Transnational Organized Crime and the Illegal Wildlife Trade
Global Ties and Global Crime

Zachariah Edward Long
Old Dominion University

Follow this and additional works at: https://digitalcommons.odu.edu/gpis_etds

Part of the Animal Law Commons, Biodiversity Commons, Criminology and Criminal Justice Commons, International Economics Commons, and the International Relations Commons

Recommended Citation
https://digitalcommons.odu.edu/gpis_etds/172

This Thesis is brought to you for free and open access by the Graduate Program in International Studies at ODU Digital Commons. It has been accepted for inclusion in Graduate Program in International Studies Theses & Dissertations by an authorized administrator of ODU Digital Commons. For more information, please contact digitalcommons@odu.edu.
TRANSNATIONAL ORGANIZED CRIME AND THE ILLEGAL WILDLIFE TRADE: GLOBAL TIES AND GLOBAL CRIME

by

Zachariah Edward Long
B.A. May 2008, St. Andrews Presbyterian College

A Thesis Submitted to the Faculty of Old Dominion University in Partial Fulfillment of the Requirement for the Degree of

MASTER OF ARTS

INTERNATIONAL STUDIES

OLD DOMINION UNIVERSITY
May 2014

Approved by:

David Earnest (Director)

Austin Jersild (Member)

Glen Sussman (Member)
World biodiversity is faced with many different threats in today’s globalized world. One such threat is the emergence of transnational organized crime in the illegal wildlife trade. But why would transnational organized crime which is traditionally associated with such crimes like illegal drugs, weapons, and human trafficking be interested in the illegal wildlife trade? This thesis seeks to explore why transnational organized crime as a rational business actor would it be interested in participating in the illegal wildlife trade. To explore this relationship, this thesis will look at several different variables. First the economic conditions of locals living with wildlife and how globalization affects their economic choices. Second the rise of the East Asian middle class and how their integration into the world economy along with their own culturally influenced preferences in commodities affects the illegal wildlife trade. Third is the role of corruption and limited resources how these two variables affect Law Enforcement Organizations who have to fight the illegal wildlife trade and transnational organized crime. Fourth is the how transnational organized crime is changing the illegal wildlife trade in volume and methods. Finally how globalization is used by the transnational organized crime to facilitate their operations in the illegal wildlife trade. In doing so, this thesis seeks to show that from a rational business actor perspective there are sound economic reasons for transnational organized crime to operate in the illegal wildlife trade.
ACKNOWLEDGEMENTS

I would not have been able to complete this thesis without the help of many different people. While I cannot acknowledge everyone individually I would like to acknowledge as many as I can. First, my thesis committee, your encouragement, questions, and suggestions have helped me craft this thesis into the document it is. Of special note, Dr. Earnest, thank you for helping me with the statistics. To my fellow ODU students, thank you for your encouragement and ideas. To my parents thank you for all your support. Finally to my family from St. Andrews Presbyterian College, thank you for your encouragement and support.
Copyright, 2014, by Zachariah Edward Long, All Rights Reserved.
# TABLE OF CONTENTS

**LIST OF FIGURES** .................................................................................. vii

**LIST OF TABLES** .................................................................................. viii

**INTRODUCTION** ..................................................................................... 1

**LITERATURE REVIEW** ........................................................................... 5
  TRANSNATIONAL ORGANIZED CRIME ............................................. 7
  STRATEGIES .................................................................................... 10
  IMPORTANCE OF INVOLVEMENT ................................................. 14
  GLOBALIZATION ........................................................................... 17
  CONCLUSION .................................................................................. 27

**HYPOTHESIS** ....................................................................................... 30
  REASONS FOR CHOOSING CASE STUDIES ...................................... 30
  HYPOTHESIS 1 ............................................................................... 34
  HYPOTHESIS 2 ............................................................................... 34
  HYPOTHESIS 3 ............................................................................... 35
  HYPOTHESIS 4 ............................................................................... 35
  HYPOTHESIS 5 ............................................................................... 36

**CASE STUDIES** ................................................................................... 37
  QUANTITIVE MEASUREMENTS....................................................... 38
  HYPOTHESIS 2 ............................................................................... 38
  HYPOTHESIS 3 ............................................................................... 42
  QUALITATIVE ANALYSIS ........................................................... .48
  HYPOTHESIS 1 ............................................................................... 49
  HYPOTHESIS 2 ............................................................................... 56
  HYPOTHESIS 3 ............................................................................... 64
  HYPOTHESIS 4 ............................................................................... 69
  HYPOTHESIS 5 ............................................................................... 82

**CONCLUSION** ...................................................................................... 88
  CHARACTERISTICS OF THE ILLEGAL WILDLIFE TRADE ............... 88
  CHARACTERISTICS OF TRANSNATIONAL ORGANIZED CRIME ..... 90
  ANALYSIS ..................................................................................... 91
  PRESCRIPTIONS .......................................................................... 93

**BIBIOGRAPHY** ..................................................................................... 95
**LIST OF FIGURES**

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure 1.</td>
<td>GDP per Captia and Ivory Seized in KGs 1988-2006</td>
<td>41</td>
</tr>
<tr>
<td>Figure 2.</td>
<td>Wildlife Killings and CPI</td>
<td>44</td>
</tr>
<tr>
<td>Figure 3.</td>
<td>Seizures of Tiger/Leopard Parts (In KG) from 1995-2005</td>
<td>73</td>
</tr>
</tbody>
</table>
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1. PRC GDP per Capita from 1989-2006</td>
<td>39</td>
</tr>
<tr>
<td>Table 2. Ivory Seizures from 1989-2006 in KG</td>
<td>40</td>
</tr>
<tr>
<td>Table 3. Number of Illegally Killed Elephants and CPI 2000-2009</td>
<td>45</td>
</tr>
<tr>
<td>Table 4. Kenyan Wildlife Service Budget for Law Enforcement Operations for 2011 (In Kenyan Shillings)</td>
<td>46</td>
</tr>
<tr>
<td>Table 5. Number of National Parks, Reserves, and Sanctuaries in Kenya</td>
<td>46</td>
</tr>
<tr>
<td>Table 6. Tiger Deaths and CPI 2000-2009</td>
<td>47</td>
</tr>
<tr>
<td>Table 7. Types of Protected Land in India</td>
<td>47</td>
</tr>
<tr>
<td>Table 8. Ministry of Environment and Forests Budget for Wildlife Operations</td>
<td>48</td>
</tr>
<tr>
<td>Table 9. Illegal Trade in Yunnan Province From 1998-2004</td>
<td>75</td>
</tr>
</tbody>
</table>
The Convention on the International Trade of Endangered Species of Fauna and Flora (CITES) reported that in 2012 more African elephants and rhinoceros were killed than in the past several years.\(^1\) According to the World Wildlife Foundation (WWF) wild tiger populations are at record lows and are losing rangeland across Asia.\(^2\) Record seizures of illegally shipped wildlife products have been reported by various customs agencies across the world along with reports of increasing sophistication among wildlife smugglers.\(^3\) In light of these reports, there is growing concern about world biodiversity and the growing dangers and impacts to the environment due to the loss of biodiversity attributed to the illegal wildlife trade.

This brings forth several important questions. Is the involvement of transnational organized crime increasing the volume of the illegal wildlife trade? If so, should states and their citizens be concerned with biodiversity loss? Are environmentalist’s calls to arms about protecting species enough to get states and citizens to act and fight the illegal wildlife trade? Are economic concerns about loss of legitimate trade enough to help push states and their citizens to action?

This thesis argues that there is a new powerful set of actors that are becoming involved in the illegal wildlife trade. That actor is transnational organized crime. Normally thought to be centered around trades such as weapons, illegal drugs, and human

---


\(^2\) Sarah Stoner, & Pervushina, Natalia, "Reduced to Skin and Bones Revisited," (Traffic, 2012), 8.

\(^3\) World Customs Organization, "Illicit Trade Report 2012," (Brussels: World Customs Organization, 2013), 100-02, 05.
trafficking, there is growing evidence that transnational organized crime is becoming more involved in the illegal wildlife trade.\textsuperscript{4}

Why is transnational organized crime becoming more involved in trafficking in illicit species and what evidence is there that can tie the two together? Transnational organized crime is becoming involved in the illegal wildlife trade for several reasons. First, the illegal wildlife trade is extremely profitable, thought to be one of the most profitable illegal trades.\textsuperscript{5} Second, the barriers to entry are very low. Law enforcement is often very weak on environmental laws and harsh punishments are very rare. When looking at this, transnational organized crime sees the illegal wildlife trade a profitable enterprise that poses little risk of being caught or serving jail time.\textsuperscript{6}

This thesis will explain the rise in an illicit trade. One challenge is that there are certain issues such as a lack of good independently verifiable data that can tie together transnational organized crime and the illegal wildlife trade. Even so, there is data that can be gathered from organizations such as the World Customs Organization (WCO), CITES, and from national governments that can help give us an idea about the involvement of transnational organized crime.

This thesis seeks to explore the relationship between the illegal wildlife trade and transnational organized crime. Why is transnational organized crime having such an impact on the trade? In trying to explore this relationship, five hypotheses will be tested

using both the literature of the field and primary sources from national governments, international non-government organizations (INGOS) e.g CITES, the WCO, and NGOs e.g. Traffic and the WWF.

In exploring the relationship between transnational organized crime, this thesis will treat transnational organized crime as a business and the illegal wildlife trade a part of transnational organized crime’s portfolio. In doing so, this thesis shows how economic principles of supply and demand are important motivators for transnational organized crime. Like any business, transnational organized crime seeks to match global supply and demand. When considering this, it is important to consider what species are being traded, from where they are being sourced, and to where they are being sent. Other aspects of the relationship that will be considered include corruption in both the range and consumer nations. The role of globalization, defined as interpersonal, economic, and transportation will also be considered. Finally all of these will be combined to discuss whether transnational organized crime is increasing the illegal wildlife trade.

This thesis will focus on three species and three nations: the African elephant with a focus on ivory, the Amur tiger, and turtles and their use in Traditional Chinese Medicine (TCM). The nations are divided into two range nations and one consumer nation. The range nations are Kenya for elephants and India for tigers. China is the major consumer nation as market for these wildlife products.\(^7\)

The structure of this thesis is as follows, the literature review will provide a framework and definitions of important terms. First, what is the illegal wildlife trade.

Second what is transnational organized crime and what makes it different from organized crime. This includes the strategies it uses to conduct operations in the illegal wildlife trade and the importance of why people should care about transnational organized crime becoming involved with the illegal wildlife trade. Finally, the thesis presents definitions used for globalization. With these definitions set, the thesis will present its hypotheses. Each of these hypotheses will attempt to explore the relationship of the illegal wildlife trade to transnational organized crime. These hypotheses will be tested via the three case studies of nations and species.

The primary objective of this study is to assess the extent to which transnational organized crime is not only involved in the illegal wildlife trade, but is also making the trade larger, more sophisticated and more dangerous.

In the conclusion, the thesis will review its findings and suggest future courses of research and possible action.
LITERATURE REVIEW

What is the illegal wildlife trade? According to the Traffic website, wildlife trade is:

any sale or exchange of wild animal and plant resources by people. This can involve live animals and plants or a diverse range of products needed or prized by humans—including skins, medicinal ingredients, tourist curios, timber, fish and other food products. Most wildlife trade is probably within national borders, but there is a large volume of wildlife in trade internationally.¹

So the illegal wildlife trade would be this wildlife trade but done under clandestine and illegal conditions, often with little regard to sustainability of the species being traded, and not regulated by any formal authority.

With the illegal wildlife trade defined, the next question is who are the actors involved in the illegal wildlife trade and by what processes are they conducting their activities? For this thesis, the main actor of concern is transnational organized crime as a rational business actor. This means that transnational organized crime seeks to maximize profit and minimize risk. In looking at the illegal wildlife trade, transnational organized crime has incentives to participate. These incentives are potential high profits and the low risk of being caught and punished by the criminal justice system. Seeking to maximize profits and minimize risks, transnational organized crime uses a variety of different practices to conduct operations. These include using locals and hiring nonaffiliated hunters to poach wildlife, corrupting government officials or using the threat of violence to get cooperation, and smuggling wildlife products. The importance

of transnational organized crime's involvement in the illegal wildlife trade can be seen with threats to social stability, economic loss, and loss of biodiversity.

Examples of this are the activities of Al-Shabaab, an Islamic militant organization. Although based in Somalia, they have attacked Kenya because of its involvement in the African Union Force that is fighting them. Al-Shabaab is known for entering Kenya and killing elephants and rhinoceros in Kenyan parks and territory in order to fund their operations. These animals have helped to pay for attacks on Kenyan soldiers and for attacks in Kenya itself, including an attack at a World Cup final match.²

Globalization is a process by which transnational organized crime is being involved in the illegal wildlife trade worse. Globalization can be considered to be a very slippery word that has many different definitions. In order to help firm up this slipperiness, this literature review will look at how transnational organized crime is able to use globalization to change identities in order to facilitate its operation in the illegal wildlife trade. Other definitions of globalization that will be used include the globalization of commerce, finance, and transportation. All of these definitions of globalization help to explain how transnational organized crime has not only to expand the reach of the illegal wildlife trade, but also to expand its size and linkages with other forms of illegal trade. This helps explain how globalization has accelerated the illegal wildlife trade.

Five hypotheses will be presented. These hypotheses will test several different variables, including supply and demand variables, corruption, the volume of illegal trade,

and globalization. But first this study will look at the literature in order find definitions and to see what it says.

Transnational Organized Crime

What is transnational organized crime? What makes it different from regular organized crime? According to the United States Department of Justice, transnational organized crime

involves the planning and execution of illicit business ventures by groups or networks of individuals working in more than one country. These criminal groups use systematic violence and corruption to achieve their goals. Crimes commonly include money laundering; human smuggling; cyber-crime; and trafficking of humans, drugs, weapons, endangered species, body parts, or nuclear material. 3

The United Nations Convention against Transnational Organized Crime (UNTOC) lacks a precise definition of transnational organized crime. This is because the convention is meant to have a broad application and have flexibility when it comes to dealing with the changing nature of crime. However the convention does have a definition of what an organized group is. According to Article 2 (a) an organized group is

Organized criminal group” shall mean a structures group of three or more persons, existing for a period of time and acting in concert with the aim of committing one or more serious crimes or offences established in accordance with this Convention, in order to obtain, directly or indirectly, a financial or other material benefit. 4

Often transnational organized crime is viewed in different ways. It can been seen as traditional mafia-style group that buy products from locals and sells them later in a

---

different market at an increased up price for larger profits and smuggling rings that are involved in more than one illegal trade.\(^5\)

In reviewing these definitions we can see that transnational organized crime is an organized group that is involved in crime across countries for the motive of profit. They are often involved in various criminal activities and can be a source of corruption, violence, and civil disorder within a nation.\(^6\)

When looking at more of the literature we see that transnational organized crime often acts a business. That is, it is involved in various criminal enterprises and seek to supply a demand using illegal methods. Following this business model, we can see incentives and strategies that transnational organized crime uses to participate in the illegal wildlife trade.

