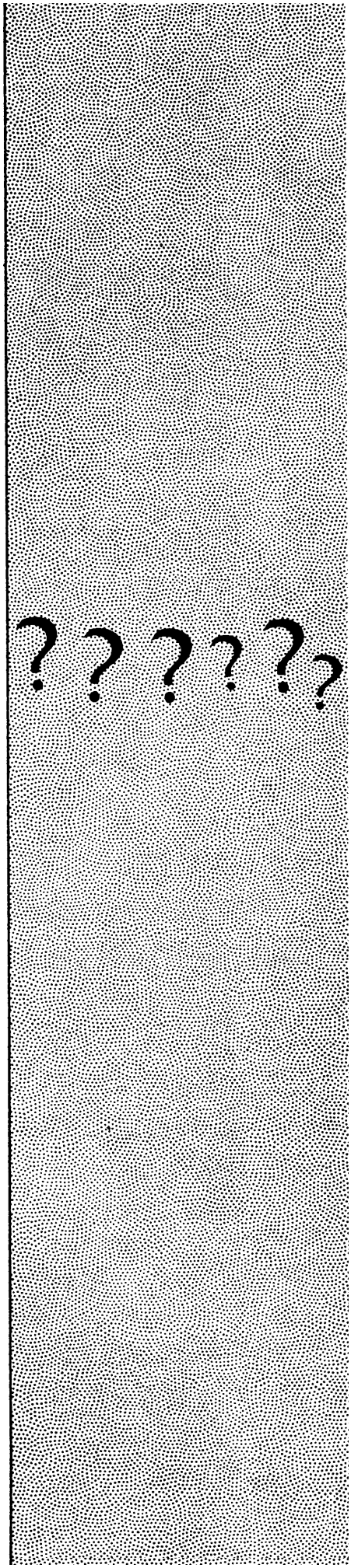
USDA FOREST SERVICE GENERAL TECHNICAL REPORT PNW-41
1975

U.S. Forest Products Trade Policies:

WHAT ARE THE OPTIONS



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PACIFIC NORTHWEST FOREST AND RANGE EXPERIMENT STATION
U.S. DEPARTMENT OF AGRICULTURE FOREST SERVICE
PORTLAND, OREGON

Abstract

Trade and other policies are being considered by the U.S. Forest Service according to the terms of the Forest and Rangeland Renewable Resources Planning Act of 1974 (Public Law 93-378, 93d Congress, S.2296). This paper describes the issues involved in the question, "Should we or should we not attempt to reduce net imports of forest products?"

In terms of volume, net imports of forest products amount to about 12 percent of U.S. consumption. The value of imports exceeds the value of exports by about $1.5 billion. Most of U.S. softwood imports come from Canada and hardwoods from South Korea, Taiwan, Japan, and the Philippines. Japan and the Common Market countries are the major markets for U.S. forest products exports.

Without a change in trade policy, net imports of forest products may increase. Constraints on options for increasing exports or decreasing imports limit the feasibility of policies designed to change existing and expected trade patterns.

Policies should be weighed in terms of their effects on both international and domestic goals. Most effects of changes in either import or export policies would be due to increases in the relative prices of forest products.

There is no clear rationale, either in theory or in existing U.S. trade policy, for balancing imports and exports of a commodity.

KEYWORDS: Import/export (forest products), trade policy.

Preface

Analysis of U.S. trade policy necessarily involves many sensitive issues. The author's evaluation of these issues may not correspond with U.S. Forest Service or other Federal policy.

There is no unanimity of opinion among analysts of forest products trade policies on many of the issues which have been raised in this paper. The paper has been published because of the wide interest in the subject matter. It is intended for use as a background report and should interest members of the forest products industries and others who are affected by forest products trade policies.

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Introduction

The United States has a complex mix of national and international goals. The potential for achieving these goals is determined by policies which guide the allocation of natural resources within the world economy. World trade in natural resources, including those from the forest, is growing. The options available to change the current pattern of trade in forest products should be part of any assessment of U.S. timber policy issues.

The purpose of this report is to describe both the options available and the constraints on these options. The report is structured to provide a background of the role of forest products trade in the U.S. economy and the issues involved in framing policies, before the questions of policy options and constraints are discussed.

U.S. forest products trade in perspective

TRENDS IN NET IMPORTS

Ties between the Canadian and U.S. economies have made the United States a longstanding net importer of forest products. Trade has been concentrated in softwood products; most of the imported volume has been lumber and newsprint from Canada.

After relative stability in the 1950's, domestic production, consumption, and trade increased (tables 1, 2, and 3). By the 1970's, exports were over four times the level of the 1950's and imports more than double. Although imports remained concentrated in softwood lumber and newsprint, imports of pulp and hardwood veneer and plywood increased. Most of the increased export volume was in pulp and paper products and softwood logs.

Increases in exports and domestic production have kept net imports relatively stable at 10 to 12 percent of domestic consumption as shown by the following:

Year	Net imports as a percent of consumption
1950	13.9
1951	12.1
1952	11.7
1953	12.3
1954	12.0
1955	12.1
1956	12.1
1957	11.8
1958	12.2
1959	12.5
1960	12.0
1961	12.5
1962	13.5
1963	12.5
1964	11.5
1965	11.6
1966	11.8
1967	10.4
1968	10.4
1969	11.1
1970	8.7
1971	12.0
1972	12.3
1973	12.2

Sources: Phelps and Hair (1974).

In terms of value, the annual forest products trade deficit (imports minus exports) fluctuates in response to changing market conditions but has generally stayed within the $1 billion to $1.5 billion range as shown in the following tabulation. The relatively low deficit in 1970 reflects increased domestic production of pulp-based products, increased log exports, and decreased imports of all products.

