Online Appendix to the Lawson 2015 Lacey Act Report

Measuring Lacey amendment impacts

A summary of the different ways in which the Lacey amendments may have reduced illegal wood use, along with the measurements methods used in this study, is given in Table 1. Further details on the methods used for each type of response are given in the relevant sections of the results.

This study attempts to measure each of the possible impacts of the Lacey amendments, in order to draw conclusions about the extent to which U.S. imports of illegally sourced wood have changed(see Table 1) . For the first two impacts (reductions in overall imports as a proportion of consumption, and shifts towards importing from lower-risk countries), this can be assessed across all product categories and sources, using official data. For the last of the impacts listed in Table 1 (changes in overall levels of illegal logging in source countries), some limited information is available from reports of independent monitors and from country studies by Chatham House. For all other potential impacts related to changes in high-risk supply chains, the only means by which these might be measured is through the analysis of records of individual shipments of specific high-risk products from specific high-risk countries.

Table 1: Types of potential means by which illegal wood import may have reduced, and means of measuring them

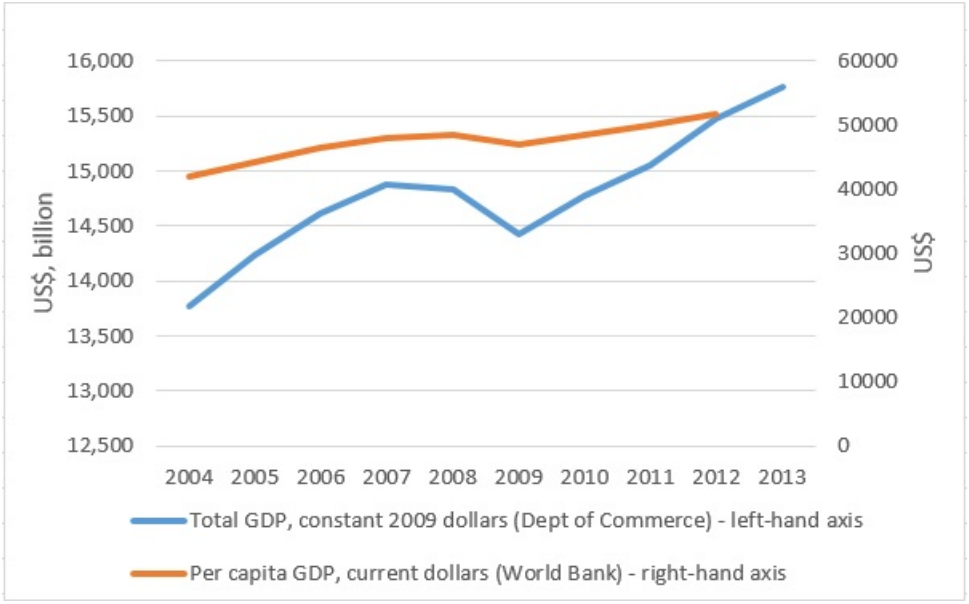
Type of Response	**Means of Measurement**
DIVERSION	
- Shift to domestic wood sourcing	Analysis of official data on consumption and imports
- Shift to lower-risk source country	Analysis of trade data
- Shift to lower-risk wood species	Analysis of trade data and shipment records
DISCRIMINATION	
- Shift supplier within source country	Analysis of shipment records and data relating to specific source companies
- Verify existing supplier	Analysis of shipment records and data relating to specific source companies
INDIRECT REDUCTION	
- Reduction in overall illegal logging in source country	Analysis of available data on changes in levels of illegality in source countries

Confounding factors

Even where relevant patterns can be measured, there is the added challenge of determining what part (if any) of a relevant change was caused by the Lacey amendments, and what part was caused by other factors. There are numerous confounding factors that could serve to shift trade in the manners described above.