When it comes to incentives there are two main ones. First is the profit that can be made by being involved in the illegal wildlife trade. With estimates of total worth around $5 billion USD, the illegal wildlife trade is one of the most profitable illegal trades in the world.\(^7\) With Asia and China becoming richer, demand for wildlife products has increased.\(^8\) As an example, when a rumor that a Vietnamese government official was cured of cancer by consuming rhinoceros horn, the demand for rhinoceros horn shot up in Vietnam surpassing the price of gold per ounce. This then led to one of the largest killing sprees of rhinoceros in Africa ever since African governments started recording

---


\(^6\) Lin, "TACKLING SOUTHEAST ASIA'S ILLEGAL WILDLIFE TRADE," 199.

\(^7\) Barber-Meyer, "Dealing with the Clandestine Nature of Wildlife-Trade Market Surveys," 919.

rhinoceros deaths.\textsuperscript{9} As wildlife products go up the value chain, the value of the product increases. That is, when the product for example like ivory leaves Africa and makes it way to Asia, its value increases all along the route.\textsuperscript{10} This means the price that is paid to the person who killed the elephant ends up getting very little money compared to the final destination price that is commanded by the transnational organized criminal enterprises. This value can grow anywhere from 25-50\% during the movement up the chain, helping to create huge profits.\textsuperscript{11}

The second incentive is the low risk of detection. Successful arrests and prosecution of those who commit wildlife crimes is laughable low. Most law enforcement organizations (LEOs) consider environmental crimes in general to be victimless crimes and put a low priority on catching those who commit them.\textsuperscript{12} If and when offenders are caught the level of punishment is so small that it does little to discourage repeat offenses.\textsuperscript{13} With enforcement from LEOs and little if any punishments from the legal system, the incentive to participate in the illegal wildlife trade becomes very strong.

There are attractive incentives for transnational organized crime to participate in the illegal wildlife trade; the strategies it deploys to conduct the illegal wildlife trade are savvy and effective. These practices minimize risk and maximize profit, which is what any rational business would want to do. Such practices are using both range nation

\textsuperscript{12} Akella, "Dismantling Wildlife Crime: Executive Summary," 2.
\textsuperscript{13} Traffic, "Wildlife and Forest Crime CCPCJ 22," (WFF, EIA, Traffic, 2013), 2, 3.
nationals and independent operators to poach animals; the bribery of government officials in range, transit, and consumer nations; and sophisticated smuggling practices.

**Strategies**

**Poaching**

When it comes to poaching, transnational organized crime has several different avenues to conduct this part of the illegal wildlife trade. In many range states poverty for those who live among or near endangered species is high and alternative means for economic growth are few. In agriculture is often the only means of consistent economic production. In addition, many nations have adopted a neoliberal approach to conservation. In this approach there is an emphasis on creating an economic value of nature in order to create market incentives to preserve it, even if it means alienating the local population. This often means that locals who once had traditional hunting and property rights to animals lose these traditional rights to the state. Usually with little or no say in the process, this tends to alienate locals from the conservation efforts, and creates incentives for locals to hunt endangered species once they lose property rights to the animals. With a lack of economic opportunities locals have no strong reason not to poach when the economic tradeoff for poaching is so high. Occasionally, transnational organized crime will also bring in its own people or hire non-local hunters to bring down

---

large numbers of animals. This has been seen a number of times in Africa where militias like the Janjaweed have attacked parks in East Africa killing hundreds of elephants and rhinoceroses and shipping the ivory and horns out to market.

**Corruption**

According to the World Bank corruption is "the abuse of public office for private gain." Corruption is often seen in various forms including patronage, bribes, and extortion. How is corruption a strategy of transnational organized crime in its involvement in the illegal wildlife trade? Considering the various forms of corruption according to the literature, the issue of bribery is a heavily used tool in the context of the illegal wildlife trade.

Africa and Southeast Asia are full of source, transit and consumer nations. But there is also a major issue of weak governance in many of these states. An example of weak governance is the bribery of government officials. In the range nations, it includes bribing of rangers or LEOs who are tasked with protecting animals from poachers, to allow poachers on protected parks or to ignore illegal hunting. Another use of bribery that can be seen at the range, transit, and consumer nation locations is bribery of government officials that work in the transportation field. The bribing of port, airport, railway, and customs official to accept forged or incorrect manifests and permits is a very

---

common example of this corruption.\textsuperscript{25} Making the corruption issue more important is that in many developing nations that are range, transit, and consumer nations, the pay of government officials is very low.\textsuperscript{26} This poor pay, especially when compared to the profits that are made in the illegal wildlife trade, can turn government officials into partners with transnational organized crime, helping to make the trade work even smoother and facilitate more trade.\textsuperscript{27} Such partnerships can hurt effective prosecution of offenders because the corrupt officials help to hide the actions of the criminals.\textsuperscript{28} These partnerships are thought to be responsible for disappearances of seized wildlife products from police custody. When evidence disappears it is often harder to prosecute the offenders.\textsuperscript{29} The LEOs in question do not even have to be in partnership with transnational organized crime in order to try and take advantage of seized wildlife products. In the Philippines, ivory is now crushed after 3.7 tons of seized ivory disappeared from police custody in 2006.\textsuperscript{30}

Corruption, mainly in the way of bribery, is a very powerful strategy for transnational organized crime. Where bribery has been very effective is linking with the strategy of smuggling and making smuggling easier.

\textsuperscript{25} WWF/Dalberg, "Fighting Illicit Wildlife Trafficking: A consultation with governments," 94.
\textsuperscript{26} Kalron, "Africa’s White Gold of Jihad: al-Shabaab and Conflict Ivory" 2.
\textsuperscript{29} CITES, "Interpretation and implementation of the Convention Species trade and conservation Elephants," (Geneva, Switzerland: CITES, 2012), 21.
Smuggling

Smuggling, it could be argued, is the lifeblood of the illegal wildlife trade and an area where transnational organized crime has a large impact. This impact is the increasing volume of wildlife products being smuggled and an increase in the sophistication of smuggling practices. Smuggling in the illegal wildlife trade has also learned lessons from other illegal trades and is now taking in these best practices to help minimize risk during transit. A side effect of smuggling is that it leads to under-reporting of the legal wildlife trade. This under-reporting makes it more difficult for understanding both the legal and illegal wildlife trade.31

What is meant by increasing volume and sophistication? Due to the difficulty of getting primary data about the illegal wildlife trade, anecdotal evidence suggests that the increasing volume found via arrests and seizures, especially in the ivory trade, shows that transnational organized crime is becoming more involved with the illegal wildlife trade.32 The increase of the illegal wildlife trade is also getting to the point where most large busts now involve large shipping containers.33

In addition to increasing the volume of the illegal wildlife trade, transnational organized crime has had effect on the level of sophistication of the illegal wildlife trade. Shipping illegal wildlife products with legal wildlife products to hide the illegal ones is now a common tactic. Smugglers use false bottoms or hidden compartments in containers, boxes, and shipping material. There is also the practice of disguising illegal

33 CITES, "Interpretation and implementation of the Convention Species trade and conservation Elephants," 19.
wildlife products as other products, and wrapping products in aluminum foil to stop x-rays.\footnote{Organization, "Illicit Trade Report 2012," 105.} Forging transit and other official papers and providing false information on documents has been added to the repertoire to get past custom officials.\footnote{Peyton Ferrier, "The economics of agricultural and wildlife smuggling," \textit{Trends in Organized Crime} 13, no. 2/3 (2010): 221.}

One of the most important changes transnational smugglers have used in the illegal wildlife trade is the increased use of transit nations. To help avoid detection by law enforcement, transit nations and networks are used. Examples of transit nations include Vietnam and Thailand for ivory, and the Tibet Autonomous Region (TAR) and Nepal for tiger parts.\footnote{Crime, "The Globalization of Crime," 181.} The creation of trading networks itself helps to indicate the level of sophistication as these networks rely on many actors in various nations, often requiring corrupt officials to facilitate movement along the network.\footnote{South and Wyatt, "Comparing Illicit Trades in Wildlife and Drugs: An Exploratory Study," 550.} These networks take advantage of improved infrastructure in range nations and global finance. A key part of these networks is that due to their secretive nature and clandestine operations, they are extremely hard to combat and tend have a large amount of resources.\footnote{Elliott, "FIGHTING TRANSNATIONAL ENVIRONMENTAL CRIME," 95.} There are also linkages with other trades and vectors of wildlife products as a payment for other illegal trades, like the drug trade.\footnote{Jacqueline L Schneider, "Reducing the Illicit Trade in Endangered Wildlife: The Market Reduction Approach," \textit{Journal of Contemporary Criminal Justice} 24, no. 3 (2008): 288.}

\textbf{Importance of Involvement}

Having reviewed transnational organized crime’s involvement in the illegal wildlife trade, this thesis will now go over why its involvement is important. The importance of transnational organized crime’s involvement in many ways mirrors the
importance of caring about the illegal wildlife trade. This includes social stability, economic loss to the legal economy, and damage to the local environment.

Social Issues

Being an organized crime network, transnational organized crime brings with it a plethora of social issues. Corruption perverts the normal relationship between citizens and governments and harms relations between the two. Transnational organized crime more times than not is involved in more than one illegal trade. Transnational organized crime often participates in money laundering, which can have negative effects on a nation's economy. A disturbing trend that is common in Africa is the militarization of the illegal wildlife trade. Thanks to the availability of cheap high-power full automatic weapons, night vision goggles, and global positioning satellites, poachers are better able to hunt large fauna like elephants and rhinoceros and sometimes outgun the park rangers. Needless to say, there are obvious stability issues when there are large groups of highly armed criminals operating within a territory and are able to outgun the local LEOs. Due to the transnational nature of transnational organized crime, it operates beyond borders, and presents a threat to state sovereignty. Enticed by the possible profits of poaching and embolden by the lack of a creditable deterrence by African nations, militias like the Lord's Resistance Army, the Janjaweed, and Al-Shabaab have attacked parks in East

---

Africa, killing elephants and rhinoceros in order sell ivory and horns to fund their activities.\textsuperscript{44}

\textit{Economic Damages}

Every animal or plant that is illegally harvested represents a loss for the legal trade in wildlife products. This includes attempts at local driven sustainable growth in impoverished areas.\textsuperscript{45} This is very important because poaching is a short-term activity that can often be controlled by outside groups.\textsuperscript{46} If poaching is done at a non-sustainable pace there are economic damages to the ecosystem as species are removed.\textsuperscript{47} The situation is also complicated because often there is only a monetary value on wildlife. There is no good way to attribute a social or ecological value that helps to deter poaching when dealing with transnational organized crime.\textsuperscript{48}

\textit{Environmental Damage}

Finally, there is environmental damage. As stated in the paragraph above, the illegal wildlife trade encourages unsustainable harvesting of animals. This over harvesting of animals can lead to a number of environmental issues. This includes loss of keystone species and loss of biodiversity.

The loss of keystone species like elephants threatens not only elephants, but also animals that depend on them. A keystone species is a species that has a multiplying

\textsuperscript{48} South and Wyatt, "Comparing Illicit Trades in Wildlife and Drugs: An Exploratory Study," 542.
effect on the environment that other species rely on. Elephants, for example, provide dung which is a food and nest source for insects. Elephants dig bigger and deeper watering holes that smaller animals and weaker animals are able to use. They also knock down trees and uproot other vegetation that other animals then take advantage of for food, nesting material, and shade. Small predators follow elephant herds chasing prey animals that get disturbed by the herd’s movements. When a keystone species is lost the impact is felt by the entire ecosystem and is not limited only to the keystone species. 

The next case of environmental damage is the loss of biodiversity. Many environments need a good diversity of species in order to operate correctly. With the illegal wildlife trade’s tendency to overharvest, this directly threatens biodiversity. Along with loss of habitat and pollution, the illegal wildlife trade is considered to be one of the greatest threats to biodiversity.

This section of the literature review has defined transnational organized crime, and in the context of the illegal wildlife trade, treated it like a rational business that seeks to maximize profits and minimize risk. It looked at what incentives there would be for transnational organized crime to enter the illegal wildlife trade. It also examined what practices organized crime would use in order to maximize profits and minimize its risk.

Globalization

Now having explained transnational organized crime and how it operates in the context of the illegal wildlife trade, this thesis turns to the issue of globalization.

---

51 WWF, "Illegal Wildlife Trade".
Globalization is important because it has accelerated the illegal wildlife trade and has been taken advantage of by transnational organized crime. In Asia, especially in China, globalization has helped to create a new class of wealthy elites who provide a constant and powerful demand for all sorts of wildlife products.\textsuperscript{52} Second the globalization of finance has created a system where it is easy for transnational organized crime to act a broker between Africa and Asia.\textsuperscript{53}

When considering the definition of globalization there are several different definitions that apply to this study. First is the changes that globalization has brought in the way in which individuals interact with the rest of the world. Agents of transnational organized crime have become skilled at global interactions and with interacting with range nation locals. The range-nation locals now found themselves in a new global market where they have access to a very valuable commodity but find themselves in conflict with national governments that want to limit their access to this commodity.

Another reason why transnational organized crime has been able to take advantage of globalization and use it to conduct the illegal wildlife trade is because of globalization’s changes to consumerism, world finance, and the weakening of state power.

\textit{Definition of Globalization}

To help explain how globalization has acted as this accelerant, we must first define what globalization is. It can be argued that there are many definitions to this word. The definition used is the increasing connectedness of communities and the movement of

in and between these communities, and the relationships they are able to create.\textsuperscript{54} Or as the world gets more globalized, there is an increasing importance of the relationship between the local and the global.

An important part of this definition of globalization is that individuals have multiple affective orientations and affiliations. What is important about these identities is that they allow for movement between the different communities.\textsuperscript{55} How transnational organized crime is able to move between these communities and exploit each community is important when looking at their ability to operate in the illegal wildlife trade.

The way that transnational organized crime takes advantage of globalization is by being able to move through these communities via their multiple affiliations and the relationships that they build. This is in great contrast to most LEOs who are bound to a specific territory, are not able to build the global relationships in the same way, which hinders their ability to follow the more agile transnational criminals. This next section will cover transnational organized crime actors and then actors in the range nations.

\textit{Transnational Organized Crime Actors}

What are the fundamental characteristics of transnational organized crime actors? They are actors that have little concern about regional loyalties.\textsuperscript{56} These are people who do not hold patriotism as a high value and travel the world in the pursuit of business. They use international business as a way to make money and use free trade to help

\textsuperscript{55} Ibid., 41.
\textsuperscript{56} Ibid., 124.
transport their goods across the world.\textsuperscript{57} As the name would suggest, transnational organized crime actors are not bound by territory and enjoy a freedom and flexibility of movement that are not shared by those who are bound by or to territory like LEOs.

Some examples of these characteristics in action include the fact that many Asian nations have large global diasporas that act as middlemen in the illegal wildlife trade.\textsuperscript{58} Transnational organized crime conducts business on a global scale using global travel, finance and trade. In the elephant trade, Kenya and Tanzania are the departure points for the trade with China and Thailand being the destination points.\textsuperscript{59} But what helps makes the trade even more global is the use of transit nations such as Laos and Vietnam via water and land routes.\textsuperscript{60} Transnational organized crime takes advantage of the technological advancements to work around law enforcement and to deliver their products to the customer, which can be seen in the increasing sophistication of smuggling practices as mentioned earlier. As transnational organized crime participates in a wide range of criminal activities, they also have a wide range of issues that they care about because there are often involved in several different trades.\textsuperscript{61} But one of the most important similarities is that transnational organized crime has shown it is not bound to any nation and can move as much as it wants to.

