



ANALYSIS

Forest sustainability and the free trade of forest products:
cases from Southeast Asia

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Abstract

This paper introduces the theoretical arguments for and against trade liberalization of forest products considering forest sustainability, and reports on the recent circumstances of three countries in Southeast Asia—the Philippines, Thailand and Indonesia. Trade liberalization raises concerns about the negative effects on forest sustainability, both in log-importing countries that have already cut a large portion of their natural forests by commercial logging and now face a pressing need for reforestation, and in forest product-exporting countries that still have large areas of natural forest and enjoy export competitiveness in forest products.

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1. Introduction

In November 2001, the Fourth Ministerial Conference of the World Trade Organization (WTO), held in Doha, Qatar, adopted a declaration that in

effect sets off a new series of negotiations that has been dubbed the “New Round”. The focus of negotiations in the forest products sector in this New Round will be the “zero-for-zero” tariff initiative for all forest products on which opposition from Japan had prevented negotiators from reaching consensus in the previous Uruguay Round.

While some progress has been made toward consensus for the liberalization of trade in forest products, scientific analyses have not yet adequately clarified the fundamental issue of whether

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this liberalization and the sustainability of forests globally are trade-offs or complementary.¹ This paper will first review recent discussions about the free trade of forest products and forest sustainability. Second, the relationship between the free trade of forest products and forest resource management in three countries in Southeast Asia will be discussed, based on recent data, interviews and references. Finally, the paper will briefly examine the essential elements of forest sustainability and an international framework for the free trade of forest products.

2. Recent discussion on free trade and forest resources

One of the most undeniable arguments used to support free trade and deregulation is that competition resulting from trade will induce technological progress. As wood exporting countries in Southeast Asia one after another implemented export embargos on logs in the 1980s, there was controversy until the first half of the 1990s as to whether or not log export controls were effective for those countries. [Repetto and Gillis \(1988\)](#) calculated the potential rent of logs per cubic meter, as well as sawnwood and plywood equivalents to 1 m³ of logs in Indonesia from 1979 to 1982. They found that the potential rent of logs was higher than for sawnwood and plywood, and notably, that the value of plywood was negative. Thus, the profit from exporting logs would have been larger than from exporting sawnwood or plywood, and the log export embargos could be regarded as having promoted investment in inefficient forest products industries in Indonesia. Moreover, the [London Environmental Economics Centre \(1993\)](#) quotes a study by Constantino in 1990 that found that Indonesia's log export embargo in 1985 neither increased the recovery rates

of domestic forest products nor decreased the consumption of logs in Indonesia compared to the time before the embargo. The argument that greater competition will improve resource efficiency became widely supported, based on these studies.

[Repetto and Gillis \(1988\)](#) defined the potential rent for logs as the export price of logs minus transportation costs, and the potential rent for sawnwood and plywood was calculated as the export prices of these products minus the transportation costs of raw logs (the same transportation costs as logs as final products) and the production costs of these products. Their analysis did not consider differences in quality between raw logs for domestic production and logs for export. For example, if domestic production can utilize more logs per hectare (including low quality logs), the recovery rates of domestic processing per hectare of forest will potentially be higher than if the logs were exported. Therefore, the low recovery rate of manufacturing processes in log-exporting countries will not directly result in inefficiency of domestic production. Hence, these studies did not prove that forest degradation had accelerated by diverting logs from export into domestic processing after the log embargo. They did prove that the recovery rates of domestic processing factories in tropical log-exporting countries were generally low, but did not prove that market competition would lead to progress in the introduction of resource-efficient technology.

Studies about the influence of the log embargos from a macro perspective also appeared. [Barbier et al. \(1995\)](#) estimated the demand functions of logs, sawnwood and plywood, and the deforestation function in Indonesia, and indicated quantitatively the effects on deforestation caused by the log embargo and restrictions on the import of forest products imposed by importing countries. [Perez-Garcia et al. \(1997\)](#) used the CINTRAFOR Global Trade Model (CGTM) to analyze the influence of log export restrictions from natural forests in the United States for the protection of spotted owls. Both studies concluded that log export restrictions profit domestic processing industries and provide some job opportunities locally, but by-and-large they are economically inefficient.

Most of the studies in this field before 1995 criticized log export regulations. Only [Goodland and Daly \(1996\)](#) disagreed with these observations. They argued that promoting domestic processing would

¹ The US Trade Representative published a report supporting tariff elimination for forest products based on a simulation using spatial equilibrium models of forest products trade ([USTR, 1999](#)). The model has not directly treated the linkage between forest products production and forest resources. As for the detail evaluation of this simulation, refer to [Shimamoto \(2001\)](#). A trial simulation of forest products production and trade and forest resources based on IIASA's spatial equilibrium model ([Shimamoto, 1998](#)) has resulted in more pessimistic estimation.

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