDS Charity, *HIV & AIDS in Botswana*, http://www.avert.org/aids-botswana.htm.

begin to become available until the early 2000s, after the governments began to respond to the endemics on their own. In both of these states, the influences of donorship and government expenditures have helped stop the exponential increase that was seen during the 1990s. Moreover, especially in Botswana, there appears to be a decrease in tuberculosis, showing that the monetary funding may be starting to help lower the burden in these states. In this sense, the monetary situation is similar in both of these cases.

The similarities in the political structure and the budgets for combating these disease reveal how incrementalism can be viewed in multiple forms. Both in the political and financial sectors, both states have incremental changes that led to a consistent amount of funding for these particular programs. Incrementalism, in these instances, explains the phenomena more effectively than punctuation equilibrium theory. In terms of punctuations, neither Botswana nor South Africa had one-time policy changes that were immediately retracted and replaced with a new policy. These states accepted policies and slowly made alterations as necessary. Further, when examining the budgets, there were no major jumps in funding that did not result in a constant increase. For example, in Figure 4.5 located on page 69, there was an increase in public government expenditure in the year 2004. Yet, this increase continued into the following years, making this jump not an example of a one-time jump in funding. Due to these reasons, punctuation equilibrium theory does not explain the policy changes as adequately as incrementalism. While they have strong similarities in the political structure and the budgetary action, they still vary in the areas of strength of the programs and the rapid or slow acceptance of international norms.

Differences in Botswana and South Africa's Policy Formulations

While their are similarities in how the political processes function in these states, Botswana and South Africa have varied program strengths through acceptance of international norms. Botswana has been very receptive to international norms, adopting many of the WHO policy recommendations within two or three years of each release. Botswana was one of the first states to implement a national ART program for all citizens in the state. In turn, "[t]he success of this treatment program has made Botswana an example for other African nations to follow."[226] Implementing this particular program, which coincides with the WHO recommendations, shows Botswana's ability to absorb HIV policy norms. Moreover, Botswana continued to adopt new strategies, including isoniazid preventative therapy programs.[227] Since 2005, the integration process for the national programs for HIV and TB have followed the WHO recommendations. Botswana's particular focus on and open acceptance of international norms is different from South Africa.

South Africa has taken a longer to adopt international norms, both due to the skepticism over ARVs, and also the ability to conduct scientific studies in individual provinces that are able to test new treatment actions. South Africa's ART program slowly developed from the two strategic plans between 2000 and 2007. Moreover, the program does not seem to effectively address all at-risk populations, especially pregnant women running the risk of mother-to-child transmission. As of 2011, many mothers were still spreading HIV to their new born children because education failed to focus both on ways in which mothers can pass the virus to their

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[226] International HIV & AIDS Charity, *HIV & AIDS in Botswana*, http://www.avert.org/aids-botswana.htm.

[227] Javid Syed.

babies.[228] The South African ART program is not considered to be as strong Botswana's, making integration much more challenging there than in Botswana. While the tuberculosis program was significantly stronger than the HIV program, integration poses many more problems in South African than does integration in Botswana. While there is evidence that certain provinces have been successful in co-infection treatment, transporting this success to all provinces is extremely difficult. The two provinces mentioned in chapter 5, the Western Cape and Kwa-Zulu Natal, are the extremes of HIV/TB treatment integration effectiveness in South Africa. The Western Cape is much wealthier than Kwa-Zulu Natal; monetary differences prevent the provinces from reacting similarily. Moreover, South Africa is still facing many challenges of economic and social development that interfere with the integration of the two programs.[229]

While Botswana and South Africa have similar successes, the differences evince that South Africa has many more elements inhibiting a swift adoption of international policy norms. These particular inhibiting agents are focused in the recent change and transitional period from a non-integrated to an integrated racial democracy and a more decentralized method of standardizing medical policies. As explained in chapter 5, South Africa's transition into an interracial democracy has slowed the process of adoption due to the rise of charismatic leaders in the ANC. Integrating into a new political system made it difficult for policies to be translated as quickly because not all individuals understood the extent of the HIV/AIDS or TB problem in all provinces. As the ANC continued to be the ruling party, also seen as the party of the new South African democracy, there were individual leaders who were able to slow the process of learning

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[228] International HIV & AIDS Charity, *HIV & AIDS in South Africa*, http://www.avert.org/aidssouthafrica.htm

[229] Heather Deegan, *The politics of the New South Africa: Apartheid and After* (New York: Pearson Education, 2001), 17.

by questioning the validity of HIV as the virus that causes AIDS. In this sense, the new democracy was learning how to run a country and simultaneously attempting to combat a massive public health epidemic. While the national leadership was attempting to address HIV and tuberculosis, the provinces were able to create policies at their own pace. According to Schedule 4 (which is a part of the constitution dictating what issue areas can be discussed and have policies formulated), provincial governments are allowed to create policies on health issues.[230] This brings up the differences mentioned between Western Cape and Kwa-Zulu Natal, which face different financial and social challenges within the provincial boarders. Due to the fact that provincial legislatures are allowed to create legislation to address health problems, provinces have enacted policies to treat diseases based on internal experience. Thus, South Africa not only learns from international norms, but also from different experiences within the state, making policy translation slower because of regional experience with a given treatment recommendation. The experiences of Botswana and South Africa reveal the potential to understand other states' actions to adopt norms. Understanding the similarities and differences cultivate a more generalized understanding of policy norm translation, at least in terms of health policy.

Final Remarks on Policy Translation

The answer to the posed question of why have Botswana and South Africa not adopted these integration policies comes down to the fact that policy must be accepted through the policy making processes dictated in their given governmental documents. Botswana and South Africa are currently in the process of integrating these two massive programs. Botswana is much closer

[230] Government Communication and Information System (South Africa). Schedule 4- Functional areas of concurrent national and provincial legislative competence. http://www.info.gov.za/aboutgovt/parliament/index.htm.

to having fully formed national policies with completed integration because Botswana's integration policy has been incrementally changing to ensure the programs are integrated appropriately and successfully. In the case of South Africa, the national government has just begun to fully integrate the two national programs starting in this current year of 2012. South Africa has now begun to accept the international policy norms that the WHO presented in 2004. While these programs have differences, the key to answering the question is understanding that policies must be accepted by the state governments and turned into national initiatives.

Understanding the process for health translation is important because diseases are becoming more and more lethal to societies. Societies thus need to ensure that appropriate policies are implemented, because citizens are not always aware of the latest medical treatments. While construction of the health sector is important, one must remember that:

> Most citizens come into contact with health sector institutions and personnel at several points in their lives, many of which are highly significant. Because the nature of some decision making in health involves matters of life and death, health is accorded a unique position in comparison with other issues."[231]

In this sense, it is the individual state's responsibility to create positive policies that are the best suited for combating disease, especially endemic diseases in the state. In particular, treatment integration is becoming more necessary as many diseases affect the immune system. Considering the role of diseases that destroy the immune system in the modern global community, opportunistic infections are increasingly more influential in the international the medical discussions.

While the medical field is constantly changing, international cooperation is vital because individual states, especially developing states, are incapable of stopping pandemics by

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[231] GIll Walt, 5.

themselves. Moreover, “there is a coalition of Western industrialized interests based on common concerns, funds, personnel and technical expertise, and this is played out in the policy arena of international agencies.”[232] The international arena is required to ensure efficient learning is acquired, leading to the Western world funding many programs; this funding is necessary because financing programs, including medical programs, is extremely costly. The international arena, through multilateral and bilateral funding and information sharing, enables states to learn to treat diseases much as Botswana and South Africa have with HIV and tuberculosis.