\textsuperscript{57} Ibid., 125-27.
\textsuperscript{58} Akella, "Dismantling Wildlife Crime: Executive Summary," 3.
\textsuperscript{59} CITES, "Fourth African Elephant Meeting," 7.
\textsuperscript{60} CITES, "Interpretation and implementation of the Convention Species trade and conservation Elephants," 16, 19.
\textsuperscript{61} Organization, "Illicit Trade Report 2012," 100-02.
Range Nation Actors

Most ranger nation actors in comparison are touched less by globalization than transnational organized crime actors. They are often centered in a specific territory or community and engage in their local community and act locally.\textsuperscript{62}

This is because many of the people who live around these endangered animals are often of tribal origin or poor and do not have much interaction with the greater world.\textsuperscript{63} What is important here is how these actors are treated by governments. This is especially important when it comes to economic livelihood. This is because if these actors are negatively impacted, such as losing traditional land rights by conservation efforts, it has the potential of turning them into alienated actors who are willing to work for transnational organized crime.\textsuperscript{64}

Alienated Actors

Alienated actors are those who have contempt for the legal order and are ready to commit violent acts.\textsuperscript{65} Alienated actors also operate with a logical and purpose driven motive that meets their own moral and lawful ends.\textsuperscript{66} Connecting this world to the illegal wildlife trade can be best explained when looking at range nation actors who feel betrayed by the government and lose long held property rights to wildlife.\textsuperscript{67} With the nationalization of wildlife, locals are being kept out of the conservation discussion,

\textsuperscript{62} Rosenau, \textit{Distant Proximities: Dynamics beyond Globalization}: 92-93.
\textsuperscript{64} Max Abensperg-Traun, "CITES, sustainable use of wild species and incentive-driven conservation in developing countries, with an emphasis on southern Africa," \textit{Biological Conservation} 142, no. 5 (2009): 950.
\textsuperscript{65} Rosenau, \textit{Distant Proximities: Dynamics beyond Globalization}: 161.
\textsuperscript{66} Ibid., 162.
\textsuperscript{67} Skonhoft and Solstad, "The Political Economy of Wildlife Exploitation," 18.
creating a participation gap. This gap alienates them and does not create incentives to respect conservation laws and efforts, as they themselves as the locals do not receive respect themselves. Then of course there is the fact that locals can earn well over twice what they make in a year with normal pay, by poaching and supplying for transnational organized crime. This helps create an extra economic incentive along with the ideological one. When considering the morality and lawfulness, what could be more moral and lawful than supporting one's family?

Movement Across Communities

An important point about today's world is that people are moving around it using multiple affiliations while conducting this movement. This movement helps to bring out the concept of deterritorialization. Deterritorialization is the decline in the importance of territory. As travel, communication, finance, and trade become easier borders become less important. As territory becomes less important it becomes not only easier to move among the various worlds, but also it becomes harder for states to defend.

Deterritorialization means a lot to transnational organized crime. As mentioned earlier, many of the strategies used by transnational organized crime such as poaching and smuggling require weakened states or looser borders in order to be of full use. The transboundary nature of the illegal wildlife trade being able to move through territory and across borders with ease equates for more profit and less risk.

---

69 Ibid., 76.  
71 Rosenau, Distant Proximities: Dynamics beyond Globalization: 171.  
72 Ibid., 176.
The Aspects of Globalization

So with globalization defined and a review of how the actors move through it, the thesis turns to the mechanics of globalization and their role accelerating the illegal wildlife trade. From a business perspective one of the best explanations of the mechanics is hypercapitalism. Hypercapitalism is the: “Expansion of commodification and the greater organizational efficiency of accumulation” 73

Hypercapitalism has two parts that transnational organized crime uses to accelerate the illegal wildlife trade. These two parts are consumerism and finance. Increases in worldwide trade provide transnational organized crime new opportunities to spread its reach and expand its customer base. Finally there have been governance changes that favor transnational organized crime. Each one has been altered by globalization in ways of which transnational organized crime now takes advantage.

Commodification and Consumerism

Commodification is the process of making objects into something that can become surplus. It is one of the basic principles of capitalism. Consumerism is the acquisition of goods for instant gratification. 74 While consumption has always been a part of the normal economic life, most consumption was based off of commercial capital. 75 As globalization increased, a trend of commodification and capitalization occurred. In respect to wildlife, the commodification of nature has been one of these new

74 Ibid., 163.
75 Ibid. 163.
processes.\textsuperscript{76} This process has seen the call to turn nature into products and create an exchange value in order to bring about sustainable and rational use of nature.\textsuperscript{77} Another part of the process is property rights. Property rights are “the capacity to call upon the collective to stand one’s claim to a benefit stream.”\textsuperscript{78}

With increasing commodification of nature, the standard approach for most developing nations is to follow the western model of large parks that have no human interaction even if they are not financially affordable.\textsuperscript{79} As result, disfranchisement is felt as the locals no longer have say in resources that they have traditional used, but now have been commoditized by the state. An anecdote of this is in Tanzania, where the Maasai were moved out of one of their historic territories. Part of the arrangement of the relocation was that that a tribal elder council would serve as an advisory board for the park. While the board does exits it complains of being ignored by a Western trained staff and management board.\textsuperscript{80}

\textit{Finance}

The globalization of finance has had two major impacts on trafficking. First, it has helped to spread the range of the illegal wildlife trade. Second, it has made e-finance and the internet are important tools for transnational organized crime.

The growth of finance has helped to create a new market where money, stocks, bonds, and other financial instruments can be used to create wealth. This new sector

\begin{itemize}
  \item \textsuperscript{76} Büscher et al., "Towards a Synthesized Critique of Neoliberal Biodiversity Conservation," 4.
  \item \textsuperscript{77} Ibid. 4.
  \item \textsuperscript{78} Skonhoft and Solstad, "The Political Economy of Wildlife Exploitation," 17.
  \item \textsuperscript{79} Abensperg-Traun, "CITES, sustainable use of wild species and incentive-driven conservation in developing countries, with an emphasis on southern Africa," 950.
  \item \textsuperscript{80} Goldman, "Strangers in Their Own Land: Maasai and Wildlife Conservation in Northern Tanzania," 5.
\end{itemize}
spans the globe and is worth more than the goods trade. As finance goes around the world there are huge profits to be made.\textsuperscript{81} But what this does is help to give the transnational organized crime a cover that allows them to cover their own finances and launder money.\textsuperscript{82}

Electronic finance is becoming a new brave world for the illegal wildlife trade. This is because the internet provides transnational organized crime and its customers with a new level of privacy that is difficult for LEOs to breach.\textsuperscript{83} Using auction sites like eBay and its online payment system Paypal, sellers and buyers are given new ways to buy and sell illegal wildlife products. Other methods are using private chat rooms and websites that restrict entrance to members only and arranging the sale, payment and delivery methods online and away from the eyes of LEOS.\textsuperscript{84} The internet offers a secure and loosely patrolled realm where sellers and buyers can meet virtually and arrange purchases and shipping. Despite efforts of LEOs and companies like eBay to try and police and monitor such activities, the size of the internet and a lack of good enforcement capabilities have helped to make the internet a new ground for transnational organized crime.\textsuperscript{85}

\textit{Governance}

Another mechanic of globalization is reduction of power held by states. According to Scholte, the statist mode of power is weakened by globalization. This is

\textsuperscript{81} Scholte, \textit{Globalization a Critical Introduction}: 165-67.
\textsuperscript{82} WWF/Dalberg, "Fighting Illicit Wildlife Trafficking: A consultation with governments," 17.
\textsuperscript{83} IFWA, "Killing with Keystrokes: An investigation of the illegal wildlife trade on the world wide web," 3.
\textsuperscript{84} Stoner, "Reduced to Skin and Bones Revisited," 22-23.
because the world system has moved to a polycentric model where states have to share power with both suprastate and substate powers. While the state is still an important actor, its power is reduced and other actors are better able to their interests in relation to states. When thinking about transnational organized crime, due to its transnational character it is able to take advantage of the weakening of states and is able to flourish. It has gotten to the point where most efforts to combat it are at the suprastate level using entities like Interpol as organizers to help coordinate efforts.

Enlargement of the Middle Class World Wide

A final part that globalization has played in this trade is that it has enlarged the world's middle class. But what is the middle class? There are many different way to define middle class. What is middle class in one nation might be considered poor in another. While in the West, there is constant bemoaning of the decline of the middle class due to globalization, the fact is that across the East it is starting to rise. For this thesis the middle class of importance is the one that is coming of age in Asia. China in particular is responsible for half of 1.2 billion people that entered the middle class from 1990-2005.

When considering this Asian middle class, it is important to remember that they have different tastes in products, the wildlife products that this thesis looks at, there is particular demand for them from one region of the world that region is East Asia and China in particular. One of the most important parts of globalization is that is has lifted

---

89 Ibid., 17.
millions of people out of poverty. This rising boat has helped to create a new Asian middle class that has many different tastes from the Western middle class. These tastes for different products mean that they will impact the global economy, both the legal and illegal economies in ways that are different from the West.

In exploring this increasing middle class is it important to look at China the most populated nation on earth. Because of its size the effect of globalization on its economy is huge. As China has integrated into the global economy and overall incomes rise, the percentage of people coming out poverty has increased. In China for example in 1987 about 83 percent of its population lived on or less than $2 USD a day. To be better put a perspective on this China’s population in 1988 was a little over a billion people, so at 83 percent almost 715,000,000 million people where living on 2 USD a day in 1988. Fast forward to 2009 with a population still a little over a billion, but now only 27 percent or around 360,000,000 million people are living on a dollar a day. That is a difference of 355,000,000 million people lifted out of poverty or in other words about the combined populations of the United States and Poland. These are people who are now able to afford wildlife products where before they had no way to. This greatly expands the market for transnational organized crime and shows an non direct way in which globalization has affected the illegal wildlife trade.

Conclusion

When considering transnational organized crime and the illegal wildlife trade, there are various variables to consider. Treating transnational organized crime a rational

90 Ruth Becker, "Medical Claims for Rhino Horn: You're better on an aspirin or biting your nails," Africa Check, http://africacheck.org/reports/medical-claims-for-rhino-horn-youre-better-on-an-aspirin-or-biting-your-nails/. 
business actor-one that maximizes profits and minimize risk and the illegal wildlife trade as possible new portfolio item-logical assumptions can be made as to why transnational organized crime would be involved in the trade. These assumptions can be made because the trade is extremely profitable and presents a low risk of being caught by LEOs.

Transnational organized crime uses several different strategies to facilitate its role in the illegal wildlife trade. These strategies include poaching, corruption, and smuggling. Each of these strategies allow for transnational organized crime to further its ability to increase their profits from the illegal wildlife trade while lowering its risk. The damage of the involvement of transnational organized crime in the illegal wildlife trade includes social issues, economic losses, and environmental damage.

While the involvement of transnational organized crime is important in explaining the issue of the illegal wildlife trade, there is another one that is also important. That is globalization and how transnational organized crime has taken advantage of it to increase their participation in the illegal wildlife trade. This includes how transnational organized crime actors are able to move across different communities while most national LEOs are confined to one community. Then, range nation actors who live with the wildlife meanwhile can become alienated actors once they have lost their property rights to wildlife and seek to provide for the families in any way they can.

The mechanics of globalization like hypercapitalism, world finance, travel, and changes to governance, have all had their own impact on how transnational organized crime is better able to conduct the illegal wildlife trade. Hypercapitalism with its commodification of nature has made economic value the only value for nature. Global finance has given transnational organized crime new global markets and opened up the
internet for their use. Globalism reduced governance of the states has weakened states to a point where it is harder for them to govern their own territory. Finally, because of globalism’s ability to life people out of poverty it has helped to create a massive new market for the illegal wildlife trade.
HYPOTHESES

With the literature review completed and some definitions given we turn to the hypotheses. Each hypothesis will seek to test aspects of economics, corruption, volume of the trade, and globalization. When possible data analysis will be used to test the hypothesis, but as this thesis is studying an illicit trade, primary data are few and far between.

Reasons for Choosing Case Studies

Before moving on to the hypothesis, it is important to review for what reasons the case studies were chosen. There are total of three nation states used as case studies. Each nation corresponds with an endangered species that is actively traded in the illegal wildlife trade. There are two range nations and one consumer nation. The range nations are Kenya and India. Kenya’s species is the African elephant and India’s is the Amur tiger. China acts as the consumer nation and as a source for turtles. The reasons for why these case studies were chosen included ecological range of the case species, available data, and role in the illegal wildlife trade. As for the chosen species the selection criteria for them was based on availability of data and presence in the illegal wildlife trade.

Ecological Range

As this study looks at ivory, tiger, and turtle products an obvious selection criteria is ecological range. Kenya has a sizeable population of African elephants and India is one of last remaining strongholds of tigers. China meanwhile has a large variety of different turtle species both terrestrial and marine. As each nation is a range nation for each of the case species, this was the first qualification for choosing them.
Availability of Data

Due to the difficulty of finding good data about an illicit trade and getting police records, these nations were chosen because of the information that was available. As elephants and tigers are charismatic species, that have high visibility in the conservation world and in the public eye, there is more data on them. This includes more data from INGOs and NGOs that have been able to conduct field research on the species. In addition both Kenya and India are former British colonies making English an official language of the nation. This made finding official government records that could be used without having to translate them logical choices.

Involvement in the Illegal Wildlife Trade

The first selection criteria was the nation’s involvement in the illegal wildlife trade. As Kenya and India are range nations of elephants and tigers they are sources of ivory and tiger products. The role of China is very important. It is considered to be one of the main destinations of many wildlife products. For reasons to be examined in one of the hypothesis, China has many reasons why it is a major consumer and importer nation. Due to the sheer numbers of wildlife products that China imports, any credible examination of the global illegal wildlife trade must look at China’s role. China has been described as a giant vacuum cleaner for South East Asia’s wildlife and is a major player in this trade.

It should be noted that all three nations are developing nations and there are no developed nations in this study. The reasons for this fall under the original selection

---

criteria. When looking at the ecological range, as there are no wild tigers or elephants in the developed world. The role of the developed nations in the illegal wildlife trade is nerveless large. The United States and the Europe are two large markets and sources of many different illegal wildlife products. However for the wildlife products being examined in this study, they are not the largest market and as such, China despite being a developing nation is a better case study to look at for consumption.

Hypotheses three through five will also take into account how major transit nations are playing a part in the global nature of the illegal wildlife trade. These transit nations were also chosen based off similar selection criteria for the primary case study nations. Each nation provides a useful mix of geographic and ecological range, available data, and involvement in the illegal wildlife trade that made including them in this study logical.