TABLE 1.—Production, imports, exports, and apparent domestic consumption of timber products, by major product, 1950-73'

(Million cubic feet, roundwood equivalent)

Year	All products		Industrial roundwood used for –																			
			Total				Lumber				Plywood and veneer				Pulp products					Logs		
	Domestic production	Apparent consumption	Domestic production	Imports	Exports	Apparent consumption	Domestic production	Imports	Exports	Apparent consumption	Domestic production	Imports	Exports	Apparent consumption	Domestic production	Imports [2]	Exports [2]	Apparent consumption	Miscellaneous products [3]— apparent consumption	Imports	Exports	Fuelwood— apparent consumption
1950. . .	10,795	12,180	8,525	1,520	140	9,910	5,905	535	80	6,360	345	5	(4)	350	1,500	935	50	2,385	770	45	10	2.270
1951. . .	10,970	12,180	8,740	1,465	260	9,950	5,780	390	155	6.020	390	10	(4)	400	1,825	1,025	90	2,765	730	35	15	2,230
1952. . .	10,780	11,940	8,775	1,375	215	9.935	5,820	385	115	6,095	435	10	(4)	440	1,810	945	85	2,665	700	30	10	2,010
1953. . .	10,710	11,940	8,790	1,420	190	10,020	5,710	430	100	6.040	475	15	(4)	490	1,910	935	70	2,775	675	40	20	1,920
1954. . .	10,590	11,780	8,755	1,460	270	9,945	5,635	480	110	6,000	480	30	(4)	505	1,960	920	135	2,745	655	35	25	1,835
1955. . .	10,970	12,240	9,225	1,610	340	10,495	5,785	560	130	6,215	575	40	(4)	815	2,200	975	180	3,000	630	35	25	1,745
1956. . .	11,275	12.605	9,620	1,640	310	10,950	5,920	530	120	6.330	590	45	(4)	630	2,475	1,040	160	3,355	805	30	30	1,655
1957. . .	10,180	11,335	8,615	1,490	335	9.770	5,100	460	130	5,435	560	45	(4)	605	2,350	960	185	3,125	580	25	25	1,565
1958. . .	10,010	11,195	8,530	1,495	310	9,715	5,160	530	115	5,575	615	50	(4)	685	2.165	895	165	2,895	560	15	30	1.480
1959. . .	10,780	12,125	9,390	1,700	355	10,735	5,745	635	120	6,260	720	75	5	790	2,355	970	195	3,130	535	20	35	1,390
1960. . .	10,220	11,445	8,920	1,675	455	10,145	5,080	610	135	5,560	705	60	(4)	765	2,575	985	275	3,290	510	20	45	1,300
1961. . .	9,960	11,210	8.745	1.745	495	9,995	4,945	865	120	5.485	765	60	(4)	825	2,475	1,000	295	3,175	490	20	75	1.215
1962. . .	10,160	11,570	9,035	1,910	495	10.450	5,120	760	120	5,765	800	75	(4)	875	2,565	1,055	295	3,330	465	20	85	1,125
1963. . .	10,615	11,975	9,560	1,990	630	10,920	5,355	830	135	6,050	870	80	5	950	2,670	1,060	340	3,390	515	15	150	1,055
1964. . .	11,155	12,470	10,170	2,035	720	11,485	5,635	815	150	6,300	960	90	5	1,045	2.865	1,120	395	3,585	540	10	170	985
1965. . .	11,455	12,845	10,540	2,100	715	11,930	5,670	815	145	6,340	1,030	100	5	1,125	3,095	1,175	380	3,890	560	10	190	915
1966. . .	11,490	12,920	10,645	2,230	800	12,075	5,645	810	160	6,295	1,030	115	5	1,140	3,190	1,290	420	4,060	565	15	220	845
1967. . .	11,185	12,395	10,410	2,160	955	11,615	5,360	800	175	5,985	1,030	110	10	1,130	3,190	1,240	460	3,970	515	15	310	775
1968. . .	11,725	13,005	11,025	2,395	1,120	12,305	5,630	960	180	6.405	1,120	165	10	1,275	3,385	1,260	525	4,120	485	15	405	700
1969. . .	11,620	12,990	11,000	2,515	1.140	12,370	5,535	980	180	6,340	1,050	180	20	1,205	3,585	1.340	570	4,355	455	15	375	620
1970. . .	11,660	12.725	11,115	2.420	1,355	12,180	5.355	955	200	6.110	1,065	170	15	1,220	3,835	1275	710	4,405	425	25	430	540
1971 [5]. . .	11,600	13,120	11,100	2,695	1,175	12,620	5.495	1,135	165	6,465	1,235	210	15	1,425	3,560	1,335	630	4,265	450	15	360	500
1972 [5]. . .	11,935	13,535	11,480	3,000	1,400	13.060	5,650	1,405	215	6,840	1,355	265	25	1,590	3,495	1,320	665	4,150	475	5	495	475
1973 [5]. . .	12,330	13,970	11,830	3,065	1,425	13,470	5.680	1.425	295	6,810	1,360	220	40	1,540	3,775	1,415	575	4,615	500	5	515	500

Columns may not add to totals because of roundin .

[2] Includes pulpwood and the pulpwood equivalent of wood pulp, paper and board.

[3] Includes cooperage logs, poles and piling, fenceposts, hewn ties, round mine timbers, box bolts, excelsior bolts, chemical wood, shingle bolts, and miscellaneous items.

Source: Table 2, Phelps and Hair (1974).

[4] Less than 2.5 million cubic feet.

[5] Preliminary estimates.

Sources: Based on data published by the U.S. Departments of Commerce and Agriculture. Data for 1900-49 in *The demand and price situation for forest products, 1964*, table 2 (Hair and Ulrich 1964).

TABLE 2.—*Production, imports. exports. and apparent domestic consumption of softwood timber products. by major product. 1950-73*[1]

(Million cubic feet. roundwood equivalent)