The most obvious confounding factor is the U.S. economy. After a long period of boom, the U.S. economy entered a recession in December 2007, shortly before the Lacey amendments took effect. The recession was triggered by a crash in the housing market. House prices had peaked in 2006, and by the time Lacey was implemented they were halfway through a dramatic 35 percent crash (S&P, 2015). The recession knocked 5.1 percent off U.S. gross domestic product (GDP), and the economy continued to shrink until June 2009. U.S. GDP has since recovered, aided by a growing population. Total GDP in 2012 (adjusted for inflation) was actually 12 percent higher than it had been in 2007 (see Figure 1).

Figure 1: U.S. GDP, total and per capita, 2004–2013

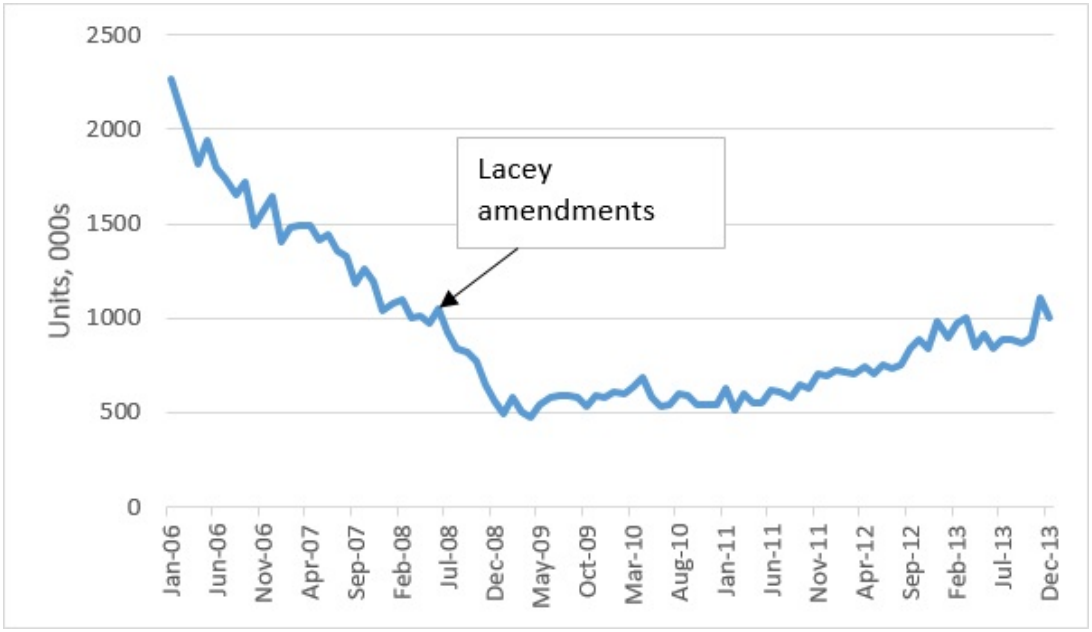


Source: U.S. Department of Commerce, 2015; World Bank, 2015

Though by 2013 GDP had recovered and exceeded the level it was at prior to the Lacey amendments taking effect, parts of the U.S. economy of particular relevance to timber and wood product consumption remained somewhat depressed. One of the single largest uses of many timber products in the United States is in residential construction. The number of new houses being built each month declined dramatically from January 2006, after a long period of growth. Most of this decline happened before the Lacey amendments took effect, but numbers continued to fall until the end of 2008. Though a gradual recovery began in 2011, by the end of the reference period of this study (December 2013) the number of new houses being built remained at less than half of the level seen at the peak at the beginning of 2006 (see Figure 2). Though the monthly figure recovered in the latter part of 2013 to the

same level it was at when the Lacey amendments took effect, the annual figure for 2013 was still 30 percent lower than the figure for 2007.

Figure 2: Monthly U.S. housing starts, January 2006 to December 2013



Source: U.S. Census Bureau, 2015.

As a result, total U.S. imports of timber and wood products remained 28 percent lower (in roundwood equivalent volume terms) in 2013 than they were in 2007.

Another important confounding factor is changes in tariffs applied to imports of specific wood products from specific countries. Though general tariffs have not changed substantially for any important wood flow over the period in question, substantial additional antidumping or countervailing duties have been applied to specific important flows at various times since the Lacey amendments, including on certain types of plywood from China and on certain types of paper products from both China and Indonesia.

