

The Effects of Resource Liberalization:
The Case of the Peruvian Timber Sector

Methods: For this paper literature review has comprised the majority of research methodology behind this paper. Mostly via database search, pertinent articles were discovered by trial and error approach. Mainly, these databases consisted of JSTOR, and GEOBASE. Internet sources had also been utilized in this paper. Globalwood.org and ITTO.int are relevant websites containing information on timber supply, demand, pricing, and historical information on the entire industry. These websites also contain pertinent information on the tropical timber industry by country (i.e. Peru).

Introduction: This paper seeks to examine the effects of resource liberalization on Peruvian forests by examining the state of these forests before and after liberalization. The global economic climate prior to liberalization will be examined to show how the decision to liberalize forestry resources was made favorable to Peru. This study will cover the 2000-2001 Peruvian Law of Forestry and Wildlife, which has been the crucial tool used by the state to liberalize Peruvian forestry resources. The prices of various species of tropical timber will be examined to study how free market forces have influenced both domestic and export prices of tropical timber since liberalization. The before and after effects of resource liberalization this study focuses on are the total area of Peru covered by tropical forests, total forest area under private concession, and Peru's deforestation rate over a 15 year period from 1996 until 2011 with economic focus given to prices of various tropical timber species,.

The issue of Peru's place in the global timber sector must be understood spatially. For this reason, I will weave in and out of the "Peruvian space" and the "global space" throughout the course of my analysis. The "Peruvian space" shall be defined by the inner workings, both politically and economically, and how these dynamics react with each other within Peru. One could say this space examines the *internal* workings of the Peruvian timber sector. The "global

space” shall be defined by the workings of the global political economy and global political ecology, or the *external* workings of the global timber economy and how Peru relates to this economy. The global space can be thought of how external influences affect the Peruvian space. I will examine how international forces like The Group of Eight Developed Countries (G8) and the World Bank foster global environments of privatization, how these global forces have created the kind of liberalized forestry sector existing in Peru today, and what have been the economic and environmental effects of the liberalizing of Peruvian forests.

Literature Review: Socioeconomics has evolved into the driving force behind global deforestation within many tropical nations. Geographically, tropical nations are generally referred to those between the Tropic of Cancer and the Tropic of Capricorn. Bedoya and Klein (1996) examined the causes of deforestation by analyzing social and economic forces. Throughout their analysis, they discovered Peru’s greatest renewable resource was tropical forests. Bedoya and Klein (1996) also discovered a series of interesting historical statistics on Peru’s forests. Approximately 70 million hectares of natural rain forest, 170,000 hectares of cultivated forest, and 10.3 million hectares of land suitable for forestation had existed in Peru in 1996. Despite these areas of land having made up 64% of Peru at the time, forestry remained of little significance to Peru’s economy with forestry products having made up just one percent of Peru’s GDP in the same year (Bedoya & Klein 1996). These statistics are relative to the period of time prior to the passage of the 2000 law and are meant for historical contrast with Peru’s current timber sector. When contrasting between the time prior to or just around the passage of the 2000 law, I have found the significance of forestry products to the Peruvian economy have not changed much. Forestry products are still responsible for the same percentage of the Peruvian economy at just one percent of GDP, but the amount of area in Peru covered by tropical forests has significantly diminished to just 54%, a 10% decline in total forested area (World Bank 2006).

Although historically, forestry products have not made up a huge percentage of the larger Peruvian economy at just one percent of gross domestic product over the last 15 years, larger and more influential global forces had previously predicted a change in percentage of Peru covered in tropical forests (Bedoya & Klein 1996). Humphreys (2006) conducted an extremely in depth investigation into how inadequate global governance leads to global destruction of the world’s

three major rainforests. Humphreys (2006) introduces a wealth of economic, social, and political data and reasons explaining his theory. Humphreys (2006) begins his explanation with the development of a taxonomy, giving a series of definitions to types of goods and also explains how defining a good becomes dependent on the political and social context a good falls in to. This means much of the definition given to a good depends on time and space. From here, Humphreys (2006) begins to apply these definitions to forests, and brings to light the influence neoliberalism has on these definitions. Humphreys (2006) then explains how international trade and investment rules demand foreign and domestic companies have equal rights of purchase to forests.