Species Selection

For the selection of the species, the two most important factors were the availability of data and the specie’s involvement in the illegal wildlife trade. As mentioned earlier both elephants and tigers are considered to be charismatic species or high profile species that get a lot attention from the public when it comes to conservation efforts. A benefit of this that there are more efforts to conserve these species and thus more data to draw upon and study as compared to less charismatic species like insects. While this does make this study fall into a critique of many works about wildlife conservation and that focuses only high profile species, this is unavoidable due to the

---

larger availability of data and the inability of this researcher to conduct field research on other less know but still endangered species. Finally all three species are heavily involved in the illegal wildlife trade. Numbers and descriptions will come in the case studies, but these are three heavily traded animals in the illegal wildlife trade.

Measurement of Corruption

In hypothesis 3 the Corruption Perception Index is used to measure corruption in all of the case nations and the transit nations. It is acknowledged that this measurement of corruption has its problems. This includes changing measurements of standards and not being able to compare CPI scores across time. However it is best available data for measuring corruption and this is why it is used.

Finally, when considering this topic this study is looking at three nations that could be considered to be failures of policing efforts. This is due to the fact that there are no real success stories when it comes to fighting transnational organized crime and the illegal wildlife trade. On the range-nation side, one of the few successes in developing world would be the nation of Botswana which has used its military to hunt and kill poachers in its territory. Even with the success it has had, it still must conduct constant military operations against poachers.\footnote{Humphreys, "War and Wildlife: The Clausewitz Connection," 15-17.} When looking at the importer and consumer side, the United States is a nation that is considered to be non-corrupt and is still a major consumer of illegal wildlife products and conducts raids and arrests related to the illegal wildlife trade.\footnote{IFWA, "Killing with Keystrokes: An investigation of the illegal wildlife trade on the world wide web," 20.} So in this issue there is no success, just different degrees of failures.
Use of Mixed Methods Approach

This thesis uses a mixed methods approach in analyzing the hypothesis. This means using both quantitative and qualitative analysis methods. The mixed methods approach was used for several reasons. First by using both methods, this thesis would be able to present data backed arguments that are stronger for making causal connections by using the quantitative methods. Second the use of qualitative methods allows the thesis to make broad arguments and generalizations. By combining these two methods, the thesis is able to present a stronger argument than if it just used one method.

Hypothesis 1

Low or no legal economic value of wildlife for local/native populations leads to more poaching.

This hypothesis will seek to look at the supply side of the economics of the illegal wildlife trade. It will use poverty data and number of seizures from Kenya and India and compare it to the number of seizures that from each nation. In addition, it will look at what type of property rights are given to the locals and native populations to access wildlife, and how such rights affects poaching.

Hypothesis 2

Where there is declining domestic stocks of wildlife, a historic/traditional use of wildlife products and economic prosperity, there will be an increased demand for wildlife products.

The second hypothesis deals with the demand side of the market. Looking at China, the thesis will review surveys about wildlife consumption in China as well as to
take into account any historic or traditional use of wildlife products. It will also examine what type of impact this will have on demand and compare these findings to the number of seizures.

These two hypotheses will test how economic forces on the supply and the demand side have or have not enabled transnational organized crime to take advantage of poverty in the range nations and demand in the consumer nation.

**Hypotheses 3**

*When there are limited resources and high corruption among LEOs, wildlife crimes are more likely to occur.*

This hypothesis seeks to see the relationship between limited resources of LEOs and corruption and wildlife crimes. The study uses data from both the range and consumer nations and compares it to the number of seizures to see what relationship is there.

**Hypothesis 4**

*Transnational Organized Crime's involvement in the illegal wildlife trade is increasing the amount of trade.*

Looking at number of seizures, this hypothesis tests whether there is see if there is a trend in the increasing sophistication of the trade. By sophistication of the trade the thesis means, are the methods of smuggling getting more complex, and are LEOs seeing linkages between the illegal wildlife trade and other illegal trades?
Hypothesis 5

Globalization has made it easier for Transnational Organized Crime to become involved in the illegal wildlife trade.

In this final hypothesis, the thesis wishes to see what impact globalization has had on the illegal wildlife trade. The study compares some of the factors of globalization, movement across communities, increased commerce, and increased world travel.

With the hypotheses defined and their parameters set, the thesis will now move on to the case studies and the testing of the hypothesis.
CASE STUDIES

One of the greatest challenges of this thesis is that it is a study of an illicit trade and transnational organized crime. Studying illicit trade present several challenges: First attention to wildlife crimes have traditional been a low priority for most governments and LEOs. This means that there are varying qualities of information to be gathered. In other words, finding good consistent data that can be used in a model can be challenging.

Second, transnational organized crime does not post profit earning reports, who they are trading with, or other such useful data. Due to these factors this thesis has had to rely on data from LEOs and other organizations for finding information about animal deaths and seizures. This creates small sample sizes that lead to questions about the generalization of any findings.

Then there are issues in that this thesis seeks to compare different species among different countries. Similar to wildlife crimes, finding good data about different species can be challenging at times. This creates issues with gathering useable data, as some species have more data available, both numerical and quality wise. In addition, this thesis is comparing different species that are often used in different end products and have different supply chains. Despite these challenges, there is still an opportunity to discover some characteristics of this trade and transnational organized crime.

The case studies will be divided into two sections. This includes quantitative measurements and qualitative analysis in order to get a more complete picture of the relationships, characteristics and analysis of the illegal wildlife trade and transnational organized crime.
Quantitative Measurements

This section will examine quantitative measurements. This will include statistics and the use of data in order to create a better understanding between any relationship between the illegal wildlife trade and transnational organized crime.

Hypothesis Two

Where there is declining domestic stocks of wildlife, a historic/traditional use of wildlife products and economic prosperity, there will be an increased demand for wildlife products.

When thinking about demand, often there are many different factors that can intensify it. Following this logic, for a quantitative analysis the factor of economic prosperity will be studied. While declining stocks in theory could be operationalized into a graph, due to insufficient data that factor will be left for the qualitative chapter. As historic and traditional use of wildlife is something that cannot be operationalized very well, it will be left for the qualitative chapter. Additional analysis on economic propensity will also be presented in the qualitative chapter.

Economic Prosperity

Thinking about economic prosperity, China should be a nation that comes to mind, thanks to Deng Xiaopeng’s reforms. With the opening of China, over 500 million Chinese people have been lifted out of poverty.¹ As China has become richer and more of its citizens can afford more material goods, however the question of increased

consumption of wildlife products comes to mind. In seeking to explore the idea that increased economic prosperity will lead to increased demand for wildlife products, the following data was pulled.

From 1989-2006, the GDP per capital of China grew by an annual average of 9.6 percent for that time period.\(^2\) Table 1 helps to measure this steady and rapid growth. Based in US dollars, as the table shows there has been consistent growth in China’s GDP per capita. While it might not seem like much to a person from the developed world, this is a very good increase in overall wealth and income.

Table 1. PRC GDP per Capita from 1989-2006

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP per Capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>441.61</td>
</tr>
<tr>
<td>1990</td>
<td>452.72</td>
</tr>
<tr>
<td>1991</td>
<td>463.08</td>
</tr>
<tr>
<td>1992</td>
<td>498.83</td>
</tr>
<tr>
<td>1993</td>
<td>562.73</td>
</tr>
<tr>
<td>1994</td>
<td>634.18</td>
</tr>
<tr>
<td>1995</td>
<td>709.19</td>
</tr>
<tr>
<td>1996</td>
<td>777.99</td>
</tr>
<tr>
<td>1997</td>
<td>846.87</td>
</tr>
<tr>
<td>1998</td>
<td>916.2</td>
</tr>
<tr>
<td>1999</td>
<td>978.24</td>
</tr>
<tr>
<td>2000</td>
<td>1043.51</td>
</tr>
<tr>
<td>2001</td>
<td>1122.29</td>
</tr>
<tr>
<td>2002</td>
<td>1206.64</td>
</tr>
<tr>
<td>2003</td>
<td>1307.65</td>
</tr>
<tr>
<td>2004</td>
<td>1429.49</td>
</tr>
<tr>
<td>2005</td>
<td>1564.54</td>
</tr>
<tr>
<td>2006</td>
<td>1731.13</td>
</tr>
</tbody>
</table>

Source: Data from Trading Economics 2014\(^3\)

---

\(^2\) Ibid.

Let us take a look at Table 2 with some data about ivory seizures from the Elephant Trading Information System (ETIS) from CITES. This system attempts to track trade in illegal ivory and other elephant products. From a report in 2007, here are some numbers about worldwide illegal ivory trade. These numbers include raw ivory which includes tusks and unprocessed parts, “semi-worked” ivory parts that have some basic work or semi-processed parts, and “worked ivory” or ivory that has been worked on and turned into a new commodity.

Table 2. Ivory Seizures from 1989-2006 in KG

<table>
<thead>
<tr>
<th>Year</th>
<th>Raw, Semi-Worked, and Worked Ivory Totals (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>18,835</td>
</tr>
<tr>
<td>1990</td>
<td>15,655</td>
</tr>
<tr>
<td>1991</td>
<td>17,713</td>
</tr>
<tr>
<td>1992</td>
<td>19,636</td>
</tr>
<tr>
<td>1993</td>
<td>18,757</td>
</tr>
<tr>
<td>1994</td>
<td>17,107</td>
</tr>
<tr>
<td>1995</td>
<td>9,668</td>
</tr>
<tr>
<td>1996</td>
<td>20,481</td>
</tr>
<tr>
<td>1997</td>
<td>9,988</td>
</tr>
<tr>
<td>1998</td>
<td>14,608</td>
</tr>
<tr>
<td>1999</td>
<td>19,756</td>
</tr>
<tr>
<td>2000</td>
<td>19,776</td>
</tr>
<tr>
<td>2001</td>
<td>19,246</td>
</tr>
<tr>
<td>2002</td>
<td>33,090</td>
</tr>
<tr>
<td>2003</td>
<td>14,915</td>
</tr>
<tr>
<td>2004</td>
<td>10,695</td>
</tr>
<tr>
<td>2005</td>
<td>17,000</td>
</tr>
<tr>
<td>2006</td>
<td>24,975</td>
</tr>
</tbody>
</table>


---

*T Milliken, R.W. Burn, & L. Sangakaula, "The Elephant Trade Information System (ETIS) and the Illicit Trade in Ivory: A report to the 14th meeting of the Conference of the Parties to CITES," (TRAFFIC, 2007), 6.*
While ETIS did not separate China from other areas, this information is still useful for several reasons. First, it gives the most complete possible picture of the worldwide illegal ivory trade. Second, as China is the main destination for most illegal ivory, the numbers are still useful to use in a comparison as it is a primary demand source. Figure 1 shows China's GDP per capita compared with the ivory seized.

Figure 1. GDP Per Capita and Ivory Seized in KGs 1988-2006

The objective of this chart is not to use statistics to prove a statistically significant relationship. Due to the small sample size that is limited by data availability, it is more important to look at the trendline of both GDP per Capita and ivory seizures. In looking

---

at the trendlines there is a positive trend between rising GDP per Capita and illegal ivory
seizures helps give bring some of this hypothesis to life.

If China is really the major destination for most illegal ivory, as many of the
various law enforcement agencies and wildlife protections groups attest to, then one
might expect that as incomes go up in the market and more consumers are able to buy the
product then illegal seizures would see movement in a positive trend. In remembering
the main goal of the thesis which is to explore why the illegal wildlife trade might be a
profitable business for transnational organized crime, if there are more customers of a
high price commodity like ivory, then there is more incentive to bring that commodity to
market in order to earn more profits.

More explanation will be provided in the qualitative chapter.

Hypothesis Three

*When there are limited resources and high corruption among LEOs, wildlife
crimes are more likely to occur.*

This hypothesis explores the possible relationship between limited resources and
high corruption among LEOs and whether these variables have an impact on wildlife
crime.

In order to find out more about this possible relationship, the following data were
used to create the graph below. Data from Kenyan Wildlife Service (KWS) and Tigernet,
a website that tracks tiger kills and seizures in India, was used to represent kills. For
testing limited resources and high corruption, Transparency International’s Corruption
Perception Index (CPI) is used to test corruption for all three nations. In order to help show the CPI the scores were raised by a factor of 10 to help them show up better on the chart.

According to Transparency International any score below 50 is corrupt and all three nations that the case studies fall below this standard. In fact all three nations can be considered highly corrupt.⁶

Budget information for the KWS and the Indian Ministry of Environment and Forests will be presented along with data about both India’s and Kenya’s national park system for further analysis.

Figure 2. Wildlife Killings and CPI

The objective of Figure 2 is to help explore the relationship between corruption and wildlife crime. The grey diamonds represent wildlife deaths and the CPI is along the x-axis. The regression model here helps to show that as CPI scores go up (which means that as corruption goes down) the numbers of wildlife deaths go down. When looking at the trendline in relation to the CPI scores and the killings, there is a strong visual relationship between corruption and wildlife killings. The $R^2$ score also shows that the relationship is statistically significant. This figure helps to affirm the part of the hypothesis that when there is more corruption then there will be more wildlife crimes.
Now each range nation will be broken down in more detail with charts to help visualize some of the information.

Kenya

Kenyan data from the KWS from 2000-2009 and reports the number of deaths of elephants inside Kenyan national wildlife parks. The next part of the Kenyan data was to factor in Kenya’s CPI. Below is table is compares both the number of elephant kills and CPI year by year.

Table 3. Number of Illegally Killed Elephants and CPI 2000-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Illegally Killed Elephants</th>
<th>CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>50</td>
<td>21</td>
</tr>
<tr>
<td>2001</td>
<td>55</td>
<td>20</td>
</tr>
<tr>
<td>2002</td>
<td>84</td>
<td>19</td>
</tr>
<tr>
<td>2003</td>
<td>57</td>
<td>19</td>
</tr>
<tr>
<td>2004</td>
<td>82</td>
<td>21</td>
</tr>
<tr>
<td>2005</td>
<td>67</td>
<td>21</td>
</tr>
<tr>
<td>2006</td>
<td>55</td>
<td>22</td>
</tr>
<tr>
<td>2007</td>
<td>47</td>
<td>21</td>
</tr>
<tr>
<td>2008</td>
<td>145</td>
<td>21</td>
</tr>
<tr>
<td>2009</td>
<td>271</td>
<td>22</td>
</tr>
</tbody>
</table>


Right off, the issue of small sample size comes up as this is only a nine year window. The argument could be made that no really substantive or significant knowledge could be drawn from such a limited amount of data. But what can be seen by looking at the Table 3 is that as Kenya’s CPI was improving the number of elephants being killed was going down. However in 2008 a spike of elephant poaching in Kenya started and continued into 2009, despite the continuing improvement of Kenya’s CPI.

---

Table 4. Kenyan Wildlife Service Budget for Law Enforcement Operations for 2011 (In Kenyan Shillings)

<table>
<thead>
<tr>
<th>Activity</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combating Illegal Wildlife Trade</td>
<td>27,184</td>
</tr>
<tr>
<td>Eliminate Poaching</td>
<td>576.3</td>
</tr>
<tr>
<td>Provide Security Patrols</td>
<td>81.8</td>
</tr>
<tr>
<td>Education and Awareness Creation</td>
<td>177.1</td>
</tr>
<tr>
<td>Co-ordination of Field Activities</td>
<td>48.9</td>
</tr>
<tr>
<td>Strategic Manpower Deployment</td>
<td>23.75</td>
</tr>
<tr>
<td>Strengthen the Specialized Units</td>
<td>244.2</td>
</tr>
<tr>
<td>Equipping &amp; Kitting of Personal</td>
<td>1,282.60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>3,043,000</td>
</tr>
</tbody>
</table>

Source: Data from “KWS Strategic Plan 2008-2012.”

