will depend on the level of the tax and how it is applied. To be successful in discouraging landowners from selling to export buyers, the duty would have to be high enough to consume the difference between export and domestic price. On high quality logs, where premium is the greatest, the tax might have to be 50-100 % of the domestic price. Down to the export price at which landowners would decide to sell to domestic mills, many logs would still go overseas. Part of the extra income that would have been enjoyed by the landowner would return to government. This could be a disincentive to manage for timber growth, so some groups have proposed that part of the tax be returned to the landowners in the form of timber growing tax incentives or subsidies.

- The arguments to restrict or not restrict exports involve many dimensions, including employment, timber supply, trade relations, competitive position, old growth preservation, and state's and individual property rights.
- Great uncertainty exists about the effects of various export restriction proposals. The most important uncertainties involve the net timber price and employment effects of a ban, and the prospects for selling the equivalent volume in new markets for wood products.
- Restrictions will generally favor domestic mills in the short run through lower timber prices, but will hurt landowners in the long run by removing markets and incentives for timber management.
- Since most of the log exports are from private land, a private ban or quota is the policy that would create the greatest effect. However, unlike the public land restrictions, this evokes the private property rights controversy.

The export duty could be levied as a specific rate per unit or as a percentage of the value. Export and domestic market conditions would affect these two forms differently. A per unit tax would not be as successful when export prices were high, and would have a proportionately greater impact on lower quality logs.

The real impact on prices and the quantity of logs traded would depend greatly on the reaction of Japan and the other log importing nations. If the volume of logs they demand is sensitive to price (because, for example, they have alternative sources of logs or lumber), landowners could experience a reduction in revenues without hope of seeing their markets reincarnated in domestic mills who will be exporting more finished products.

Tax incentive for selling domestic

The tax incentive strategy could take several forms. The objective would be to reduce the landowners' tax burden in exchange for a decision to sell logs in the domestic market. Oregon landowners pay federal and state income tax as well as state severance, harvest, and fire fund taxes on each harvest. The income tax burden varies with income tax bracket and other factors. Landowners currently pay severance tax equal to 6.5% of the net value of all but the first 25 thousand board feet (MBF) of each harvest. Landowners who pledge to sell to domestic mills might receive less for their timber, but could be compensated by paying a lower tax bill. Once again, the effectiveness in reducing exports would depend on the export buyers' reaction to the affected log supply. The tax incentive strategy would shift the financial burden of restricting exports to the state which would be forced to forgo some tax revenue that would have been forthcoming under higher valued export sales.

Depending on the difference between export and domestic price, the tax break might have to be quite large to compensate for the export price premium. If export prices are $400 and domestic prices $300 per MBF, even relieving the combined state income and severance taxes at about 16 percent would not make the two net returns equivalent. A large enough incentive to discourage exports could represent a substantial reduction in state tax revenues. If it did restrict export supply somewhat and the difference between export and domestic prices increased, the incentive to landowners would have to keep pace.

Such a program might be difficult to implement, because at least 75% of the private harvest is already being sold to domestic mills. Without some mechanism to target just owners who would be approached by export buyers, the tax break could go to landowners who would sell domestic anyway. The cost effectiveness of an improperly targeted program might be questioned. One economic scenario is that landowners could rush to get this tax break, reducing the supply to export buyers who would then increase prices, especially for high quality logs. This would encourage landowners with those logs to sell export, thereby defeating some of the purpose of the policy. Some have even questioned whether working the incentive through the state tax system would violate the federal government's sovereignty in regulating foreign commerce.

- If all other supply and demand factors remained constant, most forms of private restriction will result in lower overall timber prices. This could be offset by price increases caused by harvest reductions on public lands. The financial burden of the policy selected emanates from price reductions and may rest with the government, the export buyer or the landowner. A ban would remove the export option and most severely reduce prices. Export duties and tax incentives might actually lead to increased export prices for the highest quality timber.
- A private ban would create the greatest reduction in export volumes, but could stimulate property rights litigation.
- An export duty penalizes the export buyer who would conceivably pass at least part of the penalty on to the landowner in the form of reduced bid prices. Success in restricting exports would depend on the level and nature of the duty imposed.
- Tax breaks would restore some of the incentive for timber management to the landowner, but may be difficult to implement.

Appendix

Substitution in public export restrictions

The new prohibitions on federal and state exports have indirect impacts on the number of buyers available for private timber through the so-called substitution provisions. Under these regulations, buyers who export private logs from a given area are ineligible to buy public logs within that area. The rules are necessary to prevent loopholes that subvert the intent of the legislation. However, it also effectively forces some buyers to specialize in either private (export) or public sources. Buyers can purchase private logs for domestic mills and still be eligible for public sales; those who are ineligible for public sales can buy private logs for the export or domestic markets. However, a buyer can no longer combine export and public procurement operations in the same area.

Because the majority of timber for domestic processing still comes from public lands, many buyers who use multiple sources and destinations may choose to back out of the export market, thereby reducing the number of buyers (and perhaps bid prices received) for private landowners. Some companies may find that this forced specialization does not give them enough flexibility to maintain viable log purchases. These rules also apply to secondary buyers, so the longer term impact may be to discourage the trading of logs among firms and reduce the incentive to sort logs to their highest markets.