[232] Ibid, 141.

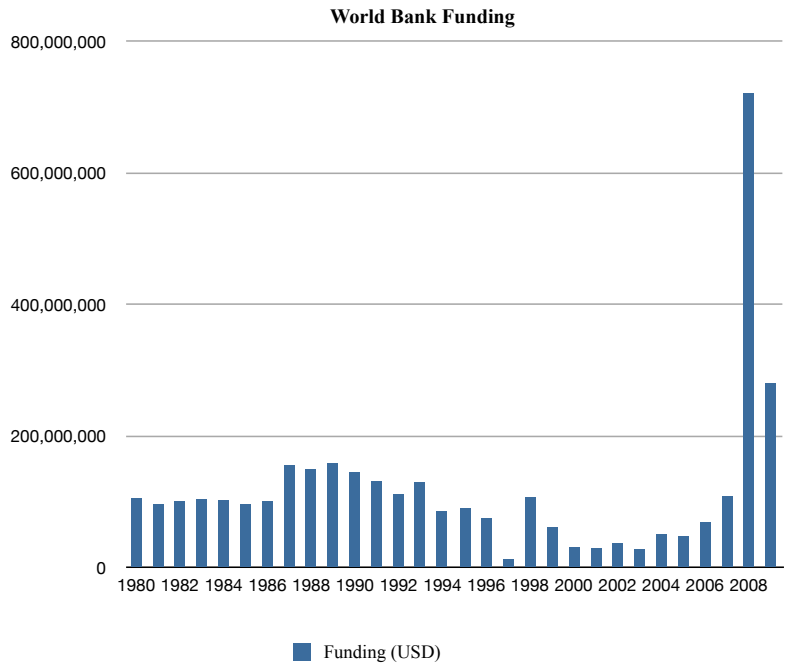
Appendix A

These appendixes are the statistics for Botswana:

These are the graphs and raw data for the funding and infection rate.

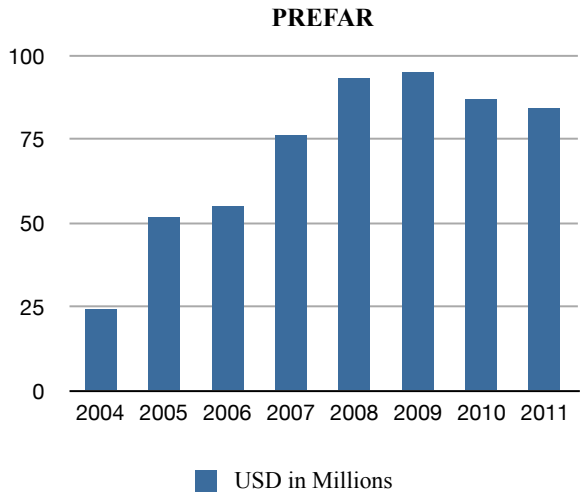
A:1 World Bank Funding

Year	Funding (USD)
1980	105,270,000
1981	96,470,000
1982	101,140,000
1983	103,120,000
1984	101,930,000
1985	95,620,000
1986	100,660,000
1987	154,840,000
1988	149,800,000
1989	157,940,000
1990	145,220,000
1991	131,070,000
1992	111,260,000
1993	128,890,000
1994	85,180,000
1995	89,540,000
1996	74,450,000
1997	12,150,000
1998	106,250,000
1999	60,890,000
2000	30,620,000
2001	29,170,000
2002	37,190,000
2003	27,850,000
2004	50,180,000
2005	47,980,000
2006	68,810,000
2007	107,670,000
2008	720,260,000
2009	279,600,000



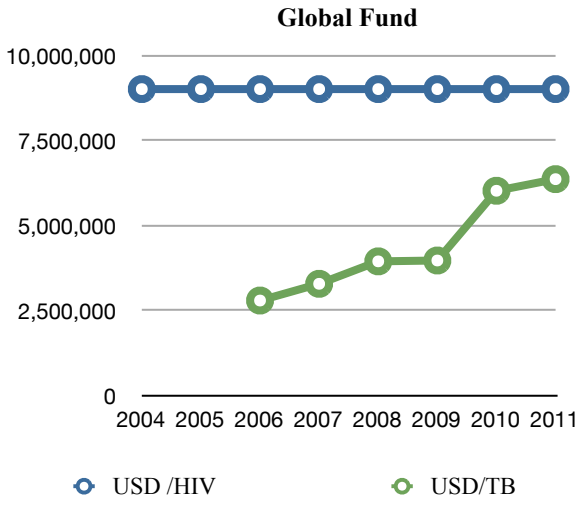
A:2 PEPFAR Funding

Year	USD in Millions
2004	24.3
2005	51.6
2006	54.9
2007	76.2
2008	93.2
2009	95.1
2010	87.0
2011	84.4
total:	5556.8

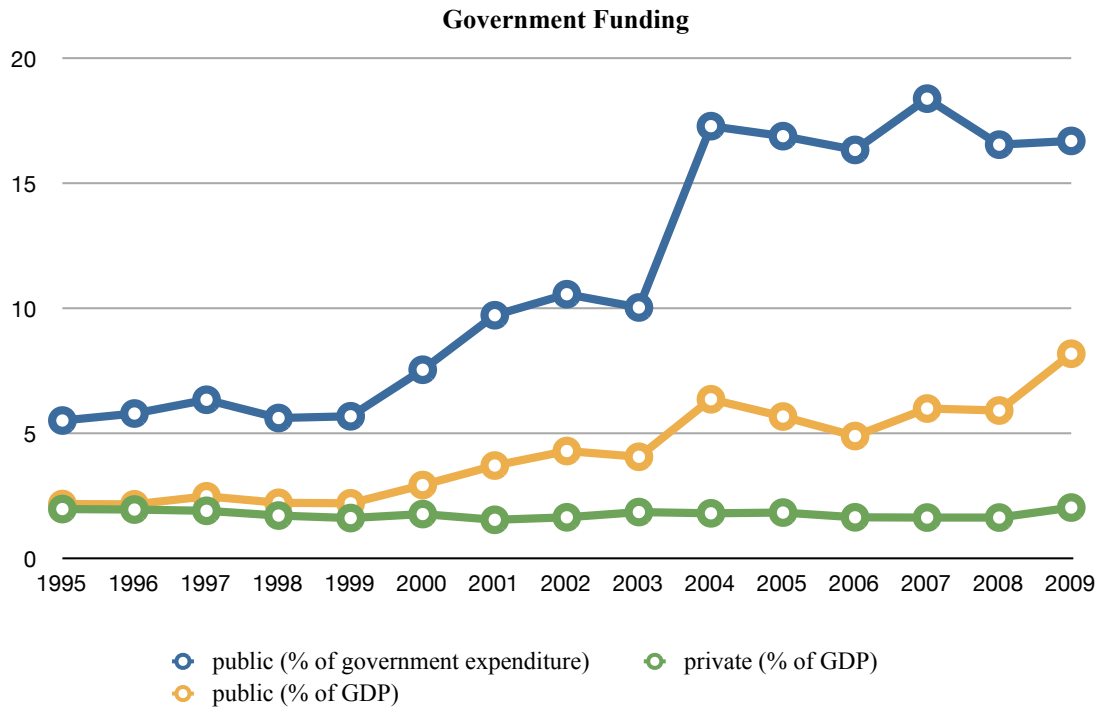


A:3 Global Fund to Fight Against AIDS, Tuberculosis, and Malaria Funding

Year	USD /HIV	USD/Tb
2004	9,019,119	
2005	9,019,119	
2006	9,019,119	2,797,173
2007	9,019,119	3,289,373
2008	9,019,119	3,949,978
2009	9,019,119	3,975,343
2010	9,019,119	6,026,998
2011	9,019,119	6,369,290