Table 5. Number of National Parks, Reserves, and Sanctuaries in Kenya

<table>
<thead>
<tr>
<th>Type</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Terrestrial National Parks</td>
<td>23</td>
</tr>
<tr>
<td>Terrestrial National Reserves</td>
<td>28</td>
</tr>
<tr>
<td>Marine National Parks</td>
<td>4</td>
</tr>
<tr>
<td>Marine National Reserves</td>
<td>6</td>
</tr>
<tr>
<td>National Sanctuaries</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>65</td>
</tr>
</tbody>
</table>

Source: Data from “Overview About Us,” http://www.kws.org/about/index.html

The next Tables 4 and 5 help to show the budgetary and resource limitations of the KWS. Responsible for eight percent of Kenya’s land mass while only have a budget of law enforcement operations of around 3,043,000 Kenyan shillings or just around $35,000 USD and having around 65 different land and marine spaces to protect, it is easy to see how limited resources becomes an issue.

India

For India, the second range nation, the tiger kill data was based off of Tigernet. India’s CPI served the role for measuring corruption. Helping to highlight some the data

---

8 Ibid.
10 Ibid.
gathering challenges, Tigernet has records to 2010 as compared to the KWS the posting records only to 2009.

Table 6. Tiger Deaths and CPI 2000-2009

<table>
<thead>
<tr>
<th>Year</th>
<th>Tiger Deaths</th>
<th>CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>52</td>
<td>28</td>
</tr>
<tr>
<td>2001</td>
<td>72</td>
<td>27</td>
</tr>
<tr>
<td>2002</td>
<td>46</td>
<td>27</td>
</tr>
<tr>
<td>2003</td>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td>2004</td>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td>2005</td>
<td>46</td>
<td>29</td>
</tr>
<tr>
<td>2006</td>
<td>37</td>
<td>33</td>
</tr>
<tr>
<td>2007</td>
<td>27</td>
<td>35</td>
</tr>
<tr>
<td>2008</td>
<td>29</td>
<td>34</td>
</tr>
<tr>
<td>2009</td>
<td>32</td>
<td>34</td>
</tr>
<tr>
<td>2010</td>
<td>30</td>
<td>33</td>
</tr>
</tbody>
</table>

*Source:* Data from Transparency International and National Tiger Conservation Authority

In Table 6 we see that from 2000-2010 with CPI improving tiger deaths do go down. This helps to give support to the hypothesis that has corruption goes up wildlife deaths go up.

Table 7. Types of Protected Land in India

<table>
<thead>
<tr>
<th>Type of Protected Land</th>
<th>Number</th>
<th>Land in KM</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Parks</td>
<td>100</td>
<td>39,888</td>
</tr>
<tr>
<td>Wildlife Sanctuaries</td>
<td>514</td>
<td>119,930</td>
</tr>
<tr>
<td>Conservation Reserves</td>
<td>47</td>
<td>1,382</td>
</tr>
<tr>
<td>Community Reserves</td>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>688</td>
<td>161,221</td>
</tr>
</tbody>
</table>

*Source:* Data from Table Indian Council of Forestry Research and Education, “Section iv Protected Areas and Wildlife, ed. Indian Council of Forestry Research and Education (New Delhi, India 2013). 49

---

Table 8. Ministry of Environment and Forests Budget for Wildlife Operations

<table>
<thead>
<tr>
<th>Years</th>
<th>Budget in Crore</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2002</td>
<td>450.62</td>
</tr>
<tr>
<td>2002-2007</td>
<td>739.42</td>
</tr>
<tr>
<td>2007-2012</td>
<td>1240.67</td>
</tr>
</tbody>
</table>

Source: Data from Ibid 49

The Ministry of the Environment and Forests has to protect about five percent of India’s land. Within these lands are other endangered species besides the Tiger, like the Asian elephant, the Indian rhinoceros, the Asiatic lion, and the snow leopard. All of these animals require a large amount of territory and are commodities in the illegal wildlife trade. As such the Ministry of the Environment and Forests has to devote other resources to protecting these endangered animals which stretches the Ministry’s efforts.

Qualitative Analysis

With the quantitative analysis complete, this thesis turns to the qualitative analysis. Where the quantitative analysis sought to find a relationship using data, the qualitative section will take information from the literature review and other data and explore the hypotheses.

---

12 Indian Council of Forestry Research and Education, "Section IV Protected Areas and Wildlife," ed. Indian Council of Forestry Research and Education (New Delhi, India 2013), 49.
13 Ibid. 49.
Hypothesis One

_Low or no legal economic value of wildlife for local/native populations leads to more instances of poaching._

In the range countries, Kenya and India, what is the legal economic value of wildlife for the local/native populations? What determines this legal economic value? But more importantly, how does this level of legal economic value affect poaching? That is main question of this hypothesis. As this hypothesis is only dealing with the supply side of the economics equation, only Kenya and India will be looked at. The next hypothesis will take a look at China representing the demand side of the economics equation.

The first thing that needs to be defined is what is low economic value a species? There are many different ways to calculate this value all of which can differ depending on the opinions and values of those making the calculations. For this thesis economic value refers to the value that species gives to the local community over time._15_ Does the local community that interacts with the species see it as something that can provide economic value over the long term, or is the only value in the form in it being dead and selling the products made from the carcasses, like ivory and tiger bones for TCM? For this thesis, low economic value of a species means that the local community sees more value in the species in the short term and harvesting carcasses for wildlife products. Contrariwise high economic value means that the local community sees economic value coming from non-use or the sustainable hunting of the species.

---

15 [http://lib.colostate.edu/research/agnic/game.html](http://lib.colostate.edu/research/agnic/game.html).
When thinking about this economic value the idea of property rights is something that needs to be considered. A property right is: the capacity to call upon the collective to stand one's claim to a benefit stream.\textsuperscript{16}

So what is this benefit stream? This is the ability of people to gather economic benefits from a source. In many rural areas wildlife is traditionally seen as a benefit stream. However, with the Public Trust Doctrine system, which is common in many western style conservation programs, this benefit stream is cut off because instead of the local people having rights to wildlife, wildlife belongs to the government in trust for future generations.\textsuperscript{17} As a result agriculture becomes the primary benefit stream for most rural communities.

With government protection of wildlife comes new clashes as rural people are alienated from traditional lands from which they have been moved and now are not able to hunt or gather wildlife has they have in the past. When rural people try to use these old benefit streams they are criminalized by the government. In addition, rural people have to live with these animals, and as result of government protection of the animals have limited ways with dealing destructive animals that threaten crops, livestock, or buildings.\textsuperscript{18}

What these factors do is to help create an environment where there is low economic value for wildlife by the local community. When there is low economic value and uneven law enforcement, it becomes reasonable in an economic sense to harvest as

\textsuperscript{18} Skonhoft and Solstad, "The Political Economy of Wildlife Exploitation," 18.
much wildlife as possible due to uncertainty about future revenue streams.\textsuperscript{19} Then, considering the high prices that transnational organized crime will pay for these wildlife products and comparing them to the normal wages of a local farmer, it makes sense to hunt these animals. In fact there is an economic theory that states when perceived economic value of a species is low and the reproductive rate of the species is low—which is true for both elephants and tigers—then extinction is the ideal economic policy.\textsuperscript{20}

Obviously the importance of economics in relation to the illegal wildlife trade is important and merits some examination, which the study will do now starting with Kenya.

\textit{Kenya}

When assessing Kenya and its situation in the context of what local people perceive as the economic value of wildlife, there are strong indicators that those who live with wildlife have a low economic value for these animals. First, while there is growth in Kenya’s economy the rural areas are still lagging behind the cities. Second, the lack of voice for rural people with relation to ownership of wildlife incentivizes overharvesting.

The first issue is economic. While a regional economic hub for the east African region, Kenya is still a nation that has a large amount of abject poverty. According to the World Bank, despite recent gains in the economy and keeping inflation low and investment high, Kenya is still vulnerable to external economic shocks. Tourism is not a fully developed sector and there are infrastructure issues and need for more investment in infrastructure. There is also a major need to address poverty, job creation, local energy production, and creating a better business environment. Job creation is especially

\textsuperscript{19} Ibid., 19.

\textsuperscript{20} Ibid., 16.
important as each year around 800,000 youth come into the job market. The need to create jobs, especially in the rural areas, continues to be a major issue and plays in with corruption issues within the nation.21 

Connecting to this economic issue is the situation in the rural areas. Kenya has chosen to follow a western style model of conservation. This means creating large zones of protected land that do not have people on them. This means moving many rural peoples like the Maasai out of traditional lands and relocating them to new areas.22 The other part of this conservation model is that all wildlife in Kenya belongs to the government.23 Consequently rural peoples who have traditionally used wildlife and had free access now have reduced access via the parks, and wildlife depending on the species cannot legally hunt. This is especially true for endangered animals like elephants.

Part of the issue with this conservation model is that there is little to no interaction by the government in Nairobi with those who have to live with wildlife. As many of these rural people have to rely on agriculture, farming or livestock they find themselves in competition with wildlife for land, water, and food. In Maasai tribal areas, elephants are known to knock down buildings in the search for food, and locals are not allowed to kill such animals. The same is for big cats that kill livestock. This inability protect their only economic source creates an incentive to poach because these animals are hurting their livelihood, but they have no real way to address it with the government.24

These two factors create a low economic value for wildlife, particularly elephants. This lack of economic growth for those who live in the rural areas and with wildlife leave them with limited number of economic prospects. Agriculture is the primary source of income and it does not pay that much. Poaching on the other hand offers a substantial boost in income that is welcomed by many families. Many of these rural people also have been moved off of traditional lands. The fact that they now lack the traditional property rights that they once had for wildlife creates a strong incentive to poach, especially if enforcement is lacking. When in one poaching operation a person can make well over twice compared to a normal year’s income, from a rational actor perspective there is no reason not to poach.

So while it appears that in Kenya there is a low economic value for wildlife like elephants, what about India and tigers?

India

While larger than Kenya, India presents this thesis with another good opportunity to explore similar circumstances. Like Kenya India has a large rural population. While this population is starting to move to the cities in greater numbers, their economic prospects are still mainly tied with agriculture as it is in Kenya. India has one of the largest populations of young people on the planet that will need jobs now and in the future.

---

coming future. There is vast poverty in the rural areas and infrastructure is in need of critical investment if growth is to be maintained.

Like Kenya, the wildlife of the nation belongs to the government and hunting is not allowed without permission. Also like Kenya, India has taken a western style conservation program. Parks and protected areas where people are not allowed to go or use are the law and technically enforced. Rural people are no longer allowed to use traditional areas for gathering food, materials, and water. Likewise traditional hunting rights have been taken away from rural people, especially for endangered animals like tigers. Another common theme shared with Kenya is that there seems to be little communication between rural people of India and the government officials of New Delhi and the regional capitals. This lack of voice for these actors helps to create feelings of neglect hostility between the locals and government officials.

In India this thesis sees another case of where there is low economic value for wildlife. The low economic potential for India’s rural poor and the lack of ownership rights for the wildlife that they once used creates a situation where once again poaching becomes a popular way to boost family income. In this case, it is because tigers and tiger parts are worth a large amount of money, much more than a normal farmer can make in a year by legal means. All of this explains the low economic value for wildlife.

Costs of Sustainable Development

---

This hypothesis has discussed the effect of limited economic value of wildlife and its relation to the illegal wildlife trade. Sometime should be spent on the complex relationship between sustainable development and the conditions of the locals. The goals of sustainable development are create development and educate people in ways that allow them to develop economically but are not damaging to the environment. However this is a process that is very complex and historically has had many issues in execution.

Traditionally when it comes to sustainable development is pushed by the West, there is a feeling by the developing world that there is more emphasis on the sustainable part as in the ecosystem that is to be protected and less on the development. As Western nations push for large parks that are empty of people in an effort to replace what is done in their nations, conflicts between locals and governments occur needlessly. This can lead to local populations attacking wildlife to prevent protection and other hostilities.

But the ultimate question that comes about is who pays for sustainable development? Is if the nations that needs the development, the nations that try to force it upon them, or international bodies? While international bodies like the United Nations have tried to step in help share some of this costs, for many developing nations ultimately the cost is paid at the local level. This is because they are the ones that must live with the result of the project. If sustainable development is going to be more than just a buzzword and something that is effective in improving the life of locals who live with

---

32 Biodiversity Conservation through Environmental Education for Sustainable Development - A Case Study from Puducherry, India, 1 97-111, 97-98 (2011).
wildlife then effective partnerships between locals and the national governments must be made.

What can be seen with this hypothesis is that if there is limited means for economic growth such as being tied to a single industry like agriculture that competes with wildlife for resources along with a lack of property rights and a conservation method that lacks rural voices to help create policy, all combine to create low economic value for wildlife. When there is low economic value for wildlife, there is more incentive to poach wildlife aggressively in order to maximize short-term gains.

Hypothesis Two

*Where there are decreasing domestic wildlife stocks, a historic/traditional use of wildlife products and economic prosperity there will be an increased demand for wildlife products.*

Where hypothesis one dealt with the supply side of the economic question of the illegal wildlife trade, this hypothesis deals with the demand side. The main source of demand for illegal wildlife products that can be supplied by transnational organized crime is the People’s Democratic Republic of China, henceforth referred to as China.

China is a good case to look at for several reasons. First it is one of the largest destinations of legal and illegal wildlife products in the world.\(^{35}\) China has begun to exhaust is own internal supply various wildlife species like turtles and tigers, which are

important demand species.\(^{36}\) In some species cases, it has made them extinct, like the Asian elephant, and has no domestic source. This means if China is to satisfy any demand for these three wildlife products, it must turn to external sources. Second, Chinese culture has a very strong traditional medicine practice that uses wildlife products for many different uses and encourages the eating of bush meat for nourishment, medicinal values and as a way to display wealth.\(^{37}\) Finally, China’s economy has grown rapidly since the reforms of Deng Xiaoping. This economic rise has also resulted in the one of the largest (if not the largest) movements of people from living in poverty to prosperity. A country that now finds more millionaires among its people, many more Chinese people now have the ability financially to purchase wildlife products not only as a special occasion, but for some as daily commodity.\(^{38}\) These three factors when combined help to explain why China is an attractive market for the illegal wildlife trade.

**Decreasing Internal Animal Stocks**

When thinking about the demand, domestic supply is something that has to be considered. While hypothesis one dealt with supply issues in Kenya and India, hypothesis three will discuss the role of transit nations like Vietnam and Nepal, China’s own internal animal stocks plays a role. China has always been an important nation when it comes to biodiversity. It is home thousands of endangered species of plants and animals.\(^{39}\) Many of these plants and animals are also critical components of TCM. In

---


\(^{38}\) Bank, "China".

