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EXPORTS OF BASIC TIMBER RESOURCES: WHO WINS AND WHO LOSES

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The United States is the world's leading producer and consumer of forest products and is second only to Canada as an exporter of forest products. This important trade feature is not a new trend for the United States. Exports from the forests of this country have played a critical role in its historical economic development. Seventeenth century New England exported such commodity products as fuelwood to the West Indies sugar mills and tree length logs to England for ship masts. In the 19th century, timber exports played a vital role in the economic development and growth of the Western United States. Waterborne exports of lumber, sawn squares, and logs continue to be an important trade feature of the Pacific Northwest.

Today, however, increasing trade of basic wood resources has raised concerns about domestic wood product prices and the ability of U.S. forests to continue to adequately supply domestic and world markets. Thus, the following discussion will examine some of these issues and provide insight into answering the question of winners and losers in the export trade of softwood and hardwood logs and chips.

Information on softwood resource production and export has previously been compiled and disseminated by Dave Darr and Richard Haynes; hardwood log resource production and exports were provided by William Luppold.¹

¹Dave Darr is Branch Chief for Economics, Trade and Market Research, USDA Forest Service, Washington, D.C.; Richard Haynes is Project Leader for Social and Economic Values Research, USDA Forest Service, Portland, OR; and William Luppold is Project Leader for Domestic and International Hardwood Product Markets Research.

Log and chip exports represented just over a third of the value of solid wood exports in 1991. However, all except hardwood chip exports peaked between 1989 and 1990, declining in 1991 and remaining relatively flat for 1992 (Figure 1).

Softwood Log Exports:

Softwood log exports dominate these four product categories in terms of both volume and value. Exports are predominantly from the Pacific Northwest to Japan. In 1991, over 70% of softwood log shipments went to Japan to supply construction material. Concerns over the impact of softwood log exports on the domestic industry have existed for some time and resulted in legislation restricting round log exports from public lands.

The arguments over who wins and who loses in the exportation of softwood logs have been well documented in the press, in the state and federal legislatures, and in academic halls. They go as follows:

- (1) Domestic mills, particularly near ports, face reduced log supplies and higher raw material prices. This situation causes a reduction in profits and employment by domestic mills, potentially higher lumber prices to consumers, and increased lumber imports from Canada.
- (2) Exports are restricted to private lands, thus shifting domestic demand to public timber supplies. This puts greater pressure on public lands to produce timber, raising concerns over increasing timber production from a finite land base.
- (3) Exporting our timber inventories today, forecloses future trade income and economic welfare gains.

The winners from the log export trade are as follows:

- (1) Log exporting has become a significant industry segment of its own, with related local and regional economic activity and creation of expanded employment opportunities.
- (2) Log exports increase profits to landowners - benefiting local economies, and increasing incentives for forest management on nonindustrial private lands.
- (3) The high value of export logs helps to reduce the U.S. deficit in balance of payment with Japan and other countries.
- (4) Free trade is preferable economically because restraints encourage remedial reactions by our trading partners.

These issues continue to be important and dominate arguments on the export trade of wood raw materials.

Softwood Chips:

Softwood chip exports are once again predominantly from the West Coast of the United States to Japan. However, these exports are not heavily debated since overseas markets provide outlets for mill residues, thinnings, and salvage material.

Exports of softwood chips have held relatively stable since 1988. The value of softwood chip exports declined by 5% in 1991 and may not show significant increases in the near future due to increased trade of softwood chips between Chile and Japan.

Although the West Coast dominated softwood export trade, hardwoods are shipped from East Coast and Gulf Coast ports as well as West Coast ports. Hardwood resource exports have not had the historical significance of softwoods and until recently were relatively small compared to the softwood trade. However, concerns over regional impacts due to increased log exports from New England and chip exports from the South have initiated debate over the pros and cons of exports similar to those in the PNW over softwood log exports. Since this is a recent concern, this paper will focus on the export of hardwood resources.

Hardwood logs:

After showing significant gains in export value between 1987 and 1989, the value of hardwood logs has remained relatively stable.