Year	All products		Industrial roundwood used for—																				
			Total				Lumber				Plywood and veneer				Pulp products					Logs		
	Domestic production	Apparent consumption	Domestic production	Imports	Exports	Apparent consumption	Domestic production	Imports	Exports	Apparent consumption	Domestic production	Imports	Exports	Apparent consumption	Domestic production	Imports[2]	Exports[2]	Apparent consumption	Miscellaneous products[3]—apparent consumption	Imports	Exports	Fuelwood—apparent consumption
1950	7.155	8.435	6,615	1.395	110	7.895	4.780	490	65	5,205	185	(4)	(4)	185	1.285	880	45	2.120	360	25	5	540
1951	7220	8.325	6,690	1.325	220	7.795	4.600	350	135	4,815	195	(4)	(4)	195	1.545	960	75	2.430	340	15	10	530
1952	7.315	8.400	6,840	1.260	170	7.925	4.715	355	90	4,980	250	(4)	(4)	245	1.540	885	75	2.350	325	20	5	475
1953	7,280	8.420	6,835	1.290	150	7.975	4.610	395	80	4,925	300	(4)	(4)	295	1,595	880	60	2.415	320	20	15	445
1954	7,220	8.330	6,805	1.330	220	7.915	4.550	445	90	4,905	315	(4)	(4)	315	1.615	865	110	2.365	310	20	15	415
1955	7.525	8.705	7.140	1.450	275	8.320	4.630	520	100	5,045	390	(4)	(4)		1.800	920	150	2.570	300	10	20	385
1956	7.790	9.010	7.435	1.465	250	8.655	4.700	490	90	5,100	400	.....	(4)	390	2.020	970	135	2.855	295	5	25	355
1957	7125	8.185	6.795	1.325	270	7.855	4,215	425	95	4,540	395	(4)	(4)	400	1.890	895	155	2.630	285	5	15	330
1958	7.030	8.125	6,725	1.340	245	7.820	4.240	495	85	4,650	460	(4)	(4)	380	1.730	840	135	2.435	275	5	20	305
1959	7.660	8.875	7,380	1.500	280	8.595	4.725	585	95	5,215	560	.....	(4)	555	1.800	910	155	2.555	270	5	25	280
1960	7.180	8.320	6.925	1.500	360	8.065	4.125	570	110	4,585	550	(4)	(4)	550	1.960	925	220	2.665	255	5	35	255
1961	7040	8,220	6.810	1.580	400	7.990	4.035	625	95	4,565	615	(4)	(4)	615	1,850	940	235	2.555	250	10	65	230
1962	7.190	8,495	6,980	1.705	400	8,285	4.150	715	100	5.765	650	(4)	(4)	650	1,870	980	230	2.625	240	5	70	210
1963	7.530	8,795	7,330	1.785	515	8.595	4,265	785	115	4.930	725	(4)	(4)	725	1.935	990	260	2.660	270	5	135	200
1964	8010	9.230	7.820	1.810	595	9.040	4.530	765	125	5.170	800	(4)	(4)	800	2,050	1.045	305	2.785	285	(4)	160	190
1965	8.290	9.565	8.110	1.860	590	9.385	4,530	765	120	5.175	870	(4)	(4)	870	2.240	1.095	290	3.040	300	(4)	175	180
1966	8290	9.580	8.120	1.955	665	9,410	4.465	745	135	5.075	900	5	5	900	2,245	1,200	320	3.125	310	5	205	170
1987	8,150	9.270	7,995	1.925	805	9,115	4.230	750	150	4,825	895	5	5	895	2,290	1,165	355	3.100	285	5	290	160
1968	8.755	9.890	8.615	2.090	955	9.750	4,535	905	165		985	5	5	980	2,445	1,175	400	3.220	265	5	385	140
1969	8.595	9.770	8.470	2.145	965	9.645	4.395	915	160		920	5	15	910	2,540	1.220	430	3.330	250	5	360	125
1970	8.760	9,700	8,655	2.090	1.150	9.590	4.270	900	180	4,990	950	5	10	945	2.790	1.165	540	3.410	230	15	420	105
1971[5]	8.765	10.095	8,665	2.315	985	9.995	4.435	1,080	140	5,380	1,105	5	15	1.085	2.530	1.220	480	3.270	245	10	350	100
1972[5]	9.030	10.405	8.940	2.555	1.180	10.315	4.610	1,340	175	5,775	1,205	10	20	1200	2.390	1.205	510	3.085	260	(4)	475	90
1973[5]	9.270	10.700	9.170	2.645	1,220	10.600	4.645	1.345	260	5.725	1,215	10	35	1.190	2.555	1.295	440	3.410	270	(4)	485	100

[1] Columns may not add to totals because of rounding.
[2] Includes pulpwood and the pulpwood equivalent of wood pulp, paper and board.
[3] Includes cooperage logs, poles and piling, fenceposts, hewn ties. round mine timbers, box bolts. excelsior bolts. chemical wood, shingle bolts. and miscellaneous items.
Source: Table 3. Phelps and Hair (1974).

[4] Less than 2.5 million cubic feet.
[5] Preliminary estimates.
Sources: Based on data published by the U.S. Departments of Commerce and Agriculture.

TABLE 3.—*Production, imports. exports. and apparent domestic consumption of hardwood lumber products. by major product. 1950-73*[1]

(Million cubic feet. roundwood equivalent)

Year	All products		Industrial roundwood used for—																			
			Total				Lumber				Plywood and veneer				Pulp products					Logs		
	Domestic production	Apparent consumption	Domestic production	Imports	Exports	Apparent consumption	Domestic production	Imports	Exports	Apparent consumption	Domestic production	Imports	Exports	Apparent consumption	Domestic production	Imports[2]	Exports[2]	Apparent consumption	Miscellaneous products[3]—apparent consumption	Imports	Exports	Fuelwood—apparent consumption
1950	3645	3.740	1.915	125	30	2.010	1,130	45	15	1.155	160	5	(4)	165	215	55	5	260	410	20	5	1.730
1951	3.750	3.850	2.050	140	35	2.150	1.180	40	20		195	10	(4)	200	280	65	10	335	390	25	5	1.700
1952	3.470	3.540		115	40	2.010	1.105	35	25		185	10	(4)	195	270	60	10	315	370	15	5	1,530
1953	3425	3.520		130	35	2.045	1.100	35	20	1.115	180	15	(4)	195	315	55	10	360	355	20	5	1.475
1954	3.365	3.450	1.945	130	50	2.030	1,080	30	20	1.095	165	30	(4)	190	350	55	20	380	345	15	5	1.420
1955	3.445	3.535	2,085	155	65	2.175	1,160	40	30	1.170	190	40	(4)	225	405	55	30	430	330	20	5	1.380
1956	3485	3.595	2,185	175	60	2,295	1,220	40	30	1,230	190	45	(4)	235	455	70	25	500	310	25	5	1,300
1957	3.055	3.150	1.820	165	70	1,915	890	40	30	895	165	45	(4)	210	465	60	30	495	295	15	5	1,233
1958	2975	3.070	1,800	155	65	1.895	920	35	25	925	155	50	(4)	205	435	55	30	460	285	16	10	1.175
1959	3.120	3845	2.010	200	70	2.135	1.020	50	25	1,040	160	75	(4)	240	555	60	35	580	265	15	5	1.110
1960	3 040	3.125	1.995	180	90	2.080	955	45	25	975	155	60	(4)	215	615	60	55	625	255	15	10	1.045
1961	2.920	2.985	1.935	165	95	2.000	910	35	25	925	150	60	(4)	210	625	60	60	620	240	10	10	985
1962	2.970	3.075	2.055	205	100	2.180	970	45	20	1,000	150	75	(4)	220	695	70	65	700	225	10	15	915
1963	3.085	3.180	2,230	205	110	2,325	1.095	45	20	1,120	145	80	(4)	225	735	70	75	730	245	10	15	855
1964	3.145	3,240	2,350	225	125	2,445	1.110	45	20	1.135	160	90	5	245	815	75	90	800	255	10	10	795
1965	3.165	3,280	2.430	240	125	2.545	1.140	50	20	1.170	180	100	(4)	255	855	80	90	850	260	10	15	735
1966	3,200	3,340	2.525	275	140	2.665	1180	65	25	1,220	135	110	(4)	240	945	90	100	935	255	10	15	675
1967	3.035	3.120	2.415	235	150	2,500	1,135	50	25	1,160	130	105	(4)	235	905	70	105	870	230	10	20	620
1968	2.970	3.115	2.410	310	160	2.555	1.095	55	15	1.130	135	160	5	295	940	85	125	900	220	10	20	560
1969	3.025	3.220	2,530	370	175	2.725	1.140	70	20	1,190	130	175	5	300	1.045	120	140	1.025	205	10	15	495
1970	2905	3.030	2.470	335	205	2.595	1.090	50	20	1.120	125	165	5	280	1.050	110	170	990	195	15	15	435
1971[5]	2830	3.020	2.430	380	190	2,620	1,060	55	25	1.090	130	205	5	335	1.030	115	150	995	195	15	10	400
1972[5]	2905	3.130	2.520	445	220	2.745	1,040	70	40	1.065	145	225	5	400	1.105	115	155	1.060	215	15	20	385
1973[5]	3065	3,275	2.665	420	205	2.875	1.035	85	35	1,080	145	210	5	350	1,225	120	135	1,205	230	5	30	400