According to Humphreys (2006), the sale of public resources would benefit countries whose business sectors dominate direct foreign investment into the country, and would not benefit those countries of resource wealth with weak business structures. Tropical nations must maintain caution toward private and foreign interest, because these nations could lose their natural resource based economies if they open the door too wide to corporate interests seeking to profit by taking these natural resources over. International forces have pushed and are continuing to push the world toward the privatization of forests. The G8 regularly pushes privatization of natural resources in underdeveloped nations. Humphreys (2006) gives two main examples of this in examining the actions of the World Bank and the G8. While the timber sector currently maintains little significance over the Peruvian economy, trends examined by Humphreys, like the exhaustion of Southeast Asian tropical rainforests for example, give us reasons for why Peru's position in the global timber sector has shifted upward over the last 15 years through liberalization (Humphreys 2006).

Ann Bartel and Ann Harrison (2005) provide sufficient facts and data to show the type of environmental reforms resulting in the most resource efficient outcomes are those incorporating privatization of some kind. Their article titled "Ownership Versus Environment: Disentangling The Sources of Public-Sector Inefficiency" was published by the President and Fellows of Harvard College and MIT in the Review of Economics and Statistics. Utilizing formulaic analysis along with examining swaths of prior research done on the topic, Bartel and Harrison (2005) figured any approach taken to environmental reformation would require privatization on some level in order to achieve greater resource efficiency in the future than there previously had been in the past.

The practice of illegal extraction of timber and delivery of this illegally logged product to the international marketplace has contributed to the erosion of legitimate international prices of legally extracted timber to the point of negligible levels of profitability for some timber producers (Pervaze 2008). This issue of illegal logging has gained attention from many interests around the world, and not just those directly involved. In June of 2008, a Congressional Research Service Report (CRS) was tendered to the United States Congress on the matter of Illegal Logging titled “Illegal Logging: Background and Issues.” According to this report, the World Bank believes nearly \$15 billion dollars in lost royalties per year to governments worldwide comes from illegal logging operations. This report details issues arising from illegal logging consisting of “corruption, collusion, and other crimes within governments” (Pervaze 2008). According to the CRS, the demand for illegally extracted timber primarily comes from U.S. driven consumer demand. In order to alleviate this pervasion of the global timber sector, the U.S. arranged a free trade agreement with Peru in 2003. This agreement forces Peru to monitor and more stringently enforce their logging industry.

In 2007, a report was crafted and titled “The Economics of Illegal Logging and Associated Trade.” This report was created to describe and explain the findings of the Round Table on Sustainable Development (RTSD) on the global economic causes and effects of illegal logging. The RTSD was founded in 1998 and created for the purposes of research for the Organisation for Economic Co-operation and Development (OECD). The most important point made by this report explains how the effects of illegal logging combined with the lack of attention paid to this practice within many tropical nations leads to timber not being “adequately priced in international markets.” This report agrees with the findings of the 2008 CRS offered to Congress of the total cost of illegal logging totaling \$15 billion dollars worldwide. Also contained in the RTSD’s report are findings on the various legal and illegal uses of extracted timber along with how much of extracted timber goes to international markets and how much goes to domestic markets.