Another potential confounding factor that is much harder to measure and account for is changes in patterns of use of different types of wood and alternatives to wood as a result of technological changes or the vagaries of fashion.

Another potential confounding factor is reductions in levels of overall illegal logging in source countries. Though Lacey might have contributed to such reductions, it is unlikely to be the sole cause. A discussion of the reductions in overall illegal wood supply in major supplier countries between 2007 and 2013 is included in the section below.

It is impossible to prove with certainty that Lacey was the sole cause of any particular change seen in the study. However, information on other potential factors, drawn from the data above and other sources,

can be used in the analysis of individual sample flows and in the subsequent analysis and conclusions, in order to reach tentative conclusions on what level of impact Lacey had.

Import-source analysis methods

All of the information collected from the research carried out for this study has been used to feed into import-source analysis estimates of the volume and value of illegally sourced timber and wood products (including pulp and paper) imported into the United States, and how these have changed since Lacey took effect.

The import-source technique involves collecting trade data for flows of different wood products from each source country, converting these to roundwood equivalent (RWE), and then multiplying each flow (source country/product) by an estimate of the percentage of that flow assumed to be illegally sourced. The individual percentages of illegality applied are based on existing estimates of illegal logging in the source country. However, this baseline illegality percentage is also adjusted where justified, to reflect the fact that a specific flow may be more or less likely to contain illegal wood than the average. For instance, it may be that a specific wood species is much less commonly the target of illegal logging than the average. Or it may be that there is reason to believe that a disproportionate amount of illegal wood is consumed domestically in a given country. Or an adjustment might be made to reflect the fact that importers in one destination country may be being more rigorous in checking the legality of their wood than importers in another country (in which case the assumed illegality percentage would be reduced from the baseline for the former, and increased from the baseline for the latter).

The import-source analysis carried out for this study built on one produced by the author for Chatham House, which examined U.S. imports between 2000 and 2008. The results of that analysis were published in 2010 (Lawson and MacFaul 2010). The current analysis examines the years 2007 and 2013. It is not directly comparable with the earlier published Chatham House analysis, since some amendments to the methodology have been made and updated data sources have been used.

In the import-source analysis, small changes in baseline levels of illegality were assumed for Brazil, Cameroon, Indonesia, Peninsular Malaysia, and Sabah in Malaysia. For China, baseline estimates for the proportion of exports of each product group that contain illegal wood are sourced from the modelling of China's own imports and wood flow described in the text. For all other source countries, estimated levels of illegality were assumed to have remained the same. All baseline levels of illegality were sourced from available literature, as were the baseline levels of illegality assumed in the China modelling.

Two versions of the import source analysis were carried out. The first was calculated solely on the basis of reductions in total imports from high-risk countries and applied levels of baseline illegality. This analysis assumes that the only impacts of Lacey were in terms of diversionary effects, and that there was no discrimination between legal and illegal wood within like products. The second version of the analysis assumed a limited level of discrimination for China, Indonesia and Vietnam. A very small amount of discrimination was assumed for furniture from Vietnam (reducing the proportion of illegality to 39 percent from 40 percent). For China, the analysis assumed that ply and wood furniture destined for the United States were around 30 percent less likely to be illegally sourced than the average for

export of these products from China, and other products about 10 percent less likely. For Indonesia the analysis assumed plywood and furniture were 20 percent less likely to be illegally sourced than average. For Indonesian pulp and paper, the modelled estimates of illegality given in the corresponding text section were used; these take into account apparent discrimination in favour of APP.

These levels of discrimination are somewhat arbitrary, but draw on the results of the research on sample flows carried out for this study. They are quite conservative. The lack of discrimination for the Congo basin is supported by the research for this study. The application of no discrimination for other countries for which no additional research was carried out works on the conservative assumption that no discrimination can be assumed unless proven otherwise. Given that these other countries represent a minority of total estimated illegal wood imports, adding some level of discrimination would not make much difference to the overall results anyway.

References

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