A:4 Government Health Spending

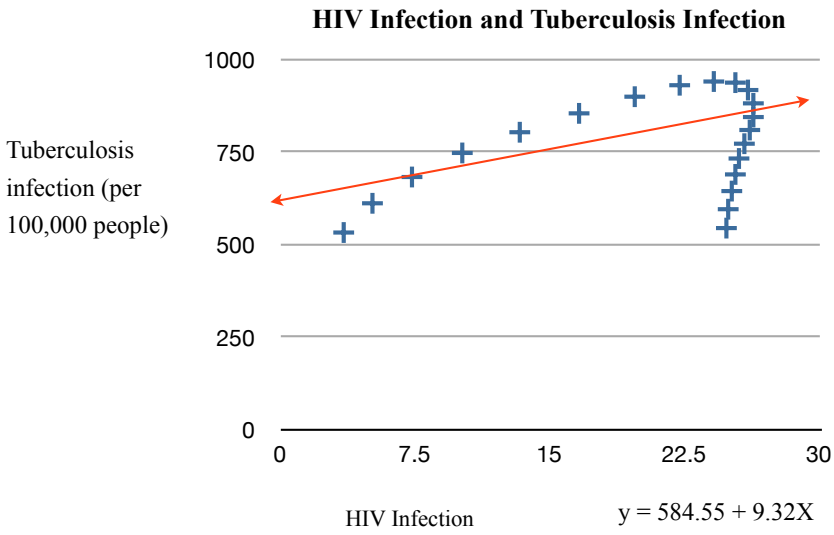


	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
public (% of government expenditure)	9.55	9.47	9.28	9.82	10.7	10.9	11.2	11.5	11.2	10.3	10.4	10.7	11.1	10.4	9.27
private (% of GDP)	4.54	5.10	5.05	5.20	5.50	5.04	5.32	5.35	5.36	5.68	5.44	5.13	5.00	4.97	5.09
public (% of GDP)	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94

The following appendixes are the different correlation and regression relationships between infection rate/ incidence rate and funding.

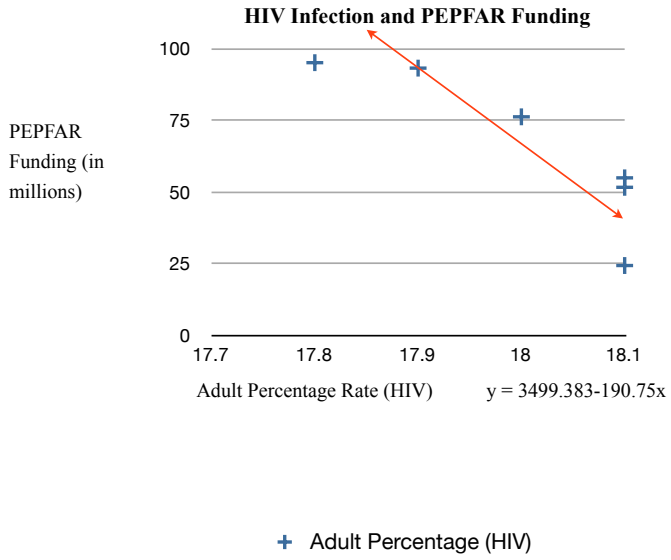
A:5 This is a correlation regression model, showing that HIV and TB are correlated in Botswana.

Year	Adult Percentage (HIV)	Incidence per 100,000 people
1990	3.5	533
1991	5.1	612
1992	7.3	683
1993	10.1	748
1994	13.3	804
1995	16.6	855
1996	19.7	900
1997	22.2	931
1998	24.1	941
1999	25.3	938
2000	26.0	918
2001	26.3	882
2002	26.3	845
2003	26.1	810
2004	25.8	773
2005	25.5	733
2006	25.3	690
2007	25.1	645
2008	24.9	596
2009	24.8	545
R Value	0.4031752085	
Intercept	584.55	
Slope	9.32	



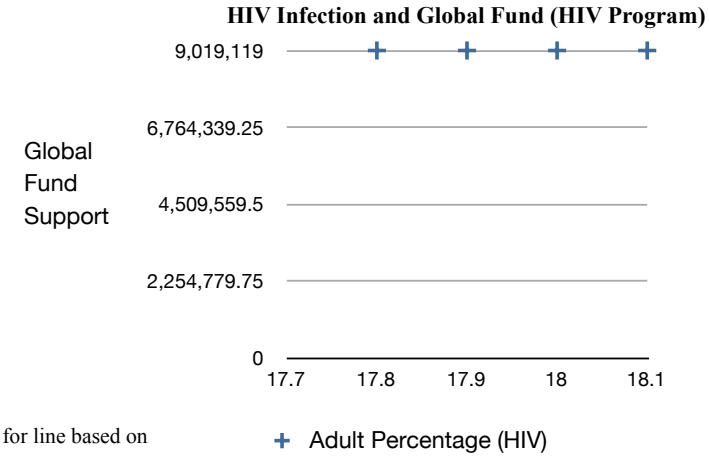
A:6 HIV Infection Rate and PEPFAR

Year	Adult Percentage (HIV)	PEPFAR USD (millions)
1990	0.7	
1991	1.2	
1992	1.8	
1993	2.9	
1994	4.3	
1995	6.1	
1996	8.4	
1997	10.7	
1998	12.9	
1999	14.8	
2000	16.1	
2001	17.1	
2002	17.7	
2003	18.0	
2004	18.1	24.3
2005	18.1	51.6
2006	18.1	54.9
2007	18.0	76.2
2008	17.9	93.2
2009	17.8	95.1
R Value	-0.879856145	
Intercept	3499.38	
Slope	-190.75	



A:7 HIV Infection Rate and the Global Fund (HIV Program)

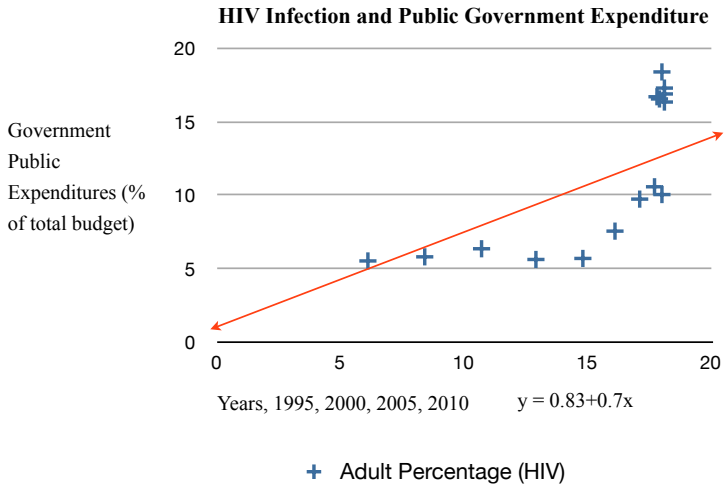
Year	Adult Percentage (HIV)	Global Fund (HIV money)
1990	0.7	
1991	1.2	
1992	1.8	
1993	2.9	
1994	4.3	
1995	6.1	
1996	8.4	
1997	10.7	
1998	12.9	
1999	14.8	
2000	16.1	
2001	17.1	
2002	17.7	
2003	18.0	
2004	18.1	9,019,119
2005	18.1	9,019,119
2006	18.1	9,019,119
2007	18.0	9,019,119
2008	17.9	9,019,119
2009	17.8	9,019,119
R Value		
Intercept		unable to calcul