The hardwood log export market differs from that of softwood logs in several important ways:

- (1) Markets are not concentrated in Asia, but are worldwide.
- (2) Three basic log products, veneer logs, sawlogs, and pulp logs, are used in a wider variety of end products and specialty markets.
- (3) High value specialty markets exist which offer significant premiums for high quality logs.
- (4) Export quality logs require longer rotation periods than softwoods.

Japan is not the only dominant market for hardwood logs, except for red alder and paulownia. Significant export markets exist in Canada and Europe, as well as Korea and Taiwan in the Pacific Rim.

Due to proximity, Canada is and has been the largest export market on a volume basis for U.S. produced hardwood logs. However, the quality of logs shipped to Canada is lower than the products exported to Asia and Europe. Recent statistics indicate that northern species such as maple, beech, birch, and aspen account for the majority of logs exported to Canada.

Many northern sellers of logs consider Canada an extension of their U.S. markets. Log export restrictions would be difficult under the current free trade agreement between the United States and Canada. In addition, if log export restrictions applied to overseas markets only, logs could first travel to Canada and then be re-exported to European and Asian markets. If this happened, U.S. sellers of hardwoods would not receive all of the gains from the premium prices these markets offer.

While Canada is the largest market on a volume basis, Europe has been and still is the largest export market for high-grade veneer logs which receive premium prices in these markets. As exports of logs to Europe have fluctuated, there has been a continuous change in the species exported which causes the impact on the domestic market to fluctuate.

Currently Germany and Italy are the major European markets for hardwood logs. The dominant species exported include white oak, cherry, and walnut. These markets prefer timber grown in the north-central and northeastern regions of the United States. This preference has apparently influenced the price of veneer logs in northern regions. However, the impact exports have on price is difficult to fully assess because veneer logs are not commodities with well-defined market prices. Transactions are usually conducted on an individual log or small lot basis.

Logs exported to Asia range from high grade veneer logs to pulpwood, including medium and high grade sawlogs used for lumber production. In the early 1980's Japan was the only significant Asian market for U.S. hardwood logs, however, growth in the Taiwanese furniture industry increased exports to that country by the mid-1980's along with exports for Korea.

Japan is the major market for two underutilized species in the United States-- Paulownia, a low value weed species and west coast red alder. Paulownia is sawn into lumber and red alder is sorted for pulp production with the better grade logs going to sawmills.

As can be deduced from the variety of products and markets involved in hardwood log exports, it is difficult to make broad generalizations concerning "winners" and "losers". Heading up the "loser" categories are both domestic wood producers and environmental interests concerned over the adverse impacts of increased harvest for exports.

However, unlike the softwood log export scenario, there are no large industrial ownerships involved with growing and managing timber resources for hardwood production. Thus, the nonindustrial private landowner plays a more important role in the log export picture, providing the majority of material for export and benefiting from the premium prices offered by overseas markets. This is particularly true in the North Central and Northeast where land ownerships are smaller in acreage and more numerous than in the West. This allows the benefits to landowners from access to export markets to be shared by a larger number of individuals.

Also, the majority of funding from federal and state agencies for forestry management incentive programs goes into softwood management. Thus, the increased income

potential derived from an expanding hardwood log export market becomes an important land management incentive.

In addition, exports of lesser utilized species such as paulownia have been quite favorable to landowners with no impact on the domestic market. However, the high value hardwood forests of the North Central and Northeastern United States are limited resources that are on a much longer rotation period than softwoods.

Hardwood Chips:

The final category of basic wood resources that will be addressed is Hardwood Chip Exports. Until 1988, hardwood chip exports from the United States have primarily originated from the Pacific Northwest (PNW). Red alder is the principal species used for hardwood chips and has been considered a nuisance species in the conifer forests of the PNW where the pulp and paper industry has historically used less than 10% hardwood in their furnish, less than eastern mills.

Exports of hardwood chips from the United States began increasing significantly in 1988 when the Southern United States began shipping hardwood chips to Asia. Over 90% of the chips exported from the United States go to Japanese pulp mills.