China the western idea of preserving species for the sake biodiversity runs contrary to a strong tradition of consumption, which made early attempts at preservation more difficult to present to the Chinese. However, due to China’s massive population explosion and lack of arable and livable land, there has been much more pressure on China’s domestic flora and fauna. This includes the increased hunting and loss of natural habitat.\(^{40}\)

Many species are now endangered and are threatened with extinction if they have not gone extinct already. This collapse of domestic stocks is forcing the Chinese to look outward for wildlife products in the same way that it looks outward for raw materials to fuel its economy. As the cheaper domestic stocks are running out and becoming more expensive, Chinese people look to Africa, India, and Southeast Asia to name a few for new sources of wildlife products.\(^{41}\) However, the declining internal stocks by themselves would not explain any possible increase in demand. China also has a strong cultural and historic tradition of using wildlife products.

**Cultural and Historic Tradition**

It can be argued that main source of China’s demand for wildlife products is, its rich history and cultural traditions. These historic and cultural traditions have shaped China to have different viewpoints about wildlife compared to the West. In comparison to modern western culture which holds value in preserving nature for the sake of nature as a response to the massive environmental damage caused by unregulated industrial development, China has not developed a similar ethic when it comes to nature. Instead

\(^{40}\) Gong Shiping, "Illegal trade and conservation requirements of freshwater turtles in Nanmao, Hainan Province, China," 1494.
the Chinese have a strong tradition of consumption of wildlife products for various medicinal and status purposes.

This historical and cultural tradition stems from several different sources of Chinese society. Two of the most important and native sources are Confucianism and Taoism.

**Confucianism**

First is the influence of Confucianism, based off of the teachings of ancient scholar Confucius, this philosophy emphasis as strong orderly and structured world that has a strong Humanist viewpoint. This viewpoint includes the idea that nature is here to be used by humans. Confucianism emphasis that the role of humanity is equal or superior when compared to nature. This makes sense when considering that Confucianism as whole is a philosophy about social status and rank. Confucianism also values control and the proper social roles that are involved in control. This focus on the status of mankind does not lend to what would be considered environmentally friendly practices by modern western environmental thinking. As Confucianism is one of the most important philosophical schools in China and advocates man over nature is, an idea of not using or controlling nature would be foreign to the Chinese from this school of thought.

---

44 Ibid., 109.
45 Ibid., 111.
Taoism

The other major native influence on Chinese thoughts about nature is Taoism. This religious movement founded by ancient monk Laozi. More of a religion or philosophy about living in harmony with the "way" or the world, Taoism is considered to be one of the most environmentally friendly religions by the west. It is a religion based on the idea of living in harmony with nature. However what is harmony or what is nature is something that is not fully defined and has gotten confused with western definitions. For example in China nature does not mean the same thing as it does in the west. Also there is a Chinese saying that is "Harmony grows profits." Because of these differences between Western and Chinese thought, it is possible that while Taoism might be more environmentally friendly than Confucianism, it might not be what Western environmentalist think it should be.

When considering the impact of these two cultural forces it is easy to see why China has not come up with is own version of western environmental thought. In this paradigm the use of TCM and other uses of wildlife products is considered a normal and acceptable by many Chinese.

Traditional Chinese Medicine

TCM has its roots all the way back to ancient Chinese history as well as roots in both Confucianism and Taoism, and is still popular and considered to be a valid medical

47 Snyder, "Chinese Traditions and Ecology: Survey Article," 111.
48 Ibid., 113.
approach for many everyday Chinese, rich or poor. TCM is uses a wide range of plants and animals including tigers, pangolins, orchids, and bears. What makes TCM so damaging to wildlife is that it is very efficient; just about every part of an animal or plant has a purpose and can be used as medicine. While this creates less waste, it also makes it attractive to poach animals as the entire animal to be used in TCM which increase the profit margin for the poacher and the seller. For example, tiger meat is sold because it said to increase vitality; bones are used in medicinal tonics and in plasters to help treat arthritis; wine is made out of the carcasses; and teeth can be ground down for tonics. The eyes are used to treat illness and the penis is used to treat male infertility. Turtle meat is a popular protein source China. The shells and bones are ground up for healing tonics. As more species become rarer the prices of have gone up. This creates a situation where buyers are willing to pay even higher prices in order to get what remains on the market.

To take one such example, as large mature Bluefin tuna is getting harder to find, sushi chefs are paying much more money than they normally would for what fish are caught. In the last couple of years large Bluefin tuna have commanded price tags of millions of dollars on the Tokyo fish market. Another fish product that is facing similar

---

50 Gong Shiping, "Illegal trade and conservation requirements of freshwater turtles in Hainan, Hainan Province, China," 1494.
53 Kristin & Ling Nowell, Xu, "Taming the Tiger Trade," (Hong Kong, China: Traffic East Asia, 2007), 3-4.
54 Moyle, "The black market in China for tiger products," 129.
issues is caviar or sturgeon eggs. A long held luxury item, massive demand, increased poaching, and slow live cycles has increased the value of caviar and made the species an endangered animal. All of these facts make caviar a good example of that is becoming more expensive as the population decreases.\textsuperscript{58}

Besides TCM, wildlife consumption has a long history in China and involves many different wildlife products. Ivory is a prime example of this, as it has always been considered a luxury item. Seen as a historic symbol of wealth due to its rarity in China and its durability, with the rising incomes of Chinese people ivory demand has gone up. In recent times ivory’s luxury status has made a leap into the 21\textsuperscript{st} century. For those who can afford it, it is seen as a stable and more favorable investment when compared to stocks and bonds.\textsuperscript{59} Tiger skin products as well are popular in various different forms, whether whole skins to be used as rugs or as clothing. In 2006 in Tibet there was a massive increase in the amount of tiger, otter, and leopard skins being used in traditional clothing, with much of the source material thought to have come from illegal sources.\textsuperscript{60} Turtle products meanwhile are seen as symbols of longevity and wealth.\textsuperscript{61}

With this long cultural and historic tradition of using wildlife products and a decline in stocks, a better picture can be framed concerning demand. There is however one more factor and that is China’s recent economic growth.

\textsuperscript{58} Raymakers, "CITES, the Convention on International Trade in Endangered Species of Wild Fauna and Flora: its role in the conservation of Acipenseriformes," 56.
\textsuperscript{61} Zhihua and Zhigang, "Characteristics and Risk Assessment of International Trade in Tortoises and Freshwater Turtles in China," 1.
Increase Economic Prosperity

In reflecting on the qualitative analysis, the idea that increased economic prosperity alone increases demand does not stand up to full scrutiny. However, when placed along with the decreasing supply of domestic wildlife and a cultural and historic tradition of using wildlife products, it plays its part. This can be seen in a couple of different examples.

As domestic stocks have gone down, it is logical to think that more Chinese would be priced out of the market, but as incomes have gone up, more Chinese people can buy wildlife products from foreign sources. For some species, bidders are stockpiling various wildlife products like tiger bones and ginseng because the overall stock is being depleted. This has further increased demand and the willingness of transnational organized crime to supply it because traffickers know that the demand will be there.

Second, due to China’s increasing middle class and upper class who can now afford wildlife products has gone up. When adding the historic and cultural tradition of using wildlife products and the allure they have, even if the average Chinese person uses a small number of products, the sheer increase in numbers has a positive impact on demand.

When thinking about what affects demand in China, there are three factors that help increase demand for wildlife products. First is that China is seeing its own domestic

---

63 Moyle, "The black market in China for tiger products," 129.
wildlife stocks go down and in the case of some species collapsing or disappearing. This decline of traditional internal stocks is forcing users of wildlife products to have to turn to external sources. Next, China has a long historic and cultural tradition of using wildlife products. Wildlife products are thought to have special healing, mystical, and material powers that non wildlife products lack. Consumption of wildlife products is seen as a status of wealth in Chinese culture. A traditional barrier to this consumption of these products is that in the past only the rich or better off where able to afford products like ivory or tiger parts. But with China’s recent economic prosperity since 1988, millions of Chinese have been lifted out of poverty and are earning more money. This means they are now able to afford wildlife products. This increase in numbers and the ability to bring in wildlife products from other nations at a low cost have helped to keep demand up and even increase it.

All three factors help to make demand high in China and thus an attractive market for the illegal wildlife trade and for transnational organized crime. With this demand it is the responsibility of LEOs to combat the trade, but there are many challenges to LEO. These are the focus of hypothesis three.

Hypothesis Three

When there are limited resources and high corruption among LEOs, wildlife crimes are more likely to occur.

To better explore this hypothesis, each nation will be examined. Like the data in the quantitative chapter, the range nations Kenya and India’s data will be based off of
elephant and tiger deaths. Data on China as the consumer nation will be based off of trade information.

Kenya

With issues of corruption, limited resources for LEOs and wildlife crimes, Kenya is a nation that has to deal with all three of these problems. Kenya scored the lowest of the three case study nations on the CPI. Besides elephants, Kenya also has to protect a large number of other endangered species in its parks and sanctuaries. The KWS has to protect all of these animals within a considerable amount of land. Kenya lives among neighbors that are not politically stable and feels the effects of the instability in the region. Al-Shabaab is known to violate Kenya’s and other nation’s borders from bases in Somali in order to hunt elephants.

A consequence of that political instability is the presence of foreign militias using freely available small arms to outgun the KWS. Also, at least 82% of the elephant poaching occurs outside parks under KWS control. KWS also attributed it to increasing sophistication of the hunters and the in limited ability to respond due to not having enough resources.

These stresses can be seen in recent PIKE data. There were only four large-scale seizures of ivory from 2000-2008 at a total weight of 7,221 kg. A large scale seizure is

---

one where the weight of the seizure is of 800 kilograms or more. Subsequently in the years between 2008 and 2012 there were twelve large scale seizures at a total weight of 21,615kg. 

\textit{India}

Like Kenya, India scored poorly on the CPI index, indicating that there are problems with corruption. India’s CPI, in contrast to Kenya’s, has improved to 35 but falling to 33 in 2010. This indicates a small but consistent decrease in corruption, although the CPI has risen a little in the past two years. In addition to the CPI, reports and surveys also tell of park personnel allowing locals to enter protected areas and harvest wildlife and plants.

India, being a larger nation than Kenya, has more range land to protect. Being responsible for as much as five percent of India’s total land, it is not hard to see the LEOs of India to suffer from with limited resources that affect their ability to protect India’s wildlife.

A WWF report, \textit{Taming the Tiger Trade}, larger number of seizures and deaths were reported, with as many as 336 seizures of tiger parts and 234 deaths. Tigernet, which is website from National Tiger Conservation Authority, a statutory body under the Ministry of Environment and Forests, recorded as many as 74 seizures of tiger parts and 234 tiger deaths from 2009-2013. These records show, first, that the level of poaching

\begin{itemize}
\item \textsuperscript{68} CITES, "Interpretation and implementation of the Convention Species trade and conservation Elephants," 18-19.
\item \textsuperscript{69} International, "Corruption Perception Index". CPI.
\item \textsuperscript{70} Robbins et al., "Conservation as It Is: Illicit Resource Use in a Wildlife Reserve in India," 9.
\item \textsuperscript{71} Stoner, "Reduced to Skin and Bones Revisited," 9-10.
\item \textsuperscript{72} Authority, "Statistics".
\end{itemize}
and killing of tigers is very high. Second, despite the efforts of various government organizations, INGOs, and NGOs that data collection is very fragmented despite the fact that they are trying to gather data on the same animal in the same country.

The large numbers of reported deaths and seizures of tigers and tiger parts would supports the hypothesis that with high corruption there is increased wildlife crimes. There is also evidence that as the corruption has gone down there has been a reduction of tiger deaths and seizures.

**China**

Being a consumer and importer nation, the data for China is different from both Kenya and India. As the consumer nation, the data is more concerned with volume of trade and how that stretches law enforcement resources rather than information about national wildlife.

Addressing corruption, according to Transparency International China has a CPI score range of 31 to 36, making it the least corrupt country of the three case study nations.\(^{73}\) However corruption is still considered to be a major issue in China. As an example it is commonly thought that it is easy to buy off police and as long as a person has enough money, then they can buy whatever or whoever they want.\(^{74}\)

In addressing limited law enforcement resources, this thesis turns to several different groups of information. According to the World Bank, approximately 140 million 20 foot long containers entered China last year. The country that took second

---

\(^{73}\) International, "Corruption Perception Index".

\(^{74}\) Li: Hua Zhang, Ning: Sun Shan, "Wildlife trade, consumption and conservation awareness in southwest China," *Biological Conservation* 17(2008): 1509.
was Singapore at a little over 30 million units. This is a mindboggling amount of traffic for law enforcement to deal with. In addition there are 172 ports, 507 airports, and 14 different borders with various land and water crossings that have to be policed.

According to the World Trade Organization, China is first in exporting goods and second in importing goods. All of this trade can easily overwhelm any LEOs that are tasked with inspecting ingoing and outgoing shipments, lending great credence to the idea that the more limited the LEO resources the more likely wildlife crimes are to be committed.

For wildlife crimes, there is sadly a long list of seizures by Chinese officials. According to PIKE, China has had fifteen large scale ivory seizures with a weight of over 30,000 KGs and has been responsible for 54% of global ivory seizures. From a WCO report, in October 2012 over 1,209 pieces of ivory were seized in Hong Kong and mainland China. According to the WWF seizures of tiger parts are common, but are now in decline with improved law enforcement and consumer education. From 2000-2012, there were at least 156 seizures of tiger derivatives. Sea turtles meanwhile have been another popular item and are hard to combat as they often are taken from

---

80 CITES, "Interpretation and implementation of the Convention Species trade and conservation Elephants," 20.
81 Organization, "Illicit Trade Report 2012," 104-05.
82 Stoner, "Reduced to Skin and Bones Revisited," 10-11.
international waters or another nation’s territory. In another WWF report, from 2000-2008 there were at least 52 seizures of sea turtle and sea turtle derivatives in China.83

Because corruption is high in China and LEOS must work with limited resources to deal with high corruption, there likely will be increased wildlife crimes. In China’s case, however, it is the importation of wildlife products and not loss of native wildlife.

Hypothesis Four

Transnational organized crime’s involvement in the illegal wildlife trade is increasing the amount of trade.

This hypothesis seeks to tease out the relationship between transnational organized crime and its impact on the illegal wildlife trade. Is it having an impact on the trade in the form of heavier trafficking? In analyzing this hypothesis, this study will look at a variety of data. This hypothesis has a dependent variable of the volume of the illegal wildlife trade over time. The causal argument is divided into three different measures. First will be the number of arrests. The second is the volume of wildlife products that are seized. The last section is factoring the involvement of transit nations and their role with transnational organized crime. Is the involvement of transit nations helping to increase the amount of illegal wildlife trade? What is their role?

Arrests

Continuing the familiar theme of this thesis, good arrest data has been hard to find. As environmental crimes tend to be low on the priority list, statistics on them tend to be

---

few and far between. With that admitted, it is important to look at the seizures and arrests that have been reported and look to see if there has been an increase in the arrests where more than three people have been arrested, a standard for defining organized crime. This section will be done by case study. Both Kenya and India have the burden of not only arresting those who kill their wildlife but also those who try to export products out of the nation. China has to worry catching those who enter their country with the products and dealing with the markets.