Although theoretically, Humphreys’(2006) analysis combined with Bedoya & Klein’s (1996) findings on the ground in Peru give reasons for the liberalization of the timber sector in Peru, raw data on pricing and governmental activity in Peru should be examined in order to determine the effectiveness of this change. Globalwood.org has an abundant amount of this raw data on the pricing of timber. This data consists of domestic prices of various species of wood

and export prices for those same species in other countries. Globalwood.org also has data on the various happenings within governments around the world relative to the timber sector. For example, laws about to be passed and how they might further regulate or deregulate the timber industry in a particular country might be found on Globalwood.org. Globalwood.org has data on key timber species for Peru like Mahogany (*Swietenia Macrophylla*), Virola (*Virola Spp*), Cedar (*Cedrela Odorata*), Marupa (*Simarouba amara*), and Lupuna (*Cavanillesia umbellata*). Trends exist to examine and monitor the demand of various species and finished products like furniture within various countries.

In determining any shift in the Peruvian economy (whether for timber or any other sector), examining prices and evaluating the occasional governmental action probably equates to an insufficient analysis of the magnitude of the change. A wealth of information on the actual happenings on the ground in various countries and around the world pertaining to the logging of tropical timber can be found on ITTO.int, which bears similarities to Globalwood.org. ITTO stands for International Tropical Timber Organization and they promote the sustainability of tropical timber in consumption and trade. On ITTO.int information was found on estimations of production of Peruvian Sawnwood, deforestation rates (with emphasis on Caoba and Cedro species specifically), and the economic profile of forestry in Peru, along with the consumption of wood domestically. The combined findings made by ITTO and Globalwood.org provide facts and figures making the possibility of a larger contribution to the global timber industry by Peru in the near future more likely.

Analysis: For the past 15 years, Peru has been undergoing a process of transformation relative to the nation's forestry resources through a process called liberalization. Through the process of liberalization, nations transfer what were once publically controlled resources to private ownership by putting them up for sale. In Peru, this transformation from public to private has been made possible by the passage of the 2000-2001 Peruvian Law of Forestry and Wildlife (USAID 2010). The passage of this law allowed for private concessions to be awarded to private interests for publically owned forestry resources (USAID 2010). This law seemingly contradicts the Peruvian constitution, however, which states all forests in Peru are the property of the public (Government of Peru 1993; USAID 2010). Though the legal framework in Peru can often be complicated and confusing, the 2000 law has the effect of liberalization nonetheless. This

dynamic essentially works like a tenant farming operation where one party owns the land, but another owns the resources on the land and has the right to harvest those resources. Most often, the Peruvian government owns the land while the state has the ability to grant private interests rights, or ‘concessions’ to harvest forestry resources on the land.

Accessibility to the timber on these state controlled lands can be achieved through many different ways, but the 2000 law declares timber extraction rights can be granted to the private sector through 40 year concessions and must consist of at least 5000 hectares of land (USAID 2010). The 2000 law demands any granting of concessions will be done through a process of public bidding (World Bank 2006). This process often can be undermined, however, by the existence of illegal logging operations in the Peruvian Amazon which extract timber without first obtaining concessions to do so. Legitimate concessionaires are required under the 2000 law to pay a multitude of fees and produce in accordance with sustainable forest managing techniques, but illegal logging operations are able to avoid both of these (World Bank 2006). These illegal logging operations also do damage to the tropical forests and contribute to the rapid rate of deforestation in the Peruvian Amazon (World Bank 2006). The issue of illegal logging has grown so pervasive in the past few years the Peruvian government decided in 2002 to create the “National Strategy Against Illegal Logging” (World Bank 2006). Illegal logging has historically existed in Peru for quite some time, but the loophole illegal logging poses to the 2000 law remains just one of the law’s faults.

Before continuing with my analysis, I must first examine how Peru’s forests became liberalized in the first place. Prior to the passage of the 2000 law, the tropical forests had covered approximately 64% of Peru while forestry resources had been responsible for just one percent of Peru’s GDP (Bedoya& Klein 1996). While the significance of forestry resources to the Peruvian economy has not changed much, the supply of forest resources has diminished significantly over time. Today, forestry resources still make up approximately one percent of Peruvian GDP, while the total area of Peru covered in tropical forests has dropped to around 54% (FAO 2010; USAID 2010).