The export trade of hardwood chips out of the U.S. South is a recent development and one that has received a great deal of discussion and debate. However, because it is a recent event, information concerning the "losers" and "winners" of such trade has not been as widely analyzed and disseminated as compared to other trade issues.

Background:

This sudden market development came as the result of a shift in the supply strategy of the Japanese pulp and paper industry. This industry is heavily dependent on foreign raw material supplies. Rising chip prices in the Pacific Northwest during the early 1980's and the potential loss of a portion of the Australian supply to a Tasmanian hardwood Kraft mill considered for 1987-88 prompted Japanese companies to secure alternative chip sources in New Zealand, Chile, China, and the U.S. South.

In 1987, small amounts of Southern U.S. hardwoods were sent to Japan. Following initial trials, almost 300,000 green metric tons were shipped in 1988 from Southern ports. In 1991, this volume approached 2 million tons and was valued in excess of \$100 million.

Hardwood chip demand in Japan is driven by pulp and paper demand, predominantly for chemical wood pulp used to make printing/writing papers and tissues. The shorter hardwood fibers when blended with softwoods enhance softness of tissues and absorbent papers.

The majority of Japanese paper production is consumed domestically. Consumption of paper and board products on a per capita basis increased dramatically during the 1980's.

During a four year period between 1985 and 1989, total consumption increased at an average rate of over 8% per year. This trend has since slowed, with an average annual increase of only 2.7% between 1989 and 1991.

In response to increasing domestic demand, the production of paper products in Japan increased over 70% between 1981 and 1991. Thus it is easy to see that one of the major benefactors of increased hardwood chip exports out of the south are Japanese pulp and paper companies.

Analysis of Winners & Losers:

Prior to 1988, the Pacific Northwest alone supplied the Japanese market with hardwood chips. In 1991, the U.S. share of the Japanese market was divided, with 44% coming from the West Coast (from Washington & Oregon); 35% from the Gulf Coast (predominantly through the export district of Mobile), and 19% from the Southeast Coast (out of the Beaufort-Moorehead City & Savannah Districts). For 1992, it appears that the Gulf Coast will equal or surpass the West Coast in hardwood chip shipments for the first time, with an estimated 1.7 million green metric tons (Figure 2).

This is made possible due to the fact that delivered costs of southern hardwood fiber have remained relatively stable over time and by the availability of an expansive land and water transportation infrastructure through the mid-south. The opening of the Tennessee-Tombigbee Waterway has greatly increased the availability of hardwoods by lowering transportation costs and significantly increasing the amount of wood that can be delivered to the Port of Mobile at a competitive price on the world market.

This has provided landowners in the South with a market for their low value hardwoods. Incomes from these lands could potentially be used for forestry management. In addition, increased harvesting activities have provided additional employment opportunities in these rural areas for those in the logging and transportation business sectors.

Other benefactors or "winners" in the export of fiber from the South include the U.S. companies selling chips to Japan. The leaders in this trade are major integrated U.S. pulp and paper companies. Their benefit is derived from the fact that profits from their overseas chip sales can be used to reduce the overall costs of raw material supplies to their domestic mills, enabling them to keep their products price competitive. While this may seem like robbing Peter to pay Paul, it must be realized that current export volumes are less than 4% of domestic hardwood fiber consumption.

The primary "losers" in the South are those industries that must compete in a local area with the export market for stumpage. Since transportation cost is the principal variable cost in the production of a low value product such as hardwood chips, the supplies with potential to export are restrained geographically in relation to distance from port. This means that the export buyer will be restricted and thus concentrated in areas

that are within reasonable transportation costs to the port. This factor is unlikely to change since fiber price is set by a world market and U.S. producers must compete with low cost emerging suppliers from Chile and Southeast Asia.

Additional concerns have been raised by the hardwood sawmill industry over increased clearcutting by chip producers which could reduce the growing stock of hardwood sawtimber in regions where there is increased production from both domestic and export chip producers. The degree to which this is actually occurring is unclear as recent forest inventory survey data in most broad geographic regions suggest that the growth of hardwood growing stock exceeds removals. This issue is currently under investigation.