[1] Columns may not add to totals because of rounding.
[2] Includes pulpwood and the pulpwood equivalent of wood pulp, paper and board
[3] Includes cooperage logs, poles and piling, fenceposts, hewn ties. round mine timbers. box bolts. excelsior bolts. chemical wood, shingle bolts. and miscellaneous items.
Source: Table 4. Phelps and Hair (1974).

:Less than 2.5 million cubic feet.
Preliminary estimates.
Sources: Based on data published by the U.S. Departments of Commerce and Agriculture.

Year	Imports	Exports	Deficit
	- - - -	*Million dollars*	- - - - -
1961	1,636.2	649.7	986.5
1962	1,763.7	655.2	1,108.5
1963	1,715.4	738.7	976.7
1964	1,790.0	866.6	923.4
1965	1,958.4	917.2	1,041.2
1966	2,163.6	1,024.3	1,139.3
1967	2,091.5	1,150.9	940.6
1968	2,427.1	1,362.2	1,064.9
1969	2,714.1	1,508.3	1,205.8
1970	2,527.9	1,818.0	709.9
1971	2,921.2	1,692.5	1,228.7
1972	3,606.9	2,037.6	1,569.3
1973	4,426.6	3,007.7	1,418.9

Sources: Kaiser and Mills (1973) and Phelps and Hair (1974).

Over the past decade, the value of imports has remained concentrated in lumber, chiefly softwood, woodpulp, and paper and paperboard products, primarily newsprint (fig. 1). The dollar value of exports was concentrated in woodpulp and paper and paperboard products during the early 1960's (fig. 2). During the 1970's, export value of all forest products increased, the biggest gains being in logs and lumber. On a commodity basis, the United States is a net importer except for logs.

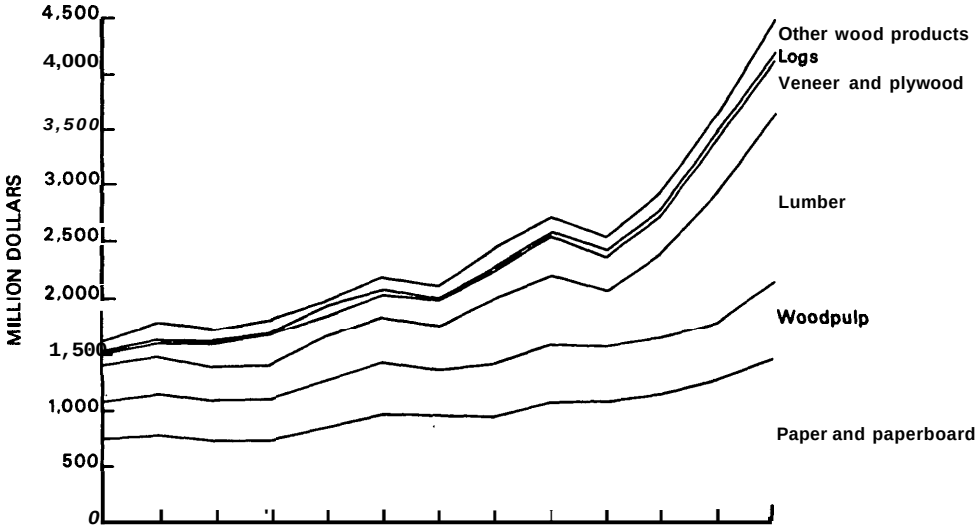

Figure 1.--*Value of imports by product, 1961-73. "Other wood products" includes cork products and wooden packing boxes; "Logs" includes pulpwood and chips; and "Woodpulp" includes small amount of waste-paper. (Sources: Kaiser and Mills (1973) and Phelps and Hair (1974).)*