No slope for line based on funding

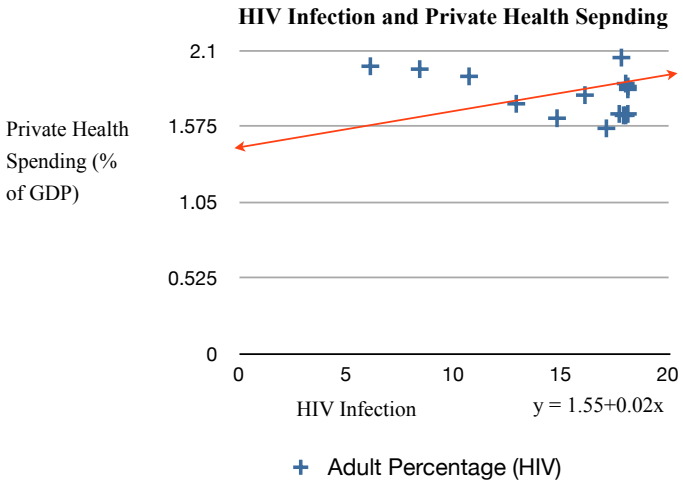
A:8 HIV Infection Rate and Public Government Expenditure

Year	Adult Percentage (HIV)	Gov't Public Expenditure (%)
1990	0.7	
1991	1.2	
1992	1.8	
1993	2.9	
1994	4.3	
1995	6.1	5.53
1996	8.4	5.81
1997	10.7	6.36
1998	12.9	5.63
1999	14.8	5.70
2000	16.1	7.56
2001	17.1	9.74
2002	17.7	10.58
2003	18.0	10.05
2004	18.1	17.30
2005	18.1	16.90
2006	18.1	16.35
2007	18.0	18.40
2008	17.9	16.56
2009	17.8	16.71
R Value	0.7434042214	
Intercept	0.83	
Slope	0.7	



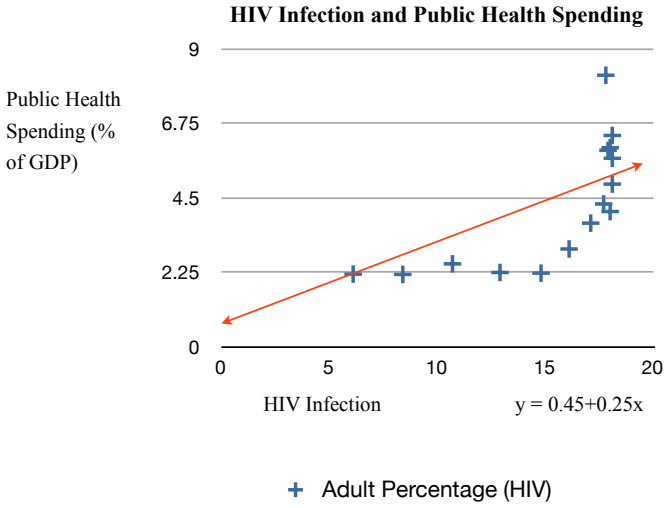
A:9 HIV Infection and Private Health Spending

Year	Adult Percentage (HIV)	private (% of GDP)
1990	0.7	
1991	1.2	
1992	1.8	
1993	2.9	
1994	4.3	
1995	6.1	1.99
1996	8.4	1.97
1997	10.7	1.92
1998	12.9	1.73
1999	14.8	1.63
2000	16.1	1.79
2001	17.1	1.56
2002	17.7	1.66
2003	18.0	1.87
2004	18.1	1.83
2005	18.1	1.85
2006	18.1	1.66
2007	18.0	1.65
2008	17.9	1.65
2009	17.8	2.05
R Value	-0.490704888	
Intercept	1.55	
Slope	0.02	



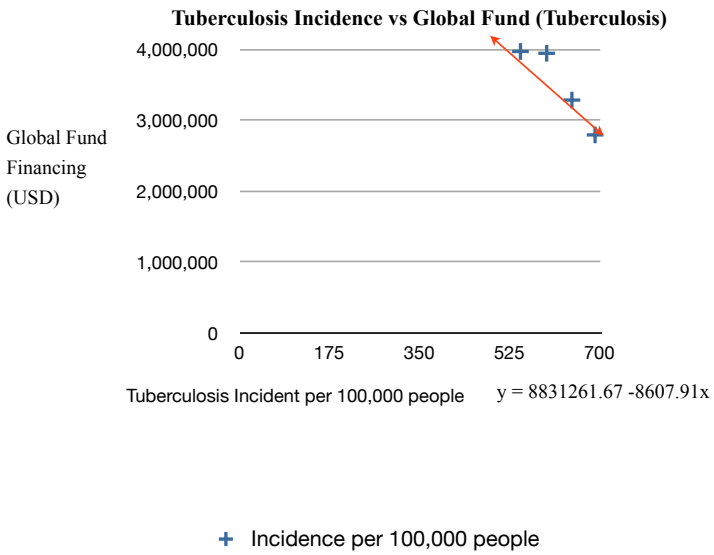
A:10 HIV Infection and Public Health Spending

Year	Adult Percentage (HIV)	Public (% of GDP)
1990	0.7	
1991	1.2	
1992	1.8	
1993	2.9	
1994	4.3	
1995	6.1	2.19
1996	8.4	2.18
1997	10.7	2.50
1998	12.9	2.24
1999	14.8	2.22
2000	16.1	2.95
2001	17.1	3.73
2002	17.7	4.31
2003	18.0	4.08
2004	18.1	6.38
2005	18.1	5.69
2006	18.1	4.91
2007	18.0	6.01
2008	17.9	5.93
2009	17.8	8.20
R Value	0.719053848	
Intercept	0.45	
Slope	0.25	



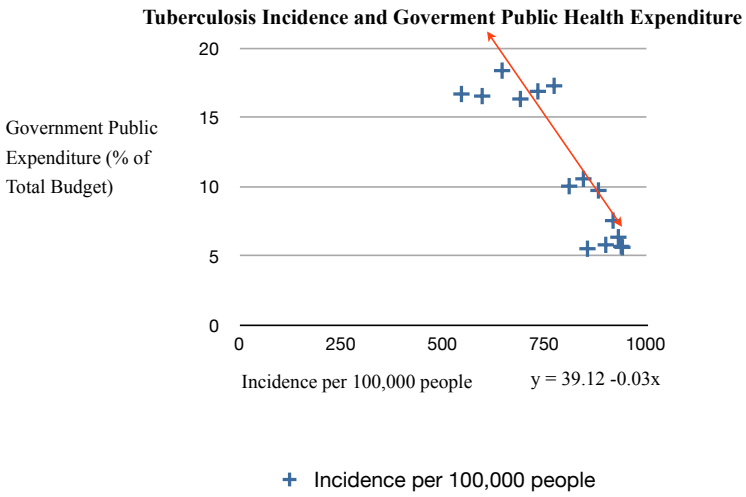
A:11 Tuberculosis Incidence Rate and the Global Fund (Tuberculosis Program)

Year	Incidence per 100,000 people	Global Fund (TB in USD)
1990	533	
1991	612	
1992	683	
1993	748	
1994	804	
1995	855	
1996	900	
1997	931	
1998	941	
1999	938	
2000	918	
2001	882	
2002	845	
2003	810	
2004	773	
2005	733	
2006	690	2,797,173
2007	645	3,289,373
2008	596	3,949,978
2009	545	3,975,343
R Value	-0.947865857	
Intercept	8831261.67	
Slope	-8607.91	