The primary reason behind this enormous drop-off in supply of forestry resources has been the increase over time of private concessions granted to private interests. Around the time of implementation of the 2000 law, the percentage of Peruvian forests under private concession

had been just 1.7 percent, which had been a far lower percentile than any other tropical timber producing nation.

Percentage of public forest under private concession public in 16 countries

Africa	%	Americas	%	Southeast Asia	%
Central African Republic	71.4	Bolivia	10.2	Cambodia	64.3
Cameroon	37.1	Canada	56.6	Indonesia	60.0
Republic of Congo	79.2	Guatemala	4.8	Malaysia	57.7
Democratic Republic of Congo	36.4	Peru	1.7	Philippines	22.7
Equatorial Guinea	71.4	Suriname	22.4		
Gabon	56.7	Venezuela	5.9		

White & Martin 2002

This information explains how around or prior to the 2000 law being implemented, Peruvian forests were under public control and the liberalization process had not totally taken full effect. After the concession system was put in place under the 2000 law and liberalization took hold of the Peruvian forests, this number rose significantly. Some reports put the current percentage of Peruvian forests under private concession at nearly 15% (FAO 2010). This trend effectively shows the significant rise in liberalized forest area in Peru.

One can argue a benefit of forestry liberalization has been a heavily reduced deforestation rate. Prior to the implementation of the 2000 law, the deforestation rate had been recorded around 260,000 hectares per year, but since has fallen to around 150,000 hectares per year (World Bank 2006). This figure on deforestation comes with some uncertainty, however. Whether the change in the deforestation rate has come from private sector efficiency or if the change has simply come from better techniques to measure deforestation remains an uncertainty. One can come to this conclusion based on the conflicting figures over the current Peruvian deforestation rate. According to the World Bank, the previously recorded figure of 260,000 hectares per year has been incorrectly recorded and the newly recorded figure of around 150,000 hectares per year should be considered more accurate, however ITTO.int lists the Peruvian deforestation rate at 269,000 hectares per year for 2005. If the deforestation rate in Peru can be proven to exist at the levels ITTO has claimed, then the deforestation rate will still be one of the

highest in the region (ITTO.int 2011). Because of the conflicting nature of existing information on the subject, the uncertainty around this issue remains.

Time, space, and systems of governance play a defining role for what type of good timber can be classified. For instance, timber in the United States remains a relatively private good, available for sale and purchase. Timber can also be labeled a “rival” good in this situation, which means the consumption of one unit leaves fewer units available for consumption by This is not the case in many other underdeveloped nations, especially those with autocratic or dictatorial government types. The North Korean government for example, monitors and regulates all goods within North Korean territory which means timber can be classified a “public” good and one only provided by government agency (Humphreys 2006). Because of the different government types, and the different levels of access citizens have to timber, a good’s classification will change as space changes like from North Korea to Peru. While the differing classification between the United States and Peru may not be so stark as the difference between North Korea and Peru, there are differences nonetheless.

These differences between Peru and more developed nations in terms of the classification of what kind of good timber is has been reduced over the last 15 years suggesting evidence of trends of liberalization of Peruvian forests. Humphreys’(2006) has developed a kind of taxonomy in order to explain further what *kind* of good timber can be classified, relative to time and space:

Taxonomy of timber for defining good type

	Rival	Non-rival
Excludable	<p><i>Quadrant 1</i></p> <p><i>Private goods</i></p> <p>Goods that can be bought and sold</p>	<p><i>Quadrant 2</i></p> <p><i>Club goods</i></p> <p>Satellite TV</p> <p>Private healthcare</p>
Non-excludable	<p><i>Res nullius (open access)</i></p> <p>Goods accessible to all , subject to depletion</p> <p><i>Impure public goods</i></p> <p>subject to rationing:</p> <p>School education</p> <p>National health service</p> <p><i>Quadrant 3</i></p>	<p><i>Public goods</i></p> <p>Provided by nature:</p> <p>Atmosphere</p> <p>High seas</p> <p>Human agency:</p> <p>Street lighting</p> <p>Footpaths</p> <p><i>Quadrant 4</i></p>