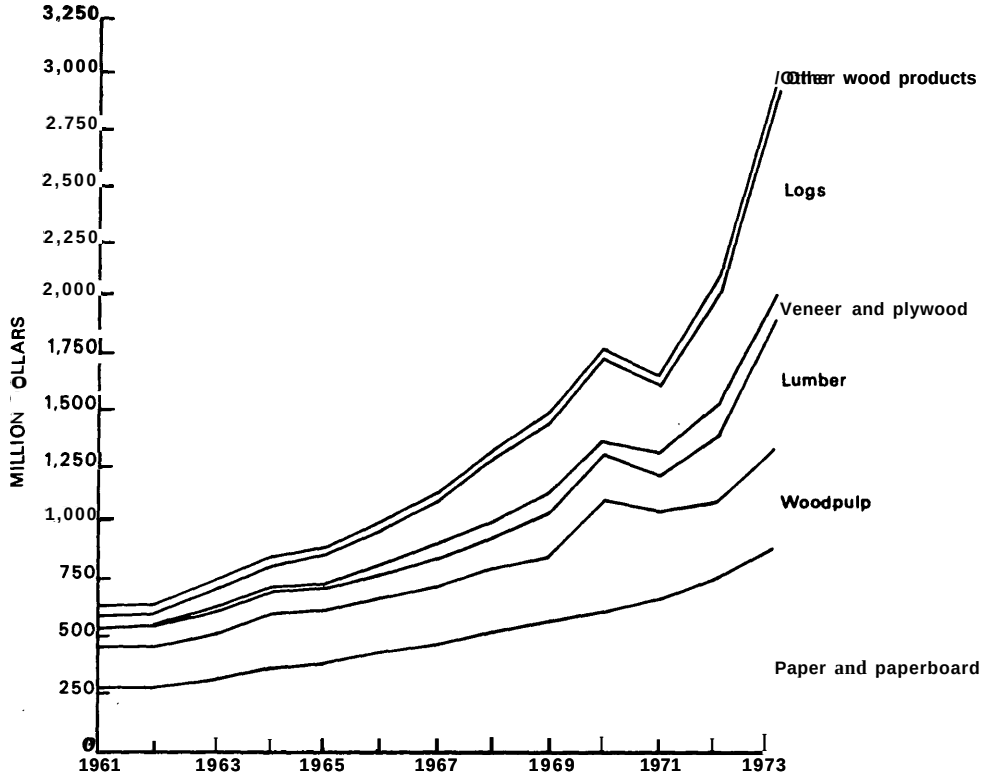

Figure 2.--Value of exports by product, 1961-73. "Other wood products" includes cork products and wooden packing boxes; "Logs" includes pulpwood and chips; and "Woodpulp" includes small amount of waste-paper. Sources: Kaiser and Mills (1973) and Phelps and Hair (1974).)

U.S. TRADE PATTERNS FOR MAJOR FOREST PRODUCTS

Foreign trade issues develop on an individual commodity basis. Much trade legislation deals with constraint or liberalization of imports. Restrictive policies often develop through political efforts of industries that consider themselves adversely affected by imports. In reaching a decision, Congress must weigh gains from import competition against the costs of disruption to domestic industry.

Imports of a specific commodity may also be limited to foster a competing domestic industry. For example, a country may tax automobile imports as an incentive to domestic manufacture of autos. Imports of a specific commodity may also be limited to regulate consumption; for example, a tariff on oil imports is expected to decrease consumption of oil and stimulate development of other sources of energy.

Imports of specific commodities may be limited to channel foreign exchange into other higher priority items. Thus, a country may heavily tax imported consumer goods to acquire foreign exchange for purchase of industrial goods.

Policies to boost exports of specific commodities generally seek to stimulate employment, achieve other domestic goals, or earn foreign exchange. In the United States, policies to limit or change the form of exports have come to the forefront in recent years because of the impact of exports on domestic interests. Temporary limits on agricultural exports were initiated because the export market caused domestic prices to rise. Proposals to limit softwood log and lumber exports imply the protection of the supply of domestic raw material--with benefits to final price and availability of products.

Trade policies for specific commodities may differ from the overall philosophy of a country toward international trade. Through the political system, members of an industry may be successful in restraining trade despite a philosophy of trade liberalism. Trade restraint in specific commodities necessarily complicates fulfillment of a liberal trade philosophy, especially in negotiations to reduce tariff or other barriers.

For trade policies in forest products, the linkage between a policy and domestic goals means that not only must the effect of a policy on net trade position or other international goals be assessed, but the effect on domestic goals must be included as part of the evaluation.

Since the forest products industries are only part of a general economic system, their trade policies should be evaluated within the context of the system. The effectiveness of different policies will vary according to domestic and international supply and demand conditions for each product and for substitute and complementary commodities. For example, the United States and the Union of Soviet Socialist Republics are the only countries which export significant quantities of softwood logs, but many countries export softwood lumber.

Issues which evolve from trade policies will depend in part on the countries involved. For example, U.S. policies to reduce forest products imports may be countered through reduction of market access for U.S. exports or through withholding of key materials.

The most important forest products imported during 1973 by leading country of origin were:

	Million dollars
Softwood lumber (total)	1,362.6
Canada	1,315.7
Woodpulp (total)	659.3
Canada	626.3
Newsprint	1,184.8
Canada	1,132.6
Hardwood veneers (total)	76.4
Canada	36.5
Philippines	19.6
Hardwood plywood (total)	388.3
South Korea	165.5
Taiwan	82.7
Japan	55.5
Philippines	40.2

Source: U.S. Bureau of the Census (1974b).

These commodities accounted for $3.7 billion out of total forest products imports of $4.4 billion. Clearly, if the United States wants to reduce imports, policies should be directed primarily to softwood lumber, newsprint, and woodpulp from Canada. Hardwood veneer and plywood imports amount to $464.7 million; policies to reduce these imports must be directed primarily to Asian countries.

The values of 1973 exports for selected commodities and countries of destination were:

	Million dollars
Softwood logs (total)	759.9
Japan	707.3
Softwood lumber (total)	506.0
Japan	114.7
Italy	70.9
Canada	67.6
West Germany	35.6
United Kingdom	19.3
Pulp chips (total)	85.7
Japan	84.6
Woodpulp (total)	420.3
Japan	79.8
United Kingdom	37.7
Italy	35.7
Canada	10.6
Paper and board (total):	918.5
Kraft container board liners, unbleached	235.8
West Germany	36.4
United Kingdom	30.8

Source: U.S. Bureau of the Census (1974a).

These commodities accounted for $2.7 billion out of total 1973 forest products exports of $3 billion. Japan was the major market for U.S. softwood logs and pulpwood chips, with purchases totaling $792 million.

Other exports went to many countries; and policies--especially for the more highly processed products--should be framed with this fact in mind. Exports of raw materials are concentrated in Japan.

FOREST PRODUCTS TRADE COMPARED WITH TOTAL U. S. IMPORTS AND EXPORTS

During the 1960's, forest products imports as a percentage of all commodity imports declined from about 11 to 6 percent; corresponding values for exports rose from 3 to about 4 percent (fig. 3).

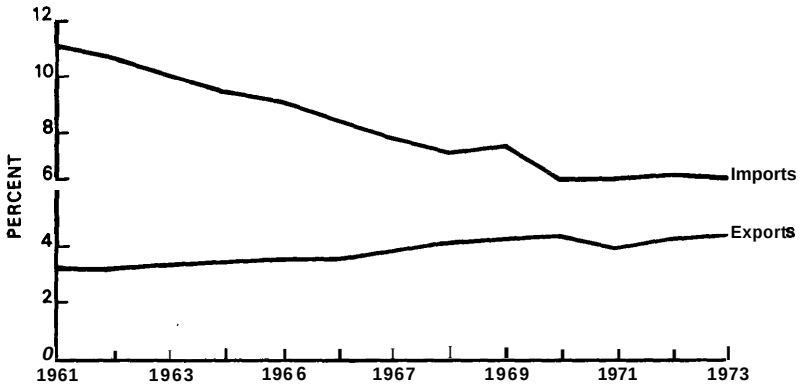

Figure 3.--Forest products trade as a percent of all U.S. merchandise trade, 1961-73. Percentages are based on forest products trade data from Kaiser and Mills (1973) and Phelps and Hair (1974); merchandise trade data are from Council of Economic Advisers (1974).

