Why China Prefers Logs
Explaining the Prevalence of Unprocessed Wood in China’s Timber Imports

By Robert Kozak1 & Kerstin Canby2

In the past decade, China has become the number one importer of timber products in the world. Logs account for virtually all of this growth, and imports of even nominally processed wood, like sawn wood products, have stagnated. But the economics of importing unprocessed wood do not quite add up at first glance, especially in light of increasing scarcities, high prices, and spiraling transportation costs. What then explains China’s preference for buying logs instead of processed wood?

Between 1997 and 2006, China’s total timber product imports have almost quadrupled in volume (roundwood equivalent) from approximately 12.5 million to more than 45 million m$^3$ and it is now the number one importer of timber products in the world. During recent years, the nature of Chinese timber product imports has changed, as China is able to increasingly capture more value from its own manufacturing processes. Figure 1 shows the trends of timber products imports.

Figure 1: China Timber Product Imports (1997-2006)

Source: Chinese Customs data, compiled by Forest Trends

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Through the late 1990s, for example, China imported large quantities of plywood. Today, however, virtually all the growth in timber imports is due to the import of large quantities of logs. Even imports of minimally processed wood products, such as sawn wood, have stagnated.

The demand for wood in China is underpinned by the fact that they simply lack internal wood resources. This is due primarily to two factors rooted in China’s meteoric economic growth. First, past wood production was largely unsustainable and there is a pressing need for ecological stabilization throughout China. Second, the current stock of domestic wood resources is not nearly large enough to fuel their massive and growing wood processing sector. Yet the question remains, why does China prefer to buy logs over processed wood products to support its wood industries and meet the burgeoning domestic and export demand?

The economics of importing logs – in some cases, from great distances – do quite not add up at first glance, especially in light of globally increasing log prices and scarcities, spiraling fuel costs for transportation, the moist and bulky nature of the material itself, and the fact that the primary conversion of logs into sawn wood is the lowest value-added processing step in the wood products value chain. So what is driving the purchase of logs in China? This is not an entirely simple question to disentangle, but several important drivers are notable.

**Import Tariffs:** An obvious starting point would be with a consideration of import tariffs on logs versus more highly processed wood products. Indeed, import tariffs in China tend to favor logs, but only marginally. In most cases, log import tariffs are either nominal or nonexistent, but tariffs on the imports of more highly processed wood products are also comparatively low in China. For example, while there are no import tariffs imposed on logs coming from exporters with “Most Favored Nation” status, the import tariffs on the majority of other processed wood products are generally less than 10% and, in most instances, only in the 3–4% range. Import tariffs can be a powerful driver in explaining both market distortions and the preference of certain import products over others, but they do not tell the whole story where China’s predilection for logs is concerned.

**Relative Efficiencies:** From a business point of view, importing logs to produce wood products also seems to make some sense, especially in light of the fact that competition between Chinese producers tends to be particularly fierce. Labor costs in China are comparatively low, as are production costs – especially for those businesses that are well supported by government programs and incentives and/or have acquired competitive advantage through economies of scale. On this latter point, Chinese sawmills, particularly the new export-oriented supermills that pepper the Siberian border, are some of the largest and most efficient sawn wood producers in the world, and nearby Russian counterparts are virtually powerless to compete with these scales and efficiencies.
In addition to the salient need to fuel their domestic secondary wood processing sector and domestic markets, there is great demand in China for the byproducts of primary log conversion – wood chips, shavings, and sawdust. Not only are these byproducts used to support China’s massive pulp, paper, and newsprint sectors (with estimated outputs of more than 80 million metric tones by 2010) and its growing reconstituted wood products sector, but the generation of hog fuel from wood waste is also seen as an important source of energy to support manufacturing in general. While agricultural products can also be used for these purposes, energy production using wood byproducts is preferred because it requires less energy inputs and water – both in short supply in China – and is a cleaner form of energy compared to coal.

**Social Policy:** The importing of logs is also seen as an effective social policy instrument in China, especially with respect to job creation. The need to capture as much employment as possible throughout the entire wood products value chain is particularly salient in China, where residential markets are robust and production overcapacity is necessitating aggressive export programs. Efforts to increase domestic processing of raw wood supplies are seen as mitigation strategy for job losses that are occurring as a result of urbanization, demographic shifts, and increased agricultural efficiencies. Wood processing, especially wood furniture production, is seen as labor intensive and creates an estimated 12 to 15 million jobs per year. This has led to a situation where wood processing companies have great incentives to remain open even if they are inefficient and not profitable, oftentimes being propped up with government subsidies (e.g., for plantations and modern, high-cost machinery), cheap loans, tax breaks, forgiven debts, or other incentives. And while the conversion of logs into sawn wood products is not nearly as labor intensive as the production of furniture, the need to consistently supply secondary wood processing companies with high volumes of custom cut and dried components provides yet another strong inducement for log imports.

**Easy Access:** Wood in its raw form is comparatively easier to acquire than processed timber in supplying countries due to underdeveloped infrastructures, low resource requirements, and easy access to a complex network of sources. On this latter point, corruption in the log trade is often far more widespread than for processed timber products. Illegally harvested logs are more easily smuggled out of country than processed wood. Interestingly, however, anecdotal evidence suggests that illegal logs are not much cheaper than legally purchased logs once bribes and other factors are taken into account. However, secure access to concessions where sustainability does not seem to factor into the equation certainly goes a long way to ensure higher profit margins for certain producers.
Proximity to Russia: China is also in close proximity to one of the world’s most formidable source of logs – the abundant boreal forests of Siberia and the Russian Far East. There, available processing capabilities can only handle less than a fifth of actual harvests, so, for the time being, the remainder can be expected to be exported as logs. While Russia has announced very steep tariff hikes on log exports to be phased in over the next two years to catalyze their own wood products sector, the degree to which this can actually be implemented is unclear at present.

While currently approximately two-thirds of China’s log imports originate in Russia, other regions of the world are now beginning to ramp up their exports of logs to China. This is especially true for developing nations that are resource rich, but economically unstable and perhaps looking for quick and easy means of infusing cash into their economies.

In Africa, the trade with China is almost exclusively in logs even where domestic processing capacity exists, such as Cameroon (fig. 2) and the Republic of Congo (fig. 3). While the production and trade of sawn wood from these countries is on the rise, these products are mostly destined for the European Union (often by way of European producers operating in African timber concessions). Conversely, the timber trade with China is almost exclusively in the form of logs. In other words, the Chinese imports of logs are not related to a lack of industry infrastructure within Africa, but rather to market preferences, the reasons for which were described above.

Figure 2: Cameroon Timber Exports (1993-2006)

That African producers willingly engage in the export of logs to China does not bode well from a long-term development standpoint: exporting logs equates to lost opportunities for the struggling economies of Africa with respect to the potential to generate wealth and create employment. So why then do African producers prefer to sell logs to China rather than adding value domestically? In many instances, the answer may simply boil down to profitability. In particular, it may be more profitable for some producers to export logs rather than sawn wood or other wood products due to comparative inefficiencies in their processes (wood recovery rates, byproduct prices) and labor costs. This is exacerbated by the potential for low back-shipping rates on otherwise empty freight ships and the high demand in China for certain species like okoumé, each providing further incentives for less efficient African producers to export logs whole. And while the lost economic opportunities from log exports has led to partial log export bans in some countries like Cameroon, other governments in Central and West Africa are much less willing to implement such protectionist measures because of the higher levels of taxes that can quickly and readily be amassed from log exports.

![Figure 3: Republic of Congo Timber Exports (1993-2006)](image)


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