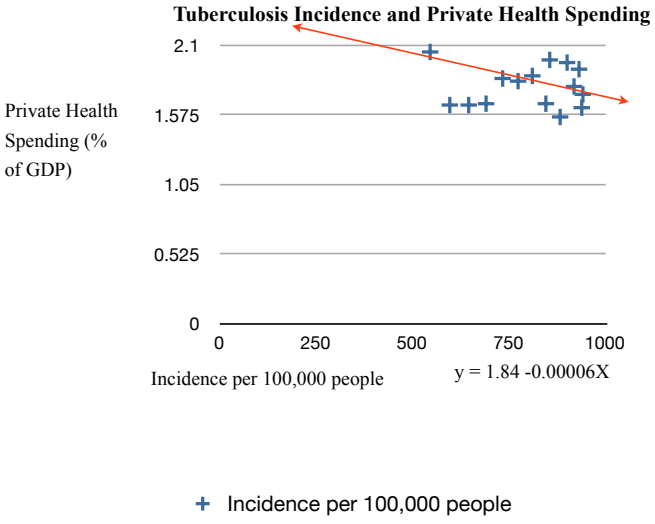
A:12 Tuberculosis Incidence and Government Public Health Expenditure

Year	Incidence per 100,000 people	Gov't Public Expenditure
1990	533	
1991	612	
1992	683	
1993	748	
1994	804	
1995	855	5.53
1996	900	5.81
1997	931	6.36
1998	941	5.63
1999	938	5.70
2000	918	7.56
2001	882	9.74
2002	845	10.58
2003	810	10.05
2004	773	17.30
2005	733	16.90
2006	690	16.35
2007	645	18.40
2008	596	16.56
2009	545	16.71
R Vaule	-0.885818021	
Intercept	--0.03	
Slope	39.12	



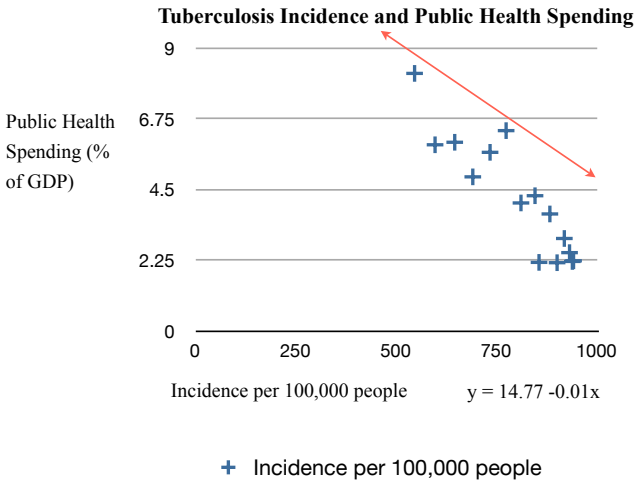
A:13 Tuberculosis Incidence and Private Health Spending

Year	Incidence per 100,000 people	private (% of GDP)
1990	533	
1991	612	
1992	683	
1993	748	
1994	804	
1995	855	1.99
1996	900	1.97
1997	931	1.92
1998	941	1.73
1999	938	1.63
2000	918	1.79
2001	882	1.56
2002	845	1.66
2003	810	1.87
2004	773	1.83
2005	733	1.85
2006	690	1.66
2007	645	1.65
2008	596	1.65
2009	545	2.05
R Vaulue	-0.05476261	
Intercept	1.84	
Slope	0	



A:14 Tuberculosis Incidence and Public Health Spending

Year	Incidence per 100,000 people	Public (% of GDP)
1990	533	
1991	612	
1992	683	
1993	748	
1994	804	
1995	855	2.19
1996	900	2.18
1997	931	2.50
1998	941	2.24
1999	938	2.22
2000	918	2.95
2001	882	3.73
2002	845	4.31
2003	810	4.08
2004	773	6.38
2005	733	5.69
2006	690	4.91
2007	645	6.01
2008	596	5.93
2009	545	8.20
R Value	-0.908921093	
Intercept	14.77	
Slope	-0.01	

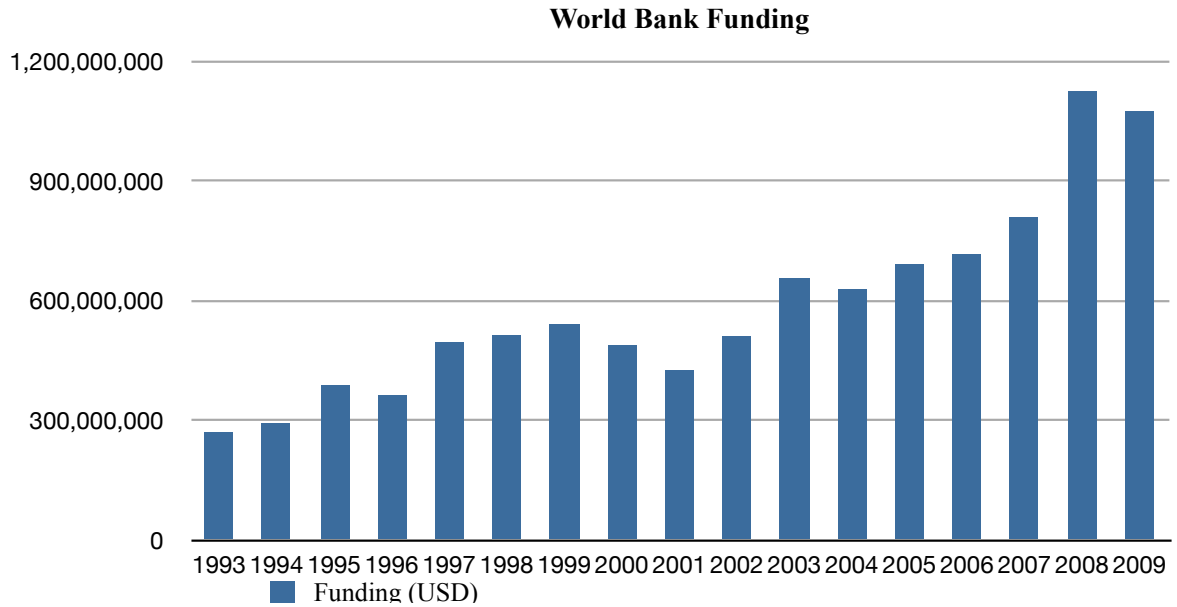


Appendix B

These appendixes are the statistics for South Africa:
The data tables below are funding statistics:

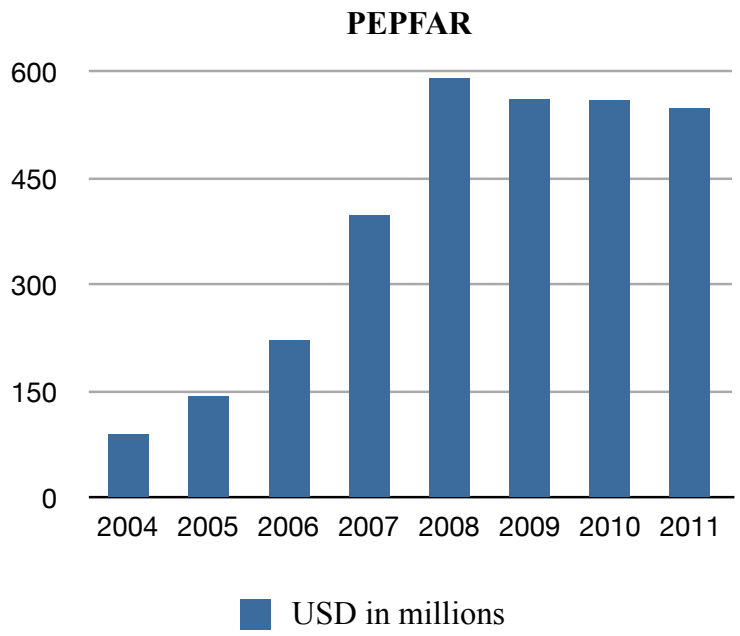
B:1 World Bank Funding

Year	Funding (USD)
1993	270,450,000
1994	293,070,000
1995	386,170,000
1996	362,300,000
1997	495,590,000
1998	512,980,000
1999	540,440,000
2000	486,370,000
2001	425,310,000
2002	511,240,000
2003	655,530,000
2004	628,920,000
2005	689,960,000
2006	714,820,000
2007	807,330,000
2008	1,124,940,000
2009	1,075,020,000