Humphreys 2006

In most developed nations, the seller of the timber has the power to exclude potential buyers from having access to timber if buyers cannot afford the timber, which means in these places timber can be classified an “excludable-rival” good according to Humphreys’ table shown above. Prior to the passage of the 2000 law, Peruvian forests would have been considered an excludable non-rival good, classifying the forests as club goods. This means the forest resources were not fully under public control, but could only have been dispersed by the state. After the passage of the 2000 law, the excludable-rival classification applies more to the current state of Peruvian forests. This analysis articulates how the type of the same good can transform over time as it becomes affected by varying regulations and government types. This kind of transformation has occurred relative to the Peruvian forests as the nation has gone through the process of liberalizing their resources via the 2000 law.

This transformation saw serious involvement from many private interests, not just corporations but international groups wielding enormous power and influence. The World Bank and the G8 regularly push resource rich underdeveloped nations towards privatization. The G8

for example, has pushed privatization of tropical forests in the past. The “G8 Action Programme on Forests” took the position of further examining “ways of promoting private investment and partnerships in sustainable forest management” in 1998 (Humphreys 2006). Humphreys (2006) details the bias existing behind this economically charged political agenda by explaining how seven out of the top ten timber multinationals in terms of annual revenue along with six of the top ten in terms of consumption of wood annually, headquarter themselves in G8 nations:

Top ten wood processors and annual revenue recipients

Rank	Top ten forest products & paper corporations by annual revenue (2000)	Rank	Top ten wood processing companies by annual wood consumption (2000)
1	International Paper (US)*	1	International Paper (US)*
2	Georgia-Pacific (US)*	2	Georgia-Pacific (US)*
3	Kimberley-Clark (US)*	3	Weyerhaeuser (US)*
4	Weyerhaeuser (US)*	4	Stora Enso (Finland)
5	StoraEnso (Finland)	5	Smurfit-Stone (US)*
6	Oji Paper (Japan)*	6	Metsalitto (Finland)
7	UPM-Kymmene (Finland)	7	UPM-Kymmene(Finland)
8	Nippon Paper Industries (Japan)*	8	Abitibi (Canada)*
9	SCA-Svenska-Celluloso (Sweden)	9	Norske Skogindustrier (Norway)
10	Smurfit-Stone (US)*	10	Canfor (Canada)*

Note: * = G8 Nations

Humphreys 2006

This kind of hegemonic influence and domination from external forces led to a feeling of inevitability among forest rich states toward privatization despite internal backlash within these states. The position multinationals maintain of being everywhere at once has allowed these multinationals to “launder the money gained from illegal logging,” and also to bribe public officials when they need them to look the other way in obtaining concessions for the next area of valuable timber (Humphreys 2006). The result of liberalization has been the opening of

Peruvian forests to these multinationals. Of the corporations listed above, Kimberley-Clark, StoraEnso, UPM-Kymmene, and SCA-Svenska-Celluloso are confirmed to have ongoing operations in Peru according to their own websites.

Prior to the liberalization of Peruvian forests to these kinds of private multinational interests, Peru had been one of the last bastions on Earth awaiting liberalization from external forces. Some final facts and data to clearly portray the international market for timber become necessary at this point in order to portray how global economic forces contributed to the liberalization of Peruvian forestry resources. Forestry products comprise nearly one percent of the world's GDP, and about three percent of the global trade of finished merchandise (Hermosilla-Contreras et al. 2007). The one percent makeup of GDP coming from illegally extracted timber consists of hardwood lumber species like Mahogany (*Swieteniamacrophylla*), Cedar (*Cedrela odorata*), Virola (*Virola elongata*), and Marupa (*Simarouba amara*) along with plywood species mainly comprised of Lupuna (*Ceiba pentandra*). Of the total one percent to global GDP, estimations have ranged between 23% and 30% of hardwood and plywood species being extracted illegally worldwide (Pervaze 2008). This trend has led to foreign multinational timber corporations expressing their concern and hesitation towards entrance into new marketplaces. The American Forest and Paper Association (AF&PA), whose corporate membership consists of more than 75% of the U.S.'s timber industry, received a report in November of 2004 crafted by Wood Resources International, a forestry sector consulting firm in which the following was stated:

Illegal harvesting can have deleterious impacts on biodiversity and other globally important environmental services. Among the factors driving illegal logging are: unclear or poorly enforced forest tenure, weak political institutions, poverty, corruption, inadequate natural resources planning and monitoring, and lax enforcement of sovereign laws and regulations. The presence of illegally procured wood fiber also affects the competitiveness of American and other producers who operate legitimately within national and international environmental and trade rules. While there are many types of illegal forest activities, some appropriately rise to a level of international concern.

The United States does have cause for concern relative to international illegal forestry. The U.S remains the world's largest demander of tropical hardwoods. This fact remains despite fears of this demand causing the very illegal forestry activities ongoing in other nations to the subsequent harm of U.S companies trying to do business abroad in these same nations (Pervaze 2008). One of these nations is Peru. The U.S remains the largest importer of Peruvian Big Leaf Mahogany (*Swieteniamacrophylla*), which has been thought to be nearly 80% logged illegally (Pervaze 2008). In 2003 the United States organized a free trade agreement with Peru attempting to, among other things, curb the effects of illegal logging relative to U.S import prices (Pervaze 2008). The agreement made a series of demands of Peru. One such demand "requires that the Peruvian government enforce its international treaty obligations and increase monitoring and enforcement of illegal logging in its country" (Pervaze 2008). In order to accomplish this, the U.S requires a validation by Peru of logs coming to the United States not be harmful to the species and were extracted with sustainability in mind. Exactly what steps Peru has taken since the adoption of this agreement in order to satisfy these demands remains somewhat unclear.

Understanding where timber moves to once the wood goes through the process of removal from the forest remains critical to an overall sense of the Peruvian market. Domestic consumption for the purposes of fuel wood makes up a large portion of the end use of globally extracted timber. Approximately 40% of all wood extracted globally is used for fuel wood, but this statistic doubles to nearly 80% in tropical countries like Peru (Hermosilla-Contreras et al. 2007). According to the ITTO figures contained within the table below, Peru extracted a total of 2,426,000 cubic meters of timber in 2010 (add all logs, sawnwood, veneer, and plywood in 2010 = 2,426 then * 1000). Domestically, Peru consumed 2, 141,000 cubic meters of this wood. This means in 2010, of all the timber produced by Peru, only about 12% of this timber was exported. The other 88% of this timber was consumed domestically.

Production, Trade and Consumption of Tropical Timber by Peru (1000 m3)

Product	Production					Imports					Exports					Domestic Consumption				
	2006	2007	2008	2009	2010*	2006	2007	2008	2009	2010*	2006	2007	2008	2009	2010*	2006	2007	2008	2009	2010*
Logs	1774	1963	1758	1334	1601	0	0	0	0	0	0	0	0	0	0	1773	1963	1758	1334	1601
Sawn	840	932	795	619	743	1	1	0	1	1	189	246	250	264	264	652	687	546	355	479
Ven	7	4	4	1	1	0	0	0	0	0	6	1	3	1	1	1	3	1	1	1
Ply	61	69	104	67	81	0	0	1	0	0	49	36	42	21	21	12	33	64	47	60

ITTO Statistics Database 2011

This conclusion suggests a large percentage of Peruvian forest resources are still largely controlled by Peruvians despite the total percentage of Peruvian forests under private concession rising dramatically over the last 15 years. The issue of percentage of forests under “public” control briefly takes us back to the global space. The rainforests of Southeast Asia are depleting because of over extraction by multinational timber corporations, and because of inefficient domestic consumption. This depletion along with the competition being built up in the Asian rainforests has led many of these corporations to search for the next area on Earth of untouched, or non-liberalized forest resources (Humphreys 2006). Resulting from these various global economic forces, one of the areas to have their forestry resources liberalized has been Peru.