U.S. imports and exports of commodities are both dominated by manufactured goods (table 4). The United States is a net exporter of agricultural products and raw materials and a net importer of mineral fuels.

TABLE 4.—*Value of U.S. commodity imports and exports, 1973*

(Millions of dollars)

Commodity group	Imports	Exports
Food and live animals	7,986	11,931
Beverages and tobacco	1,213	1,008
Inedible crude materials except fuels[1]	4,988	8,384
Mineral fuels, lubricants, and related materials	8,101	1,671
Oils and fats, animal and vegetable	255	684
Chemicals	2,437	5,748
Manufactured goods, classified chiefly by material[2]	13,198	7,161
Machinery and transport equipment	20,970	27,842
Miscellaneous manufactured articles	8,184.	3,951
Commodities and transactions not classified	1,790	. 1,844
Total	69,122	70,224

[1] Includes wood, lumber and cork at an import value of $1522 million and an export value of $1,303 million and pulps anh wastepaper at an import value of $669 million and an export value of $487 million.

[2] Includes wood and cork products at an import value of $781 million and an export value of $299 million and paper, paperboard, and paperboard products at an import value of $1,457 million and an export value of $919 million.

Source: U.S. Bureau of the Census (1974a, 1974b).

When considering the relative effectiveness of different fdrest products policies, we should keep the perspective that policies to change the flow of other commodities may better achieve national and international goals.

Background for framing policies

THE TARIFF AND HOW IT AFFECTS TRADE

The term "tariff" can be applied to taxes on imports or exports. An ad valorem tariff taxes a fixed percentage of the value of the commodity; a specific tariff taxes a fixed sum of money per physical unit of the commodity. About one-half of the import duties applied by the United States are the ad valorem type, and one-half are the specific type. Export taxes are illegal in the United States.

Whether the buyer or the seller pays the tariff depends on the elasticities of supply and demand for the commodity. The more elastic the import demand schedule relative to the export supply schedule, the more the tariff will be borne by the exporting country. In general, the price to the exporter will decline and the price to the importer will increase if a tariff is applied to either imports or exports.

If imports are taxed, production expands in the industries producing substitutes. With full employment, this expansion can be accomplished only by drawing resources away from industries that presumably rank higher in the order of comparative advantage (otherwise, the resources would have been employed there in the first place, even before the tariff). The tariff forces a redistribution of income from other industries to substitute industries, and from the general public to the government. Because the import tariff raises the price to the consumer and protects the domestic producer, its effects are comparable to those of a combined tax and subsidy (Kreinin 1971).

A tax on exports decreases foreign demand for the previously exported item, decreases its domestic price, and decreases domestic production of the commodity and its substitutes, possibly to the benefit of unrelated commodities. It also forces a redistribution of income from taxed to nontaxed industries, possibly to consumers, and to the government. The net effect on income distribution to consumers depends on how much prices of other commodities are altered.

If an export tax is levied to relieve a domestic shortage of the commodity, domestic production may not decline. Export taxes, which are illegal in the United States, may be imposed by other governments to earn foreign exchange.

A tariff on imports may eliminate competition for a domestic industry and thereby increase monopoly control.

NONTARIFF BARRIERS TO TRADE

The March 1973 International Economic Report of the President (Council on International Economic Policy 1973) points out that 27 main categories of nontariff barriers (NTB) are reflected in 800 notifications made by countries participating in an inventory undertaken by the General Agreement on Tariffs and

Trade.[1/] Examples include preferential government procurement practices, export and domestic subsidies, variable levies, quantitative restrictions, discriminatory taxes, customs valuation practices, and product standards that protect domestic suppliers.

Many nontariff barriers elude inventory. They arise mainly from differences in political-economic practices. For example, in some countries, local businesses agree among themselves not to import certain types of competing merchandise, sometimes with informal support from the government. In addition, government economic and social programs have included features that either obstruct imports directly or encourage exports by artificially lowering costs.

The precise effect of NTB is usually difficult to identify or measure, and some probably do not have a major impact on trade. There is general agreement, however, that many nontariff measures have been framed or administered in a manner which gives a significant competitive advantage to domestic producers and, in certain cases, even constitutes a virtual prohibition against import. Although most of the nontariff distortions operate to limit import competition, others are also widely used to encourage exports. Various types of subsidies and other incentives to export fall in this category.

Two of the more common NTB are the import quota and the export subsidy. Import quotas generally have as an objective protection of a domestic industry from competition. Some of the effects are: Consumption of the commodity declines as consumers switch to substitutes, production of subst'itutes expands, and government revenue increases if import licenses are auctioned (Kreinin 1971). The effects of the quota on total employment, income, balance of payments, and other criteria depend on what happens to the economic system in total.

The issue of export subsidies comes up often in trade in agricultural commodities. The effect is to channel resources from nonsubsidized industries into production of the subsidized commodity. Income is redistributed from the general public and other industries to the subsidized industry. Again, the net effect on domestic and international goals depends on the total impact on the economic system.

Within the U.S. forest products field, one of the major NTB's is the prohibition of log exports from Federal lands west of the 100th meridian. One effect of this policy is a shifting of foreign demand to private and State of Washington Department of Natural Resources lands. Income is redistributed from Federal to other lands, resources are maintained in firms dependent on Federal timber and possibly disrupted in domestic firms dependent on other lands for timber purchases. The net effect on domestic and international goals depends on the total economic system and not just on the individuals and firms directly affected by the policy.

The actions of cartels affect trade and are in effect NTB. Cartels composed of individual firms in an industry, possibly in different countries, are not new. Many industries composed of a limited number of companies have been pointed to as

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[1/] See Kreinin (1971) for a discussion of the functions of the General Agreement on Tariffs and Trade.

having the objectives of cartels, which may include price fixing, allocation of world markets among member firms to avoid competition, and control of technological research and development (Kreinin 1971). U.S. antitrust legislation has been used to bring charges against specific firms or groups of companies in domestic industries. Examples include members of the following industries: southern pine plywood, gypsum board, plumbing fixtures, computers, and telephone equipment.

International cartels include the International Air Transport Association and Organization of Petroleum Exporting Countries (OPEC).

The U.S. Domestic International Sales Corporation (DISC) program in effect subsidizes U.S. exports by postponing, under certain conditions, taxes on up to one-half of the income from exports.

All of these NTB's influence trading patterns through manipulation of factors which affect a country's comparative advantage. Each NTB has an effect on allocation of resources and distribution of income in a country's economy.