Kenya

In Kenya the presence of large poaching parties hunting elephants has increased in recent years. As ivory prices have gone up along with the ease of getting high power and fully automatic weapons, the KWS has encountered more poaching parties that are made up of more than three people and are able to outgun rangers. In 2011 the KWS had 30 engagements with armed poachers. This led to the seizure of 49 firearms and 1,040 rounds of ammunition. In addition 2,638 suspects were arrested in 2011. This was an increase of 3.6 percent from 2010.84

India

In India the presence of large poaching parties is seen as a substantial threat to India’s tiger population. Recently at the Sariska Tiger Reserve, a group of at least four poachers entered the reserve and managed to kill the entire tiger population before the reserve’s own ranger force did anything.85 While an extreme example it shows the

---

85 Banks, "Skinning the Cat Crime and Politics of the Big Cat Skin Trade," 19.
impact of what groups of poachers are capable of doing, especially if LEOs are slow or refuse to act.

As for arrests, there has been more action in arresting poachers, smugglers, dealers, and other criminals. From 1994-2006 around 1,900 people were accused in connections with cases involving wildlife crimes. Of that number only 30 were convicted and sentenced. A recent case involved a family and had no fewer than ten people involved in a smuggling network that took tiger and other illegally poached wildlife products from India to Nepal and China.86

China

In arresting those who commit wildlife crimes, China has been making some progress. It has worked with various IGOs like Interpol to build up capacity and to work with them and other nations on joint operations. This has led to a number of arrests in China and across the world where products were en route to China.87 What is troubling however is that in Africa, Chinese businessmen and nationals served as the middlemen to facilitate the transport of wildlife products from Africa to China. On the other hand, out of the three case study nations, China has the strictest laws and harshest penalties for those who commit wildlife crimes.88

Volume

If the number of people per arrest is going up or there is more evidence of large poaching parties, the next question is, is the number of wildlife products going up per

86 Ibid., 18.
87 Organization, "Illicit Trade Report 2012," 105.
seizure? Are we seeing a link between the how many people are arrested per seizure and how much illegal wildlife product they are carrying? What is most concerning there is an increase in weight and number of individual wildlife products being found per seizure.

Kenya

With the recent increase in elephant killings, more ivory have been seized by the KWS and other Kenyan LEOs. In addition, Kenya is serving as a major departure point for much of East Africa’s ivory. In recent years, Kenya has had up to twelve large scale seizures of a total weight of 21,615 kg in ivory. From 2009-2011 there was a total of 17 large scale seizures of ivory weighing in over 24,600 kg. 89 Ironically part for the increased volume in Kenya’s reports is because they have been able to improve their abilities in reporting deaths of elephants using the MIKE and ETIS programs that CITES sponsors. 90 However there are still major challenges when it comes to Kenyan LEOs being able to catch poachers and members of transnational organized crime, especially when it comes to catching them leaving the nation.

India

When looking at India, thanks to its partnerships with local NGOS and IGOs there is fair amount of data. Starting off with information from WPSI from 1994-2004, there were at least 978 cases involving the seizure of tigers, leopards or otters parts and another 783 cases of tiger parts being seized. 91 The WWF has published several reports about the

89 CITES, "Interpretation and implementation of the Convention Species trade and conservation Elephants," 11, 15-16.
90 Ibid., 16-19.
91 Banks, "Skinning the Cat Crime and Politics of the Big Cat Skin Trade," 16.
conditions of tigers. In one report seizures of bones from 1999-2005 were recorded at 175 kg in India.\textsuperscript{92}

Figure 3. Seizures of Tiger/Leopard Parts (In KG) From 1995-2005 \textsuperscript{93}

Figure 3 shows how many tiger and leopard parts were seized from 1995-2005 from a joint WWF Traffic study. When considering that the total tiger population of India is thought to be under 3,000 tigers these numbers are shocking and seem to indicate that some sort of organization of the poaching of tigers is underway.

\textit{China}

As the importing nation there are two ways to look at the volume of trade in China. One can examine what is seized at the borders, ports, and airports. Next, one can study what is found on the markets. This section will look at the two separately. A disturbing report is that it appears that in China much of the wildlife smuggling is not

\textsuperscript{92} Nowell, "Taming the Tiger Trade," 38-39.
\textsuperscript{93} Stoner, "Reduced to Skin and Bones Revisited," 9-10, 12-13.
decreasing and the underground, and black markets are growing.\textsuperscript{94} This is despite recent gains made in seizing products by Customs officials.

\textit{Customs Seizures}

In cooperation with the WCO and other partners China participated in Operation GAPIN. During this worldwide operation, it was determined that China was the preferred destination for many wildlife products. A total of 497 kg in raw ivory, 393 worked ivory pieces and 140 tortoises along with other contraband including heroin were seized.\textsuperscript{95} In another operation with the WCO, mail carrying ivory from European nations was intercepted. The mail ranged from carrying a few grams of ivory up to 19.4kgs.\textsuperscript{96} In report by Dalberg done for the WWF, their investigation estimated that in 2011 23 tons of ivory was shipped from Africa to Asia.\textsuperscript{97}

\textit{Markets}

Thanks to its practice of using wildlife products in its traditional medicine and certain wildlife products like ivory and tiger skins being seen as symbols of wealth, there is still a strong market for these wildlife products despite official bans on them. What makes for a strong wildlife market? Generally, when a city is closer to the border of transit nations, there is more supply. For example in Pingxiang City, in Gunagxi province, over 20-40 tons of turtles are traded each year.\textsuperscript{98}

\textsuperscript{94} Zhang, "Wildlife trade, consumption and conservation awareness in southwest China," 1500.
\textsuperscript{95} Organization, "Illicit Trade Report 2012," 101-02.
\textsuperscript{96} Ibid., 105.
\textsuperscript{97} WWF/Dalberg, "Fighting Illicit Wildlife Trafficking: A consultation with governments," 10.
\textsuperscript{98} Zhang, "Wildlife trade, consumption and conservation awareness in southwest China," 1500.
Table 9: Illegal Trade in Yunnan Province From 1998-2004

<table>
<thead>
<tr>
<th>Wildlife Product</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tiger bone</td>
<td>19 KG</td>
</tr>
<tr>
<td>Number of turtles</td>
<td>70</td>
</tr>
<tr>
<td>Big Headed Terrapin</td>
<td>162 KG</td>
</tr>
<tr>
<td>Thailand Soft Shelled Turtle</td>
<td>12 Tons</td>
</tr>
</tbody>
</table>

*Source:* Data from Zhang, “Wildlife Trade, Consumption and Conservation Awareness in Southwest China.” 1500

As seen in Table 9, Yunnan province, which borders both Myanmar and Vietnam, has a very active illegal trade. While a breakdown of years was not available, sheer numbers show that a large amount of turtles are being traded in this border area.

Another marker of a large market is how big the city is and how rich the population is. Cities like Beijing and Shanghai tend to have strong markets because of the number of wealthier people they have. In recent years Tibet has seen an increase in its markets for wildlife products, especially tiger skins for traditional clothing. This demand is due to the increasing wealth of the region and its border with Nepal, from which tiger skins and other products from India are shipped.

Transit Countries

A transit country is one that serves as a way point on a route for the illegal wildlife trade. In the value chain or supply chain, a transit nation can provide additional added value to the wildlife product and or provide a safe entry into the consumer nation.

---

99 Ibid., 1499.
100 Ibid., 1503.
101 Banks, "Skinning the Cat Crime and Politics of the Big Cat Skin Trade," 3.
Transit nations play an important role for several different reasons. Transit nations provide a measure of protection. By moving to another country before ending at the final consumer nation, transnational organized crime can use transit nations as a way to avoid consumer country LEOs. This is especially true if LEOs in the transit nation are weak or bribed by transnational organized crime to leave them alone or even help them. Transit nations also provide a source of income as products can be sold there if something goes wrong in the consumer nation. This section will look at some of the transit nations per species and see why they have become transit nations.

There are several important characteristics of transit nations. The reasons for their involvement have some similarities. Geographical location puts them all close to China and some have multiple border crossings on land and water, allowing for easy of transport for transnational organized crime. Second, corruption is a common issue. Corruption in LEOs and other government bodies as seen in earlier hypothesis indicates a higher amount of wildlife crime. This is same for the transit nations. Third, each nation has other characteristics that make business sense to use them as a transit nation. This might include a work force skilled in wildlife products, or cultural and economic similarities that allow the smuggled wildlife products to be sold there instead of China. Fourth, poverty is common, giving transnational organized crime economic room to operate and to entice locals to work with them. Some important transit nations include Nepal, Myanmar, Vietnam, and Thailand.
Nepal

While normally thought of as a quiet mountain nation that is home to Mt. Everest and Sherpas, Nepal is an important transit nation in the illegal trade from India to China of tigers and other wildlife products. Due to the still tense border relations between India and China, direct border crossing between the two is difficult. This is why Nepal becomes a good transit nation. Sitting between the two giants, with good relations between both, facilitates easier border crossing into Tibet.

Corruption is a major issue in Nepal. With a TPI score of only 31 and traditionally scoring in lower part of the rankings, Nepal has serious issues when it comes to corruption. This corruption makes it easier for transnational organized crime to use established trading routes for other products and use them to send tiger products from India to China. Also there are reports of major corruption among Nepalese and Chinese customs officials, with some traders openly bragging about having an agreement with customs officials with both countries that lets them ship wildlife products across the border. From 2010-2012, 45 persons were arrested in connection with organized crime. In addition, fighting with Maoist rebels and constant intergovernmental discord makes policing and prevention of transnational organized crime much harder.

106 Stoner, "Reduced to Skin and Bones Revisited," 13.
Myanmar

Myanmar’s recent opening to the world has allowed it to become a transit nation for tiger parts entering China. The secretive nature of the government and its corruption have proven to be hurdles when it comes to finding good information about what role transnational organized crime plays in the illegal wildlife trade. In particular there is concern about the limited ability of law enforcement capabilities.107

Like Nepal, Myanmar borders India and China, making it a natural transit point. Even during the closed-off period, both China and India had good relations with the military junta and trade with China and India was common.108 This helps to provide established trade routes of illicit goods that can be used by smugglers. With corruption being very endemic and TPI score of 21, transnational organized crime likely has opportunities to make inroads with LEOs, and customs officials.109

Vietnam

The role of Vietnam is important not only for transshipment of tigers but also other the other wildlife products covered in this thesis. For tigers, Vietnam is important not only as a transit nation but also as a range nation. Bordering China, Vietnam has the advantage of having good land and water routes. Corruption is a major problem and Vietnam has a ranking of 31 on the CPI.110 One aspect that makes Vietnam special is that it is just more than a transit nation. As its economy has strengthened it is starting to

---

107 Ibid., 21.
become a consumer nation in its own right. Part of the recent increase in rhinoceros killings is due to demand in Vietnam after the story that rhinoceros horn cured a government official of cancer.\textsuperscript{111}

For some numbers from Vietnam, it is suspected that at least 3,500-4,000 tons of illegal wildlife products are moved within the nation. In a study of 1997-2007 there were 14,758 cases of wildlife crimes in Vietnam with a total weight of products seized at 634,932.4 kg.\textsuperscript{112}

Like China, Vietnam has a tradition of using tiger parts in traditional medicine. With the increasing wealth of the nation there is more demand for tiger parts and even tiger meat. As a result, transnational organized crime is able to sell tiger parts and other wildlife products in Vietnam even if it is not able to transport the products into China.

\textit{Thailand}

When it comes to ivory, Thailand is arguably the most important transit nation. It is believed that the majority of ivory that leaves Africa comes to Thailand in order to be processed before going to other markets like China or Japan. So why is Thailand a major ivory transit nation? It has to do with Thailand’s ports and close proximity to China, its own corruption issues, and a having a large domestic ivory industry and market.

One major advantage that Thailand enjoys is open access to Africa. While its ports are not as a busy as China’s in 2011 Thai ports saw over 7 million twenty

\textsuperscript{111} WWF, "Illegal Wildlife Trade".
\textsuperscript{112} Nguyen Van, "Wildlife Trading in Vietnam Situation, Causes, and Solutions," 155.
equivalent units enter and leave its ports. Within this traffic it is easy for smugglers to bring in ivory and to ship it out once it is processed. Besides ports that can take in shipments from Africa and send them out to China, Thailand also is close to China. While lacking a direct border, Thailand borders both Vietnam and Myanmar from which traffickers can smuggle ivory into China.

Corruption is yet again another issue that plagues this transit nation. Scoring 35 on the CPI, Thailand has many problems when it comes to corruption. In recent years the constant military interventions in the civilian governments has created further instability that makes fighting transnational organized crime harder.

Finally one of the most important reasons why Thailand is a transit nation for ivory is because it has a large population of ivory workers. Thailand has always had ivory markets in part because of its own native population of Asian elephants. As such ivory carving and work is a traditional industry that has a long cultural tradition. Ivory is commonly used in religious items in Buddhism and seen as symbol of wealth. This provides a steady demand for ivory and creates a need for skilled ivory workers. Thailand’s ivory workers add value to the raw material, which become much more valuable and can be sold at higher price as they are transformed into works of art, religious items, and other trinkets.

What makes the transit nations important is that they make the illegal wildlife trade more enticing for transnational organized crime, and they can increase the amount of trade that is being done. By providing safe havens to transport products, adding value

---

113 Bank, "Container port traffic".
115 Traffic, "Traffic's engangement in the fight against illegal trade in elephant ivory."
to products, or even acting as a secondary consumer nation, transit nations give transnational organized crime more flexibility in operating their business. When trying to smuggle tiger parts from India to China, rather than risk the tense border crossing between the two, they can use Nepal or Myanmar’s more relaxed borders. Ivory starts out as raw tusks which are valuable in their own right, and are transformed into much more expensive and valuable commodities after Thailand’s ivory workers are able to work on them. Then it is easy to ship the products out of Thailand into China via sea, air or land. Sea turtles caught in foreign waters are brought to the safe ports of Vietnam where they can be moved up to China or sold there.

According to many IGOs and LEOs who study the illegal wildlife trade, there is evidence of transnational organized crime’s involvement and the increasing amount of the trade through transit nations. This is because the use of transit nations in the trade requires the expertise of transnational organized crime in order to coordinate the routes, to coordinate personnel, and to bribe government officials. While there is no direct link between transit nations and increasing volume of the illegal wildlife trade due to the involvement of transnational organized crime, the conditions the transit nations provide makes them very good facilitators for increased volume. In addition to the quantitative evidence earlier, this provides a strong argument that via these transit nations, transnational organized crime is increasing the volume of the illegal wildlife trade.
Hypothesis 5

Globalization has made it easier for transnational organized crime to become involved in the illegal wildlife trade.

This final hypothesis explores the idea that from a business sense globalization has made it easier for transnational organized crime to become involved in the illegal wildlife trade. Globalization is a very complex term and can refer to a various number of different worldwide trends, movements, and ideas. For this thesis, the primary concern is globalization as an economic movement and increased global travel. These two aspects of globalization are important to transnational organized crime and their involvement in the illegal wildlife trade for different reasons.

Economic globalization is important because it has opened new sources of products (as discussed in hypothesis one) and has created new markets for said products (as discussed in hypothesis two). The increasing complexity and interconnectedness of the economic globalization has in some ways made the illegal wildlife trade easier. This is because economic globalization allows transnational organized crime take to advantage of the e-commerce to conduct the illegal wildlife trade and to conduct it on a scale that has not been possible before.