There also are related environmental concerns over increases in clearcutting for fiber production. These concerns range from threatened species to wetland issues to water quality issues, and are not limited to chip production for export.

Conclusions:

To summarize, the tally sheet of "winners" and "losers", pros and cons of wood resource commodity exports is a difficult one to balance, particularly when private landowner rights are involved and impacts on domestic industry are mixed, as in the case of hardwood chip exports.

Free trade of wood resources debits include:

- (1) Reduced supplies for domestic production and potentially higher prices for timber supplies.
- (2) Reduction in timber related domestic employment and higher prices for end products.
- (3) Foregone profits from exports of value added products.
- (4) Increased environmental pressure on U.S. forest land to produce for foreign markets.

However, the credits include:

- (1) A contribution towards the balance of trade.
- (2) Increased profits to landowners which can benefit land management efforts and local economies.
- (3) Increased profits and employment by those U.S. companies involved in export trade.
- (4) Support of free trade encourages trading partners to do the same, benefiting exports of other U.S. products.

Tradeoffs between domestic and export interests are real and at times difficult to fully quantify. This makes the final accounting a topic of continuing debate.

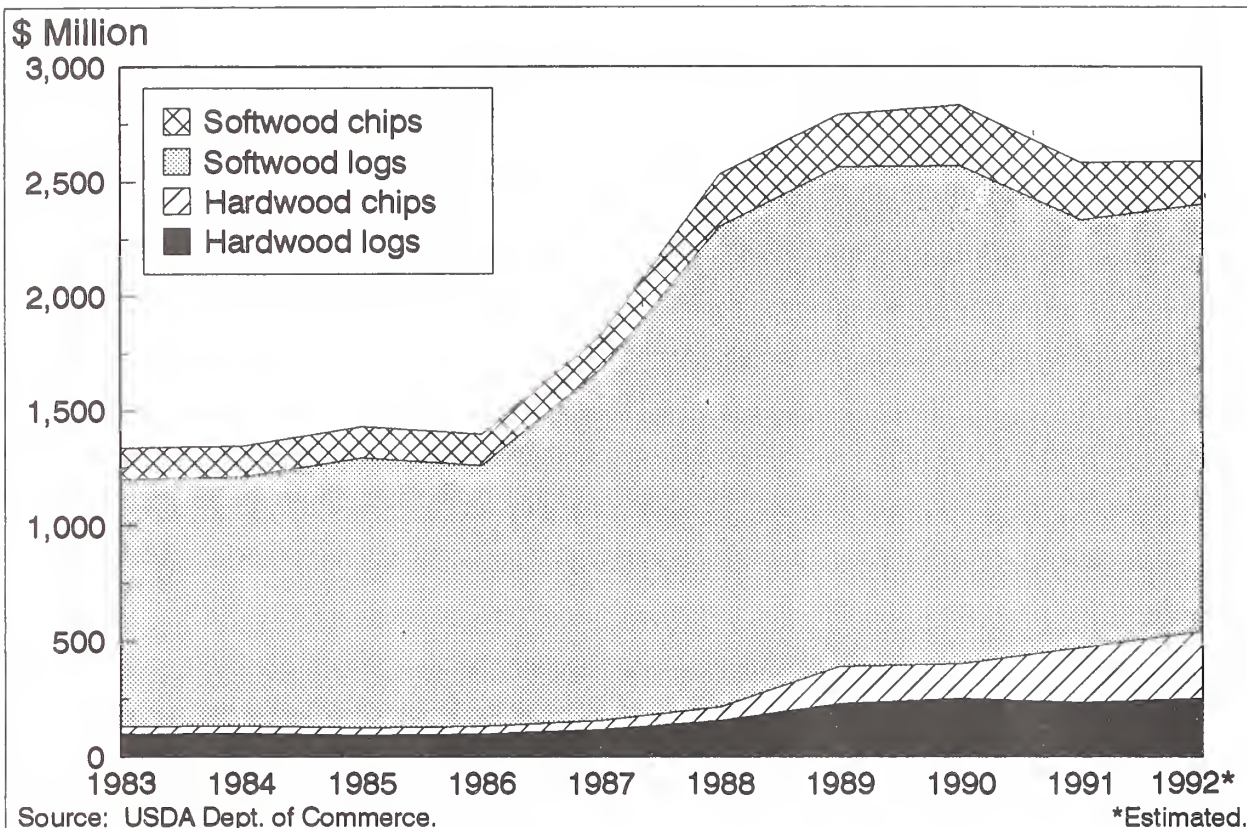


Figure 1. U.S. wood commodity exports.