The timber species, grades, and the source (or timbershed) to which the substitution rules apply is critical. Some difference exists between the federal ban, specified in the law and implemented by the U.S. Forest Service and Bureau of Land Management, and the state ban, whose regulations are developed by the state forestry agencies.[25,26] At this writing, the states have used the state boundaries. Federal definitions will be made in early 1991. A buyer who exports private Oregon logs might be ineligible for public logs in Oregon but could buy public logs in Washington.

Substitution rules have forced a choice for multistate companies, some of whom have already declared intentions to specialize as mentioned above. Weyerhaeuser Co. has announced that it will no longer export unprocessed logs from its Oregon land holdings, but would continue to export in Washington[16]. Weyerhaeuser's decision was guided by the need to supply an old growth mill at Springfield with logs from federal lands and by the fact that the Oregon operations accounted for only 10 per cent of their export volume. Under the old federal substitution rules the company could legally export logs in a smaller area and continue to buy federal logs in the Willamette Valley. This announcement and those by other firms has been claimed a victory by politicians who had helped implement the law. Weyerhaeuser's decision was lamented by the Port of Coos Bay which would lose about 50 MBF (about 15 ship loads) of traffic a year and some ship and dock worker jobs. Weyerhaeuser has further stated that it would probably not sell this volume to local domestic mills at current prices, so there will be a reduction in the logging employment.

Reading list and citations

1. Baker, J. and Lippke. B. 1990 "Changing forest products export trends and impact of restrictions on log exports." In *Proceeding of the PNW Regional Economic Conference.* April 26-28. University of Washington, Seattle.

2. Carp, T. 1989. "The battle over log exports." *Oregon Business*, May 1989.

3. Corlett, M.L., Sowle, J.A., and J.A. Carr (eds). 1989. *Forest Industries 1989-90 North American Factbook.* Miller Freeman Publications Inc., San Francisco CA.

4. Darr, D.R. 1980. "Softwood log export policy: the key questions." *Journal of Forestry.* March. pp 138-140.

5. Darr, D., R.M. Haynes and D.H. Adams. 1980. *The Impact of the Export and Import of Raw Logs on Domestic Timber Supplies and Prices.* PNW RP-277. Portland, OR.

6. DeFazio, P. 1990 (Sept. 18). H.R. 5651. A bill (introduced in the 101st Congress) to amend the Export Administration Act of 1979 to prohibit the export of unprocessed logs harvested from lands west of 100th meridian.

7. Flora, D.F. and W. J. McGinnis. 1989. "Embargoes on and off: Some effects of ending the export ban on federal logs and halting exports of state-owned logs." *Western Journal of Applied Forestry.* 4(3):77-79.

8. Flora, D.F. 1989. "Timber exports: Winner and losers." Lecture, Oregon State University, Corvallis OR, October 26, 1990.

9. Goldschmidt, N. 1989. "Oregon shines: An economic strategy for the Pacific century." Oregon Economic Development Department, Salem OR.

10. Gruenfeld, J. and R. Flynn. 1990. "Log exports: an update." *American Forests.* Sept./Oct. pp 50-53,74-76.

11. Hamilton, T.E. 1971. "Log export policy: Theory vs. reality." *Journal of Forestry,* Vol. 68, No. 8.

12. Hines, J.A. 1987. *Log export restrictions of the Western States and British Columbia.* U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, PNW-GTR-208. Portland, OR.

13. Howard, J.O. and F.R. Ward. 1988. "Oregon's forest products industry: 1985." *Resource Bulletin* PNW-RB-149. U.S. Department of Agriculture, Forestry Service, Pacific Northwest Research Station, Portland OR.

14. Howard, J.O. and F.R. Ward. 1990. *Oregon's Forest Products Industry: 1988.* USDA Forest Service Research Paper

15. Johnson, J.A. and W.R. Smith (eds). 1988. *Forest products trade: Market trends and technical developments.* University of Washington Press, Seattle WA.

16. Kadera, J., D. Ulrich, and J. Griffith. 1990. "Weyerhaeuser to halt Oregon log exports." *The Oregonian,* Portland, Wednesday, Nov. 28.

17. Olsen, J. 1988. "Pacific Northwest lumber and wood products: An industry in transition." *National Forests: Policies for the Future,* Vol. 4. The Wilderness Society, Washington D.C.

18. Oregon Legislature. 1983. The log export issue: An analysis by the Joint Legislative Committee on Trade and Economic Development. 1983. Salem, OR.

19. Pacific Rim Trade Association. 1983. Briefing Paper on the Oregon Log Export Controversy.

20. Pacific Northwest Regional Commission. 1974. "Benefits and costs of alternative log export policies," Phase I report by Stanford Research Institute. Volumes I and II.

21. Ramsey, B. 1988. "The logjam over timber exports." *Seattle Post-Intelligencer.* Tuesday, May 31.

22. Robertson, L. 1989. "Log exports: Mortgaging our future?" Four part series, *Eugene Register-Guard* beginning July 9.