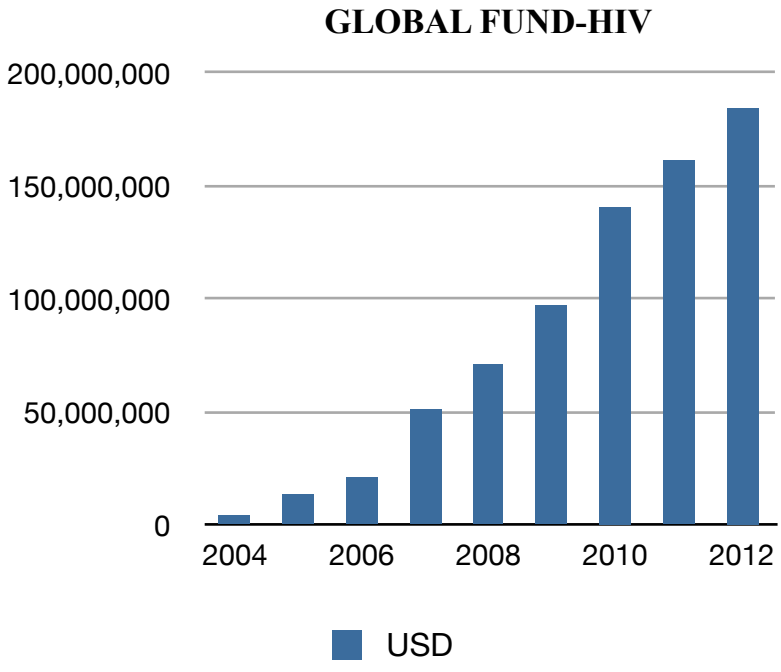
B:2 HIV PEPFAR Program

Year	USD in millions
2004	89.3
2005	143.3
2006	221.6
2007	397.8
2008	590.9
2009	561.3
2010	560.4
2011	548.7
total:	3113.4

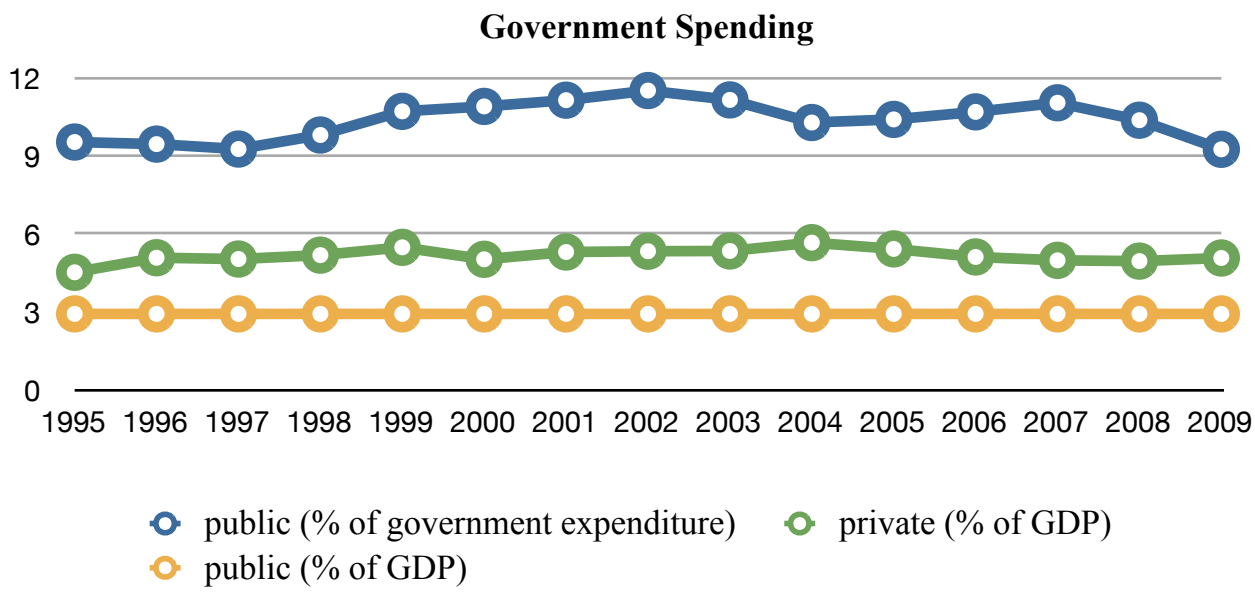


B:3 HIV Global Fund Program

Year	USD
2004	4,488,872
2005	13,720,585
2006	21,250,901
2007	51,204,127
2008	71,073,173
2009	97,172,340
2010	140,817,454
2011	161,282,400
2012	184,559,390



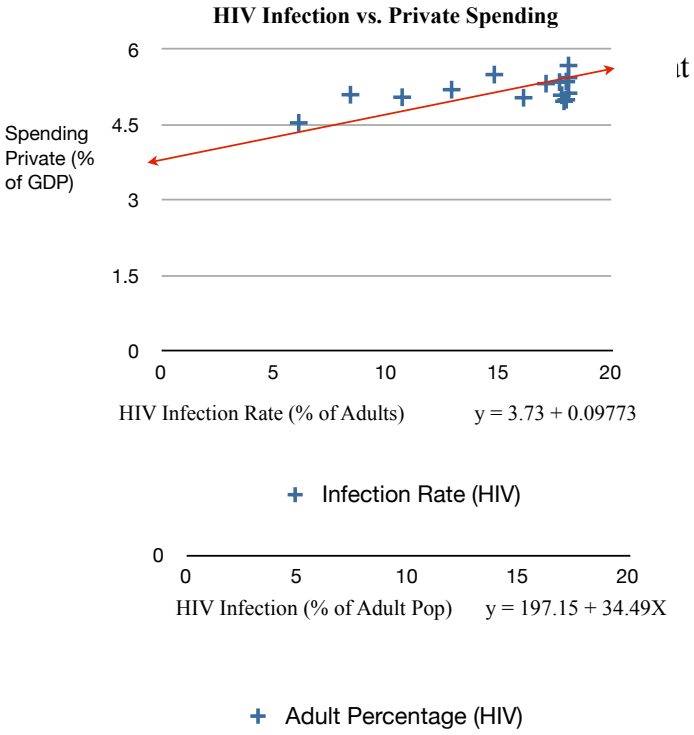
B:4 Government Health Spending



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
public (% of government expenditure)	9.55	9.47	9.28	9.82	10.7	10.9	11.2	11.5	11.2	10.3	10.4	10.7	11.1	10.4	9.27
private (% of GDP)	4.54	5.10	5.05	5.20	5.50	5.04	5.32	5.35	5.36	5.68	5.44	5.13	5.00	4.97	5.09
public (% of GDP)	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94	2.94