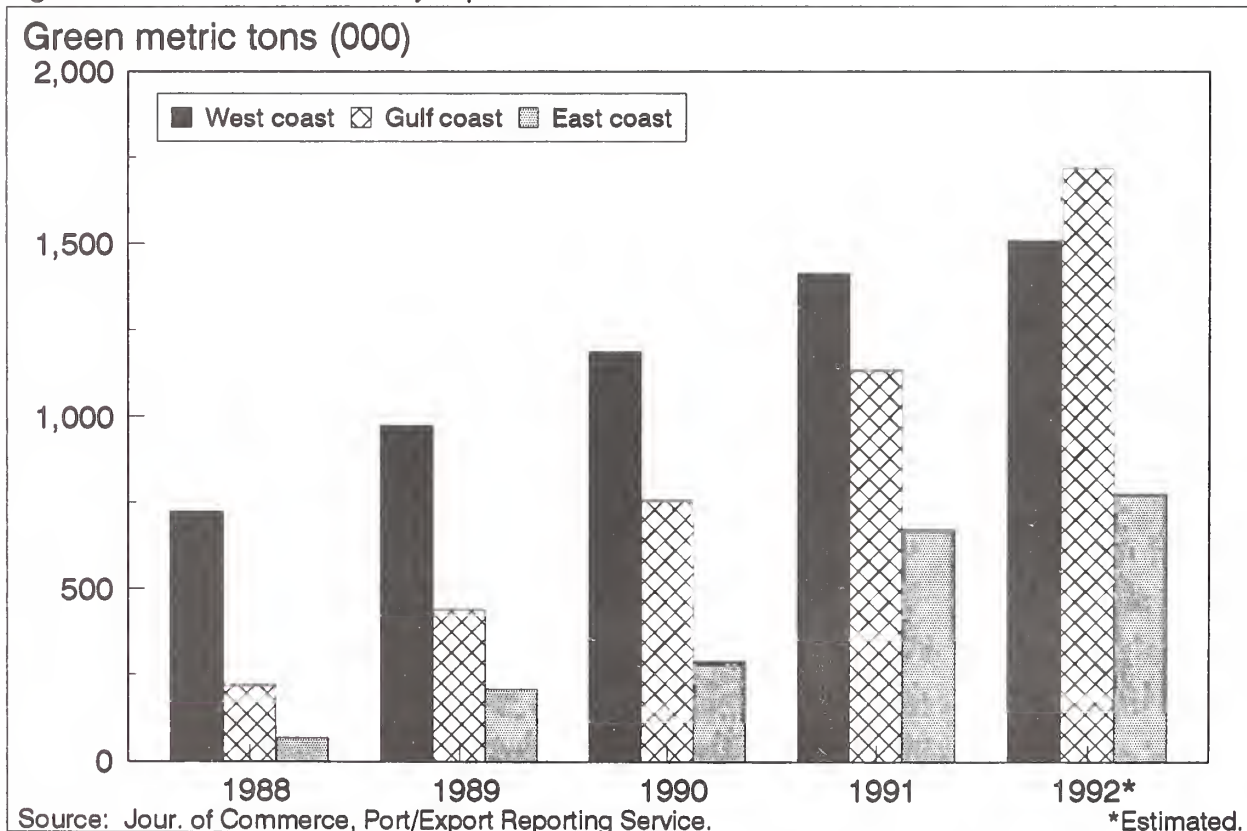


Figure 2. U.S. hardwood chip exports.