The globalization of transportation is a key part of the illegal wildlife trade. As this thesis has shown, ivory from Kenya, tiger parts and products from India, and turtle parts and products from Southeast Asia need to be shipped, flown, or transported via land routes to China. Before the globalization of transportation, the legal transportation of consumer products was considered risky, expensive, and dangerous at the best of times.

---
Now such travels are considered to be routine, cheap or at least inexpensive on a business scale, and safe. This ability to move products in a routine, inexpensive, and safe way is very important for transnational organized crime and is a critical part of the illegal wildlife trade's success. This hypothesis will look at economic and transportation globalization and their impacts on the illegal wildlife trade.

Economic Globalization

Economic globalization has increased the connectedness of the world. With the telecommunication boom and the increasing reach of e-commerce, the internet, e-mail, and services like Skype, it is now easier for transnational organized crime to conduct the illegal wildlife trade.\footnote{IFWA, "Killing with Keystrokes: An investigation of the illegal wildlife trade on the world wide web," 3.}

Why is this? As discussed earlier in hypothesis three, doing business over the internet allows for increased privacy from LEOs and other watch groups. The use of secure networks, websites, and member-only webpages gives sellers of illegal wildlife products a safe place to sell, collect payment, and coordinate shipping with buyers. Buyers meanwhile are allowed an anonymous face which makes it harder for LEOs to go after them in the physical and virtual world. The other obvious part to this is that the internet allows sellers and buyers from all over the world to talk to each other, when before they would have had very little or no way to communicate with each other. As such economic globalization via the internet has allowed for buyers and sellers of the
illegal wildlife trade to increase their contacts with each other, thus making the trade
easier to conduct and harder to enforce for LEOs.\textsuperscript{118}

Other parts of the movement of the illegal wildlife trade to the virtual world
include the use of legal venues like E-Bay to sell wildlife products by using various
methods. These methods include falsely labeling illegal wildlife products as legal or
imitation products; listing items for a short period of time to get exposure before taking
them down; selling illegal wildlife products that are banned in one nation in another; and
using services like PayPal to secure payment and shipping arrangements.\textsuperscript{119}

By moving into the virtual world, transnational organized crime is able to take
advantage of one the best things about economic globalization. In order to do business
you no longer have to meet your business partner in person. Instead, with a good and
secure internet connection, a seller in Kenya can talk live via Skype or via email with a
buyer in China. They can discuss price and shipping without having to leave their own
country. As mentioned in hypothesis three, one of the most difficult issues for LEOs is to
coordinate LEOs from different nations to deal with the international aspect of the illegal
wildlife trade.

In this scenario, there is little to no chance of the Kenyan or Chinese LEOs
finding out about this virtual meeting; figuring out who the seller and buyer are in real
life; finding out how and when the wildlife product will be shipped and where it is being
shipped to; and finally assuming if they were able to do so, jurisdiction issues will come
up. Where will they make the arrest? Who gets to prosecute? With diplomatic protocol

\textsuperscript{119} IFWA, "Killing with Keystrokes: An investigation of the illegal wildlife trade on the world wide web," 15.
to deal with, LEOs are at a disadvantage when compared to transnational organized crime and their buyers.

As important as economic globalization is to the development of the illegal wildlife trade and transnational organized crime's involvement in it, there is another type of globalization that is important. That is the globalization of transportation.

*Globalization of Transportation*

The globalization of transportation refers to the increased globalization of all forms of transportation. This includes the increase of railroads that connect countries, the world-changing standardized cargo container, the large and fast super container ships that transport them across the world; to advent of reliable and fast jet transport that allows a person to fly around the world in about two to three days if they wanted to. The question for this hypothesis is how has transnational organized crime taken advantage of it?

When thinking about China as the primary consumer nation of illegal wildlife products, the role of the standard cargo container in the transport of wildlife products is one of the most important impacts of the globalization of transportation.\(^\text{120}\) With China’s economic boom, its ports have become beehives of economic activity. Looking at World Bank data, China is the number destination of cargo containers in the world.\(^\text{121}\) They come into Chinese ports from all over the world, carrying all sorts of different goods and products. As a result transnational organized crime has started using these containers to


\(^{121}\) Bank, "Container port traffic".
bring in wildlife products.\textsuperscript{122} Using these cargo containers to bring products has several advantages. First, due to their numbers they are a low profile way to smuggle in products. Due to the sheer number of them entering China it is impossible for Chinese customs to search them or x-ray them all, making detection unlikely.

If a container is searched, due to the nature of the container itself it is easy to hide illegal products among legal products. Containers can also be refrigerated meaning that wildlife products that might spoil in hot weather can be safely transported across the oceans where before they might not have been. Besides these advantages of the containers, the ships themselves offer advantages. They are fast and generally safe, making them a secure way to transport product across dangerous waters. The number of containers helps to enhance the low-profile of the individual container carrying the products, giving it protection in numbers from LEOs and discovery.

When someone talks about the globalization of transportation, the first thing that might come to mind is plane travel. Flying has become normal, safe, relatively quick, and is growing in reach as more airports open across the world. The use of "mules," or people who smuggle contraband via planes, is a common tactic by transnational organized crime. With the illegal wildlife trade there has been an increase in this tactic especially with Chinese citizens smuggling wildlife products from Africa.\textsuperscript{123} This increase is possibly due to reliability, safety, and numbers of plane travel. As a result smuggling via air has become a well know tactic by transnational organized crime.\textsuperscript{124} It should be said that this vector of transportation does have more risks especially if the

\textsuperscript{122} Organization, "Illicit Trade Report 2012," 103-05.
\textsuperscript{123} http://www.traffic.org/home/2010/9/13/chinese-citizens-risk-imprisonment-for-ivory-smuggling.html
\textsuperscript{124} Organization, "Illicit Trade Report 2012," 103, 07.
product is being moved by an individual person. With the recent increases in airport security worldwide, it is easier to catch people smuggling on passenger flights.

Finally the globalization of transportation is opening up new areas of both resources. In places like Burma, Laos, Africa, and even China, new highways and rail tracks are opening up what was once inaccessible tracks of jungle, mountains, or plains. With these new resource areas opening up, poachers are able to move in and harvest species and ship them out on the new roads that brought them into the area. This is proving to be a very important part of transnational organized crime’s supply chain as they seek to exploit new areas that have not been hunted and have untapped populations of desirable plants and animals.\textsuperscript{125}

In summary, globalization of transportation allows transnational organized crime to have a reliable, fast, and secure logistic train. Whether it is using cargo containers via ships or jet travel to ship products from supplier to buyer, or finding new resource areas, this logistic train allows transnational organized crime to be a dependable business partner to its buyers. This helps to encourage repeat business, which is what all business actors want from their customers.

CONCLUSION

This thesis approached the issue of the illegal wildlife trade and the involvement of transnational organized crime not from a normative approach, as is often the method used by environmental NGOs, but from a business approach. This means looking at the illegal wildlife trade as a normal trade and transnational organized crime as a rational business actor, which is an entity that seeks to maximize profit and minimize risk. The thesis then looked at the characteristics of the illegal wildlife trade and transnational organized crime and conducted a risk analysis of sorts to see where there are risks and where there are opportunities for profits.

Characteristics of the Illegal Wildlife Trade

What are the characteristics of the illegal wildlife trade? There are three main characteristics of the illegal wildlife trade that this thesis has identified. It is global, it is clandestine, and profitable. These three characteristics entice business actors to enter the trade as it presents a profit-making enterprise.

Global Trade

The illegal wildlife trade is a trade that is truly global. While this thesis has concentrated on the flow of wildlife products from Kenya, India, and South East Asia to China, wildlife products flow from developed nations like the USA and Canada to Asia, from Africa to Europe, from Central Asia to the Middle East, and from South America to Europe and North America. The trade involves millions of species ranging from small plants and insects to mega fauna like elephants, rhinoceros, and musk oxen. This global trade has been made more efficient by the development of better world-wide
transportation and e-commerce, which allow for more sellers and buyers to connect and conduct business transactions.

_Clandestine Trade_

One of the main characteristic of the illegal wildlife trade is that it is clandestine. Those who conduct poaching, selling, and transporting operations play a very dangerous cat-and-mouse game with LEOs who try to catch them. At this point in time, however, it is a contest that LEOs are losing. Thanks to issues like corruption and limited resources, LEOs are not always able to go after illegal operators. This ranges from poachers who hunt and gather wildlife, the middlemen who sell the wildlife buyers, the smugglers who transport the wildlife products, and the buyers of the wildlife products. The use of e-commerce and the extra layer of security that it is able to provide have given the trade more ways to conduct operations secretly and without LEOs being able to catch those who operate in the trade. All of these features allow the illegal wildlife trade to conduct its operations in secret and only have a small portion be exposed by LEOs.

_Profitable Trade_

The final characteristic of the illegal wildlife trade is that it is very profitable. Valued between $15-30 billion USD, it is among the top three largest illegal trades. The other two are the illegal trade in drugs and weapons. Over the years certain wildlife products like elephant ivory or rhinoceros horn has been valued on a per ounce basis, more than gold. With the rise of China and other eastern Asian nations, demand for wildlife products used in TCM has gone up, leading to increased hunting and gather of species like tigers, ginseng, and seahorses. Asian culture also has a high value for bush
meat and animals like turtles have become a popular dish. This large demand has increased prices of wildlife products, especially as certain species become endangered and more efforts are put into stopping poaching of them. With increased demand comes increased profit potential.

These characteristics of the illegal wildlife trade have helped to create an environment that is enticing transnational organized crime to enter and become an operator of the illegal wildlife trade.

Characteristics of Transnational Organized Crime

Keeping in mind the characteristics of the illegal wildlife trade, transnational organized crime when seen as a rational business actor has several characteristics that make it a unique business actor that can take advantage of the illegal wildlife trade. The two important characteristics of transnational organized crime in relation to the illegal wildlife trade include transnational organized crime’s capacity to operate on a global level and its experience in operating in clandestine trades.

Global Capacity

In order to take full advantage of a global trade, an actor must have a global reach. When looking at transnational organized crime it has this necessary reach that allows it operate in the illegal wildlife trade. In looking at transnational organized crime one of its best abilities is to network. These networks help the flow of wildlife products and other illegal products from the ranger or source nation to consumer nations in a way that is efficient and reliable enough to satisfy customer demand, and to do so in a way that avoids LEOs. Some of these networks include the African-China network that takes
ivory and rhino from Africa and transports it into transit nations like Thailand and Vietnam before sending it into China.

*Experience in Clandestine Trades*

An important strength of transnational organized crime is that it is well experienced in operating in clandestine trades. Used to selling and smuggling firearms, growing, selling, and smuggling drugs, this experience has been turned to the illegal wildlife trade. This experience includes using locals who live with the wildlife to poach or gather the wildlife, turning the wildlife into a product that can be sold to a consumer, and then smuggling it to the consumer while avoiding detection from LEOS.

Another important expertise that transnational organized crime has is in the art of corrupting and intimidating government officials. This is very important because corruption helps the trade to remain clandestine as LEOs and other government officials are bribed or threatened to look the other way as transnational organized crime takes conducts it various operations along all sections of the trade.

*Analysis*

In the introduction this thesis asked is transnational organized crime becoming involved in the illegal wildlife trade, and if so, why? Looking at transnational organized crime as a rational business actor that seeks to maximize profit and minimize risk and the illegal wildlife trade as a business opportunity there are many reasons for entry. First, the risks are low, due to corruption and limited resources LEOs effectiveness is reduced to a point where getting caught is not very large. Second, if an actor is caught in general the punishment is very small and does not discourage future action. This means the chance
to make profit is very large and as discussed there is a substantial amount of profit that can be made. If there is a market that presents the opportunity to make profit with minimal risk, then rational actors like transnational organized crime must enter that market before competitors do. Observing this rule transnational organized crime as entered the illegal wildlife trade in order to chase profits.

Consequences

With the entry of transnational organized into this market there have been several new consequences. First is the increase of events where LEOs encounter heavily armed poachers hunting wildlife. In Kenya it is now common for the KWS to encounter heavily armed poachers armed with assault rifles and machine guns. These types of encounters have increased the number in-line-of-duty deaths by KWS officers. In addition, militias like the Janjaweed and the LRA have entered Kenya to poach wildlife to support their operations. This presents a serious security threat that goes beyond the normal realm of environmental issues.

A second consequence is that transnational organized crime with its networks and organization has increased the volume of the trade. In recent years there have been more elephants and rhinoceros killed than ever before fueled due to demand in Asia, but facilitated by transnational organized crime’s ability to move the product. There are more seizures at ports of entry by LEOs hinting at a much larger trade. This means that more species are becoming threatened despite years of conservation work and efforts.
Prescriptions

As to what are some possible solutions to this issue of transnational organized crime becoming involved in the illegal wildlife trade, it is the opinion of this thesis that there are no easy or fast solutions. In light of the situation that many of these wildlife species face, it is a disheartening statement, but the truth. From a supply viewpoint, if economic efforts to improve the lot of those that live with or near wildlife are to succeed, then long-term, community based projects are most likely the best solutions. This means finding either non extractive uses for wildlife like ecotourism which has its own issues; bringing in non-wildlife industry which may or may not be practical, or moving people away from the wildlife. However none of these solutions are fast or easy to do.

From a demand viewpoint, consumer education is the most viable solution. However, this also takes time and resources. To simple demonize TCM will alienate the people that need to be reached and will reek of western arrogance. Instead working with practitioners of TCM and educating them about the status of the wildlife species they use and alternatives is a better approach.

Finally when looking at the issue from a LEO viewpoint, there is need to fight corruption, increase resources and increase international cooperation. The increased cooperation is very important because often transnational organized crime is able to commit a wildlife crime in one nation and escape prosecution by going to another where the act they committed is not even a crime. Strengthening punishments for wildlife crimes is an important step as most punishments especially when compared to other crimes are very small and do not discourage repeat offensives.
All of the prescriptions will take time to have effect if they even are implemented. As such this thesis is not optimistic that every species will be saved. Unfortunately some species will be lost. But if action is taken then some species can be saved.
BIBLIOGRAPHY


Biodiversity Conservation through Environmental Education for Sustainable Development - a Case Study from Puducherry, India, 1 97-111 (2011).


Education, Indian Council of Forestry Research and. "Section Iv Protected Areas and Wildlife." edited by Indian Council of Forestry Research and Education. New Delhi, India 2013.


VITA
Zachariah Edward Long
Graduate Program in International Studies
7045 Batten Arts & Letters
Norfolk, VA 23529

Education

Master of Art in International Studies  May 2014
Old Dominion University

Bachelor of Art in Asian Studies  May 2008
St. Andrews Presbyterian College

Work

Office Manager of Institute of Asian Studies  August 2012-May 2014
Old Dominion University, Norfolk, VA

Telephone Interviewer, Social Science Research Center  May 2013-July 2013
Old Dominion University, Norfolk, VA

JCWS Research Assistant  May 2013-August 2013
Joint Force Staff College, Norfolk, VA

Environmental Organizer Intern  May 2012-July 2012
TerraScapes Environmental Consulting LLC, Virginia Beach, VA