Trade unions or other multicountry trade organizations contain elements of cartels. Typically, members of the organization give other member nations preferential treatment in trade compared with nonmembers. The European Common Market is an example of this arrangement. This arrangement, in effect, gives member countries a comparative advantage in member countries' markets.

THE EFFECT OF SUPPLY AND DEMAND ELASTICITIES ON THE SUCCESS OF DIFFERENT TRADE POLICIES

In the U.S. economic system, trade patterns are generally changed through policies which change or maintain commodity prices. Exceptions to this philosophy are restrictions on exports of sensitive materials or restrictions on trade with specific countries. Relative domestic and international commodity prices guide producer and consumer decisions.

The effectiveness of different trade policies will depend in part on how producers and consumers respond to changes in relative prices. The elasticities of domestic and international supply and demand measure in part how producers and consumers respond to changes in price. Domestic or international goals related to price stability or aggregate commodity values are especially sensitive to the supply and demand elasticities for a commodity, its substitutes, and its complements.

The effect of a trade policy on total U.S. balance of payments depends on these elasticities. For example, a decrease in import volume would increase its total value if demand for the commodity were inelastic but would decrease value if demand were elastic. The decrease in value may be offset if substitute commodities are imported.

In the case of exports, an increase in volume would decrease total value if foreign demand were inelastic but would increase value if foreign demand were elastic. The effectiveness of U.S. export promotion policies will also depend on the elasticity of supply of similar products in competing supply regions.

These elasticities may change over time and over the range of prices and quantities in supply and demand schedules.

THE EFFECT OF FLOATING EXCHANGE RATES ON DIFFERENT TRADE POLICIES

Floating exchange rates can offset the intended effects of ad valorem and specific tariffs. As a country's currency is devalued relative to other countries', the price of its exports declines compared with that of other countries. Lower prices increase the competitive position of these products. If prices are lowered enough, the products become competitive in a domestic market despite tariffs intended to limit imports.

Inflation also tends to erode the intended effect of specific and ad valorem tariffs by reducing the value of the tariff relative to the total value of the product.

Quotas and other NTB's which are not related to price are relatively unaffected by floating exchange rates or other measures of relative advantage.

ADMINISTRATION OF BARRIERS TO TRADE

Tariffs are relatively easy to administer. The specific tariff of dollars per unit of product is less complicated than the ad valorem tariff which requires a valuation of the product. Subsidies for exports of a commodity also consumed domestically are more difficult to administer. Typically, domestic consumption is subsidized to the same extent as exports. Import quotas involve the problem of allocating the quotas among importers and over time. Other NTB's vary in need for administration.

National policies on imports and exports require approval of the U.S. Congress unless Congress has delegated the authority. Flexibility can therefore vary according to terms specified in each trade policy. Terms may be in response to short-term conditions, such as imposing a temporary prior import approval system for grains or other commodities and monitoring U.S. exports of these commodities, or to long-term policies designed to develop or maintain an industry for national security reasons.

From the standpoint of satisfying cyclical patterns of consumer demand, the nonprohibitory tariff has an advantage in that imports can respond to surges in demand despite the tariff. In the case of a quota, the response to surges in demand is the price of the commodity. A cyclical pattern of demand can be expected to result in spot shortages if response from imports is prohibited.

If, for some reason, the national policy is to balance net imports of a specific commodity, a mix of flexible import and export constraints and incentives would be necessary to pursue this goal over time. International and domestic markets change in response to changing supply and demand conditions. A policy to promote long-term development of an

industry or other objectives should reconcile long-term with short-term needs of the country.

COMPARATIVE ADVANTAGE AS THE BASIS FOR TRADE

In a free market situation, nations trade because the exchange is mutually beneficial. Countries export goods or services for which they have a *comparative* advantage with other countries. Comparative advantage is defined as the relative costs of producing a unit of each good.or service in each country. For example, assume that in the United States a thousand square feet of hardwood plywood costs $150 to produce and wheat $3 per bushel; assume corresponding costs for another country are $75 for plywood and $10 for wheat. In the United States, the ratio of the cost of plywood to wheat is 15 and in the other country 7.5. In this simplified example, the United States would produce only wheat and import all its plywood needs. The other country would produce only plywood and no wheat. For more than two countries and two commodities, trading patterns become correspondingly complex, but the principle of comparative advantage determines what is traded between any two countries. If the two countries have different currencies, an exchange rate between the 'two currencies will develop and permit the flow of trade between the two countries. The exact exchange rate depends on the supply and demand for the two goods in the two countries. Floating exchange rates would result in a rate which balances export and import values between the two countries.

Various multinational trading patterns develop. For example, a country with an inexpensive labor supply may import raw materials, process them, and sell finished products to a third country.

The ultimate trade flows among countries are limited by increasing costs of production and price-responsive demand in each country.

Trade also occurs or is curtailed for reasons other than those outlined under a free market situation. For reasons of national interest, a country may sell at reduced rates or give to other countries commodities or services which the countries would otherwise not be able to import. Or a country may limit or refuse to export or import specific commodities or services from other countries. Import or export patterns which are "forced" as against what would have occurred under the principle of comparative advantage may achieve the goals of national interest at a cost of trading opportunities forgone. In unique circumstances, a country may have such an overwhelming comparative advantage in a specific commodity and limited import needs that achievement of the national interest is compatible with domestic goals.

Trade policies to increase or decrease imports or exports operate to change the comparative advantage which would have existed without the policies. Presumably, these policies would be implemented to offset the impacts of trade where impact is measured in terms of conflicts with domestic policies or other reasons of national interest. A policy to decrease imports of forest products may decrease the total value of imports but would increase the cost of forest products to the consumer. Subsidy programs to make domestically produced goods cheaper to the consumer would offset to some extent.the cost of forest products to users, but the total cost would be increased. To be balanced against this increased cost is the contribution of the policy toward domestic or other goals. A policy to

increase exports of forest products may have the effect of increasing the total value of U.S. exports, but at the price of subsidies or other costs related to export promotion programs and possible dislocation of domestic industries dependent on the commodity being exported.

Policies to reduce imports or increase exports have the intention of improving the advantage of U.S. producers relative to other producers of similar products in competing regions. In the case of imports, if U.S. producers do not have the capability to respond, the effect of the policy is to raise prices of the commodity and increase the use of substitutes where the United States may or may not have a comparative advantage. In the case of exports, policies to increase exports may not be effective if U.S. producers do not have the capability to respond or if other countries counter the U.S. move by implementing their own export promotion policies. Potentials for decreased forest products imports and increased exports are discussed later.