Economic uncertainty in the United States and Europe has encouraged Peru to look for elsewhere for new areas of demand. Peru would like to alleviate the effects of the downgrade of the nation’s GDP forecast from 6.5% to 6.3% this year and to between 5% and 6% next year (Globalwood.org 2011). Domestic consumption of manufactured goods made from Peruvian sawnwoods has increased by 55% year to date, and exports of these same manufactured goods are up 26% year to date (Globalwood.org 2011). Although domestic consumption may be up, the International Tropical Timber Organization (ITTO) has projected demand to drop for a number of species of sawnwoods due to falling demand in the United States and Canada. The current pricing structure of sawnwoods will see a decrease if Peru cannot find a way to re-route demand either by direct export to demanding nations, or by liberalizing even more of the forests

and relaxing regulations on sustainable harvesting. Prices in U.S. Dollars of various species according to Globalwood.org can be found below:

Domestic & export pricing of Peruvian sawnwood and plywood species

Sawnwoods	Domestic Pricing	Export Pricing
Mahogany	867-911	1655-1702 U.S.
Virola	63-80	333-421 MEX
Spanish Cedar	264-305	946-977 N.A.
Marupa	62-76	258-283 MEX 365-389 Asia
Plywood		
Lupuna	397-458	345-408 MEX

Globalwood.org

In order to protect their export prices, Peru will need to think about whom they want to provide their timber to in the near future, and if this demander will be able to keep demand relatively constant for a sustained period of time. Do they run the risk and decide to liberalize their forests even more? Do they instead decide to protect their forests from total liberalization and suffer financially in the short term? Perhaps Peru turns to China, or perhaps they turn to Dubai. Peru needs to choose between these two options, and Peru needs to make this choice quickly.

Conclusion: The process of Peruvian liberalization of forestry resources has been propelled by socioeconomic forces. These forces consist of national economic status like GDP performance and price stability, environmental forces like deforestation rates, and external forces like World Bank or G8 policies influencing privatization. In Peru, these forces were all present prior to the passage of the 2000 law and comprised the reasoning behind the liberalization of forestry resources. Peru’s GDP performance has been downgraded and forecasted to slow further from 6.5% now to as low as 5% next year. Peru has maintained a stable set of export prices for timber resources, but those prices will fall if Peru decides against taking action in order to avoid slowing demand from the U.S and Canadian markets. Peru’s deforestation rate currently hovers around 269,000 hectares per year which remains the worst in the entire region.

Some continuing uncertainties surrounding the issue of forestry liberalization in Peru remain, however. The effects of the global recession may have increasingly hazardous effects for the forests of the Peruvian Amazon.

If the government of Peru becomes desperate to support the price structure of their timber industry, they may begin the process of further dismantling their regulatory environment. This would make logging easier, and would certainly inflate the deforestation rate. Also, uncertainties revolve around the levels of corruption in Peru. Corruption has been known to exist in Peru relative to the logging industry, but this corruption has never been quantified to an exact amount, which makes it difficult to gauge the extent to which timber companies engage in dubious practices to obtain logging concessions from the Peruvian government. Uncertainties also surround who Peru's trading partner will be in the future if they choose to replace the United States and Europe as a result of their slowing economies. The story of the Peruvian timber sector and the relation it maintains with the international marketplace will certainly remain active. Peru will need to decide in the future on a macroeconomic level what the next stage of their timber industry will be. They will have to choose either between further liberalization of their forests probably at the expense of their long term ecological sustainability or pulling on the reigns of liberalization to the long term interests of resource preservation.

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