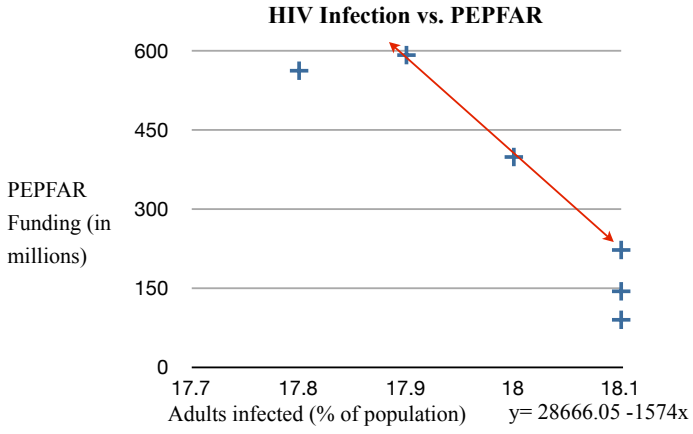
The following appendixes are the correlation and regression statistics that were run with infection rate and funding

B:5 HIV Infection Rate and Tuberculosis in South Africa HIV and tuberculosis are



Year	Adult Percentage (HIV)	Incidence per 100,000 people
1990	0.7	301
1991	1.2	301
1992	1.8	302
1993	2.9	305
1994	4.3	309
1995	6.1	317
1996	8.4	332
1997	10.7	360
1998	12.9	406
1999	14.8	479
2000	16.1	576
2001	17.1	683
2002	17.7	780
2003	18.0	852
2004	18.1	898
2005	18.1	925
2006	18.1	940
2007	18.0	948
2008	17.9	960
2009	17.8	971
R-value	0.885012240878999	
slope	34.49	
intercept	197.15	

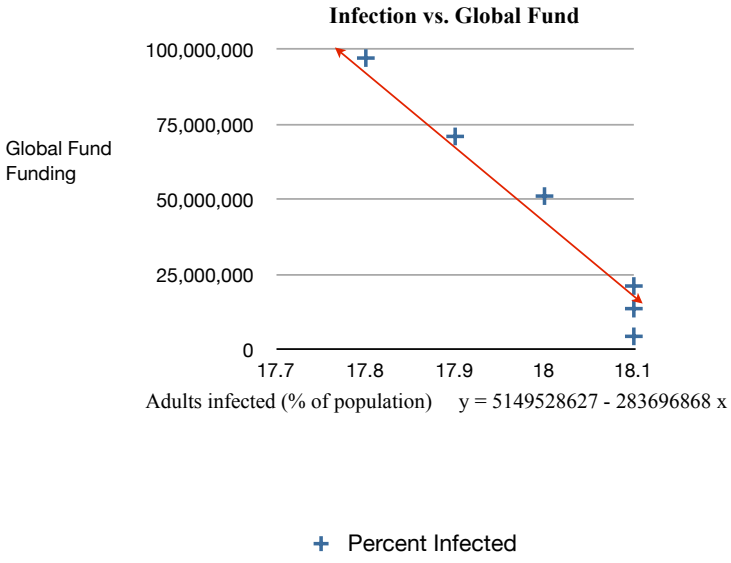
B:6 HIV Infection and PEPFAR



Year	Percent Infected	Funding (PEPFAR)
2000	16.1	
2001	17.1	
2002	17.7	
2003	18.0	
2004	18.1	89.3
2005	18.1	143.3
2006	18.1	221.6
2007	18.0	397.8
2008	17.9	590.9
2009	17.8	561.3
R-value	-0.92713626	
slope	-1574	
intercept	28666.05	

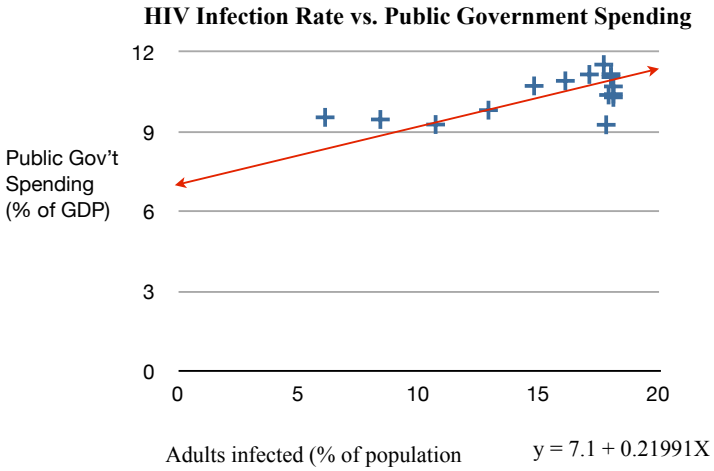
B:7 HIV Infection and the Global Fund

Year	Percent Infected	Global Fund (USD)
2000	16.1	
2001	17.1	
2002	17.7	
2003	18.0	
2004	18.1	4,488,872
2005	18.1	13,720,585
2006	18.1	21,250,901
2007	18.0	51,204,127
2008	17.9	71,073,173
2009	17.8	97,172,340
R-value	-0.983105829	
slope	-283696868	
intercept	5149528627	



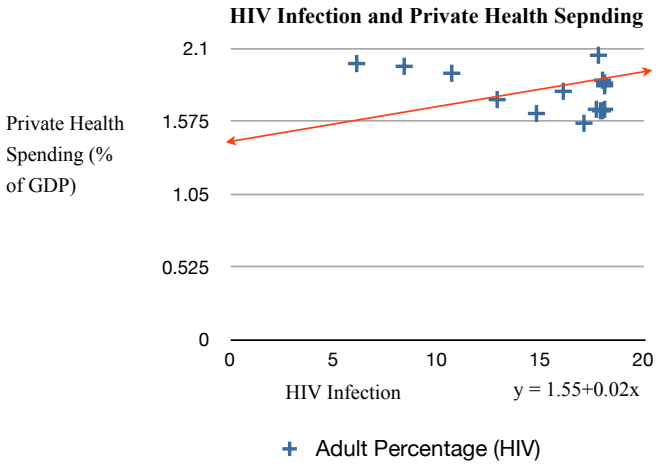
B:8 HIV Infection Rate and Public Government spending

Year	Infection Rate (HIV)	Gov't Spending (Public)
1990	0.7	
1991	1.2	
1992	1.8	
1993	2.9	
1994	4.3	
1995	6.1	9.55
1996	8.4	9.47
1997	10.7	9.28
1998	12.9	9.82
1999	14.8	10.73
2000	16.1	10.92
2001	17.1	11.16
2002	17.7	11.53
2003	18.0	11.17
2004	18.1	10.30
2005	18.1	10.42
2006	18.1	10.71
2007	18.0	11.06
2008	17.9	10.39
2009	17.8	9.27
R-value	0.6451442894	
slope	0.21991	
intercept	7.1	



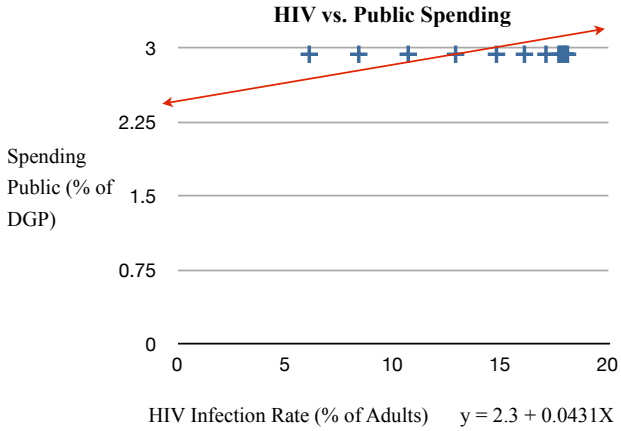
B:9 HIV Infection Rate and Private Health Spending