23. Shribman, D. 1990. "In Oregon, a little-known challenger believes Sen. Hatfield can't see the forest for the trees." *The Wall Street Journal,* Wednesday, Sept. 26.

24. State of Oregon Measure No. 2, 1989. Official 1989 Special Election Voter's Pamphlet.

25. State of Washington. 1990 Log Export Restrictions, Chapter 240-15 of WAC.

26. State of Oregon. 1990. Proposed Log Export Rules to be part of OAR 629-30. November 20.

27. Thomas, K.R. 1989. "Regulation of timber exports: Legislative options." *Congressional Research Service Report for Congress.* Library of Congress. Nov. 14.

28. U.S. General Accounting Office. 1985. *Potential Impacts of Tighter Forest Service Log Export Restrictions.* Report # GAO/RCED-85-17.

29. Ulrich, A.H. 1988. U.S. "Timber production, trade, consumption, and price statistics 1950-86." U.S. Department of Agriculture, Forestry Service; Demand, Price and Trade Analysis Group, Washington D.C.

30. U.S. Congress. 1990 Customs and Trade Act of 1990 including Public Law 101-382. Title IV Sec 487. Forest Resources Conservation and Shortage Relief Act.

31. Vlasky, R.P., and J. Gruenfeld. 1985. "History of North American West Coast Log Exports and Comment on Future of Log Exports from Alaska." CINTRAFOR reprint. Univ. of Washington, Seattle.

32. Warren, D.D. 1990. "Production, prices, employment, and trade in Northwest forest industries, fourth quarter 1989." Resour. Bull. PNW-RB-174. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station, Portland OR.

33. Series entitled "Northwest Forests: The New Era," *The Oregonian*, Dec. 16-21. Portland, OR.

Discussion Questions

1. Should Oregon continue to export logs? Should log export restrictions from public lands be lifted? Why or why not?

2. Should private lands be included in the log export restrictions? Do you think these restrictions will lower the prices received for timber by private landowners? Which of the three policy options described (ban or quota, export duty, or tax incentive do you think will best create the intended benefits of restriction with the least disruption of employment patterns, rights, and privileges? Why?

3. The impact on trade and timber prices of a private export ban would certainly be greater than the recently enacted ban on state logs, but the ethical and perhaps legal questions of private property rights would surely be evoked. Do you think that a log export ban is an unacceptable "taking" of landowners rights? Do you think landowners should be compensated fairly if this policy is chosen? How?

4. Is banning log exports from Oregon an effective way to save our old growth timber resource? Do you think the Japanese are deliberately trying to exploit the state's forest resources? Could the importing nations' need for logs cause increased exploitation of valuable forests elsewhere in the world? What areas of the world would be most vulnerable?

5. Do you think a private export ban will keep forest industry workers employed? What information would you seek in trying to arrive at your conclusions?

6. How are foreign buyers able to pay more for logs than domestic log buyers? What happens to the differential (or export premium)? Who benefits from it? How might this compare with the benefit derived from processing the same logs up in domestic mills? Do you think landowners should be taxed on the export premium?

7. What do you think would be the Japanese reaction to the banning of all log exports from the U.S.? Do you think they will buy the equivalent in lumber from us or will they go elsewhere for additional logs and lumber (e.g., USSR, New Zealand, or Chile) or to wood substitutes such as concrete and steel? Might we endanger our steadily growing share of the Japanese lumber consumption with log export restrictions?

8. How do you think Korea and China will react to an log export ban? Although most of the discussion of export restriction focuses on Japan, it purchases only half the export logs from the Pacific North West. Korea and China buy most of the other half, yet have even less potential for buying lumber and plywood. By prohibiting these two countries from buying logs, we may have problems in finding a big enough international market. Do you think we have focused our export opposition on Japan too much, perhaps out of our experience in World War II, or that Japan most clearly represents a foreign threat to our economic dominance?

9. British Columbia has long prohibited log exports except for some relaxation in the mid1980s when it had too many logs for its production needs. How might BC react if the U.S. bans log exports? If U.S. prices drop and the BC industry becomes less competitive, might BC decide to send "surplus logs" to Japan to replace the U.S. imports? Might it step up its foreign lumber marketing efforts in anticipation of an American onslaught? Which of the two countries do you think Japan would rather turn to supply its lumber needs?

10. Several PNW companies are trying to import of Siberian (USSR) logs that provide the close grain needed for secondary wood products such as window and door moldings. Logs of this quality are rapidly becoming less available from the nearby national forests. This seems to indicate that if we want to preserve old growth timber and the industries that have relied on it, we may have to import logs just as the Japanese do. However, importing logs also could open up our forests to new insect and disease organisms brought in with imported logs.

    Do you think log importing should be encouraged or discouraged? If we restricted our own log exports, which are mainly second growth, but began to import in earnest from Japan's primary alternative source of logs, what kind of reaction might we get from Japan? What implications does this have for the old growth ecosystems of Siberia and the rest of the world?

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