Year	Adult Percentage (HIV)	private (% of GDP)
1990	0.7	
1991	1.2	
1992	1.8	
1993	2.9	
1994	4.3	
1995	6.1	1.99
1996	8.4	1.97
1997	10.7	1.92
1998	12.9	1.73
1999	14.8	1.63
2000	16.1	1.79
2001	17.1	1.56
2002	17.7	1.66
2003	18.0	1.87
2004	18.1	1.83
2005	18.1	1.85
2006	18.1	1.66
2007	18.0	1.65
2008	17.9	1.65
2009	17.8	2.05
R Value	-0.490704888	
Intercept	1.55	
Slope	0.02	



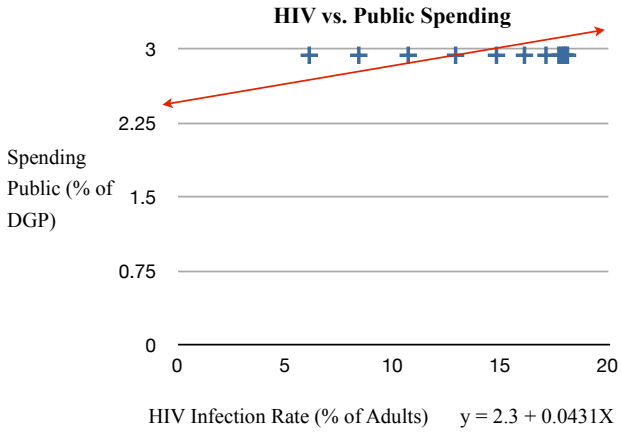
B:10 HIV Infection Rate and Public Health Spending

Year	Infection Rate (HIV)	Public (%of GDP)
1990	0.7	
1991	1.2	
1992	1.8	
1993	2.9	
1994	4.3	
1995	6.1	2.94
1996	8.4	2.94
1997	10.7	2.94
1998	12.9	2.94
1999	14.8	2.94
2000	16.1	2.94
2001	17.1	2.94
2002	17.7	2.94
2003	18.0	2.94
2004	18.1	2.94
2005	18.1	2.94
2006	18.1	2.94
2007	18.0	2.94
2008	17.9	2.94
2009	17.8	2.94
R-value	6.18218E-17	
slope	0.0431	
intercept	2.3	



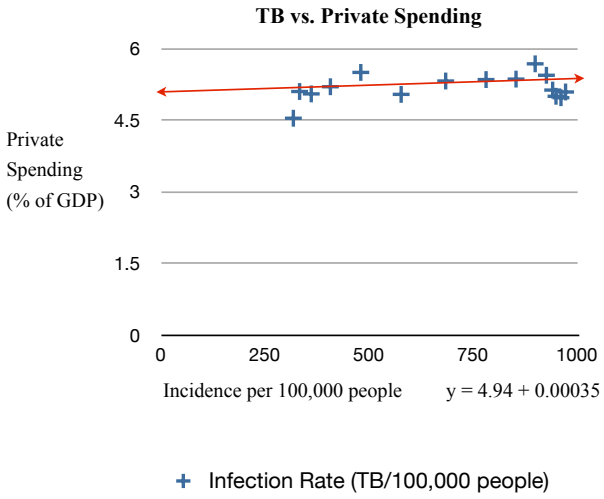
B:11 Tuberculosis Incidence and Government Public Spending

Year	Infection Rate (HIV)	Public (%of GDP)
1990	0.7	
1991	1.2	
1992	1.8	
1993	2.9	
1994	4.3	
1995	6.1	2.94
1996	8.4	2.94
1997	10.7	2.94
1998	12.9	2.94
1999	14.8	2.94
2000	16.1	2.94
2001	17.1	2.94
2002	17.7	2.94
2003	18.0	2.94
2004	18.1	2.94
2005	18.1	2.94
2006	18.1	2.94
2007	18.0	2.94
2008	17.9	2.94
2009	17.8	2.94
R-value	6.18218E-17	
slope	0.0431	
intercept	2.3	



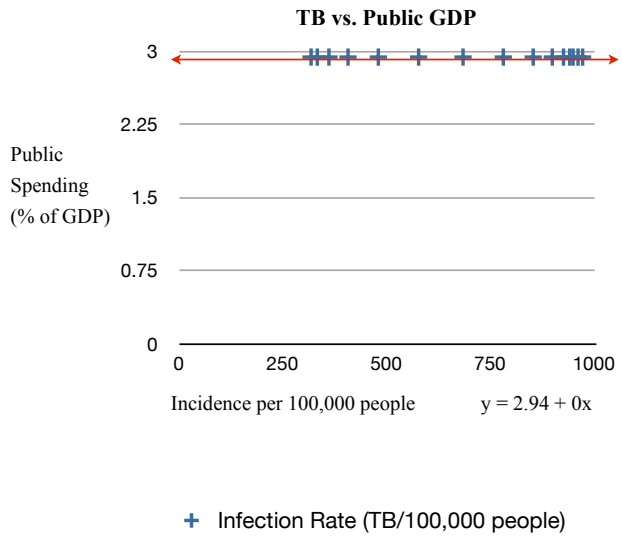
B:12 Tuberculosis Incidence and Private Health Spending

Year	Infection Rate (TB/ 100,000 people)	private (% of GDP)
1990	301	
1991	301	
1992	302	
1993	305	
1994	309	
1995	317	4.54
1996	332	5.10
1997	360	5.05
1998	406	5.20
1999	479	5.50
2000	576	5.04
2001	683	5.32
2002	780	5.35
2003	852	5.36
2004	898	5.68
2005	925	5.44
2006	940	5.13
2007	948	5.00
2008	960	4.97
2009	971	5.09
R-value	0.32599660907749	
slope	0.00035	
intercept	4.94	



B:13 Tuberculosis Incidence and Public Health Spending

Year	Infection Rate (TB/ 100,000 people)	Public (%of GDP)
1990	301	
1991	301	
1992	302	
1993	305	
1994	309	
1995	317	2.94
1996	332	2.94
1997	360	2.94
1998	406	2.94
1999	479	2.94
2000	576	2.94
2001	683	2.94
2002	780	2.94
2003	852	2.94
2004	898	2.94
2005	925	2.94
2006	940	2.94
2007	948	2.94
2008	960	2.94
2009	971	2.94
R-value	2.43799E-16	
slope	0	
intercept	2.94	



Appendix C

Generalizing the Policy Translation Experience

Is there a way to understand how policies are translated from the international realm to state programs? Policy translation is a multi-step process that includes the bureaucracy, legislature, and executive branch in order to embrace a policy. Following in line with the idea of incrementalism and Kingdon's stages, as described in chapter 2, policy translation is a step process. The steps include incrementalism and the evolution of time. The following steps can be used to describe the process of translation:

1. International representatives present the norms/ recommendations from the international regime;
2. The appropriate bureaucracy and interconnected agencies review the norms/ recommendations;
3. Considering and integrating the international recommendations into state policy;
4. A policy is proposed to the legislative body (hopefully will support of the head of state);
5. Approval and implementation of the policy.

These steps allow for the variety in types of policy making systems and for different types of policy norms besides health to be considered. Further, the provided step process follows inline with the policy narratives of Botswana and South Africa.

This more generalized view on policy translation is applicable for other instances of international norms being accepted in state policies. Due to the fact that international policies are altering due to the learning process, there are opportunities for international policy recommendations to be translated in many arenas. While this particular step process has only been used in the above investigation, there is opportunity to use this process for other regime norms.

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I hereby reaffirm the Lawrence University Honor Code - *Margaret H. Schmidt*