In addition to the potential effect of forest products trade policies on other commodities and the issues raised by these impacts, the value of forest products exports or imports affects exchange rates between the U.S. dollar and other nations' currencies. The exchange rate determines the final terms of payments to be made for all imported or exported items, Fluctuations in this rate due to changes in the value of imported and exported goods and services have an impact on the stability of domestic operations and affect the feasibility of implementation of all international trade policies.

Exchange rates are based on the relative supply and demand for each country's currency. Demand for a currency reflects the current comparative advantage of each country and a speculative element based on expectations of the future strength of each currency relative to that of other countries. For example, if future devaluation of a currency is expected, this decreases the current demand for that currency. Domestic policies enter into this speculation through evaluation of the future stability of a country's comparative advantage. Domestic problems such as inflation tend to be viewed as indicators of future devaluation of a country's currency. Forest products trade policies which are not consistent with programs to deal with domestic problems such as inflation may work against the overall goals of the trade policy. For example, export promotion programs for a commodity at a time when the price of commodity is increasing rapidly in the domestic market may be counterproductive for exchange rate goals.

THE ROLE OF COMMODITIES IN THE BALANCE OF PAYMENTS ISSUE

The balance of payments always balances. Balance of payments transactions are tabulated with a double-entry system: each transaction has debit and credit aspects of equal size. Table 5 shows the different categories under which debits and credits are tabulated. An excess of debits or credits in one or more of these categories must be matched by an equal excess of credits (or debits) in the remaining ones.

The "balance of payments" generally refers to the surplus or deficit position of the total for the basic balance. All the items in the current account and long-term capital category are viewed as indicators of the overall strength of an economy. Before implementation of floating exchange rates in 1973, chronic deficits in this category were viewed as a problem in maintenance of fixed exchange rates. Chronic deficits precipitated crises which were generally followed by devaluation of the

TABLE 5.—U.S. balance of payments summary by area[1]

Billion US $

	Global		European Community		Japan		Canada		Other Developed[2]		Developing Countries		Communist Countries		International Organization and Unallocated[3]	
	1972	1973	1972	1973	1972	1973	1972	1973	1972	1973	1972	1973	1972	1973	1972	1973
Exports	48.8	**69.9**	11.8	16.7	**5.0**	8.4	12.6	15.4	4.6	6.7	13.9	**20.0**	0.9	2.7	.....	.....
Imports	−55.7	−69.1	−12.6	−15.4	−9.1	−9.7	−14.4	−17.2	−4.4	−5.8	−14.8	−20.4	−0.4	−0.6	.....	.....
Net Trade	−6.9	0.8	−0.8	1.3	−4.1	−1.3	−1.8	−1.8	0.2	0.9	−0.9	−0.4	0.5	2.1	.....	.....
Military Sales	1.2	2.2	0.3	0.4	•	■	•	0.1	0.2	0.4	0.6	1.3	.....	.....	.....	.....
Military Expenditures	−4.7	**−4.6**	−1.9	−2.2	−0.8	−0.8	−0.2	−0.2	−0.3	−0.3	−1.5	−1.1	.....	.....	.....	.....
Net Military	−3.5	−2.4	−1.6	−1.8	−0.7	−0.8	**−0.2**	−0.1	−0.1	0.1	−0.9	0.2	.....	.....	.....	.....
Investment Income Receipts	14.0	18.8	2.8	4.0	0.6	0.8	2.4	2.9	1.3	1.8	6.3	8.8	■	■	**0.5**	0.5
Investment Income Payments	−6.1	−8.8	**−2.8**	−4.2	**−0.9**	−1.1	−0.7	−0.9	−1.0	1.8	−0.4	−0.6	■	■	−0.2	−0.2
Net Investment Income	7.9	10.0	•	−0.2	−0.3	−0.3	1.7	2.0	0.3	•	5.9	8.2	■	■	0.3	0.3
Travel Income	3.4	4.2	**0.5**	0.7	0.2	0.4	**1.0**	1.1	0.3	0.4	1.4	1.6	■	■	*	■
Travel Expenditures	−6.4	−7.0	**−1.8**	−2.1	−0.2	−0.2	−1.0	−1.1	−1.1	−1.1	−2.2	−2.3	•	−0.1	•	−0.1
Net Travel	−3.0	−2.8	−1.3	−1.4	•	0.2	•	•	−0.8	−0.7	**0.8**	−0.7	•	−0.1	•	−0.1
Other Services Net	0.5	**0.9**	0.1	0.1	0.3	0.5	•	−0.2	0.1	0.2	0.4	0.6	•	•	−0.2	−0.3
BALANCE ON GOODS AND SERVICES	−4.6	6.5	−3.6	−2.0	**−4.8**	−1.7	−0.3	−0.1	−0.3	0.5	3.9	7.9	0.5	2.0	0.1	−0.1
Remittances	−1.6	−1.6	•	−0.1	■	•	−0.1	−0.1	−0.3	−0.3	−1.1	−1.1	■	■	■	■
US Government Grants (excluding military)	−2.2	−2.2	•	■	■	■	■	■	■	•	**1.9**	−2.0	•	•	−0.3	**−0.2**
BALANCE ON CURRENT ACCOUNT	−8.4	2.7	−3.7	−2.1	−4.8	−1.7	−0.4	−0.2	−0.6	0.2	**0.9**	4.8	0.5	2.0	−0.2	−0.3
US Government Capital Flows	−1.3	−1.6	•	■	•	0.6	•	•	−0.1	−0.1	−1.1	−1.6	−0.1	−0.4	−0.1	−0.1
US Direct Investment Abroad	−3.4	−4.0	−1.0	−2.1	**−0.2**	**−0.1**	−0.4	−0.3	**−0.5**	−0.5	−0.9	−0.7	■	•	−0.4	−0.3
Foreign Direct Investment in US	0.2	1.9	−0.1	0.8	•	0.2	0.1	0.1	0.1	0.2	•	0.6	•	■	■	■
Net Portfolio Investments	3.7	3.8	3.0	1.6	0.2	0.7	−0.7	−0.2	1.3	1.3	−0.2	•	■	•	0.2	**0.4**
Other Long Term Private Capital[4]	−0.7	−0.8	0.1	•	0.3	0.3	−0.2	−0.1	■	•	−1.1	−0.7	•	−0.3	•	•
Net Long Term Private Capital Flows	−0.2	**0.9**	2.0	0.3	0.3	1.1	−1.1	−0.5	1.0	1.0	−2.2	−0.8	•	−0.3	−0.1	0.1
BASIC BALANCE	−9.8	2.0	−1.7	−1.8	−4.3	•	−1.6	−0.6	0.3	1.1	−2.5	**2.4**	**0.4**	1.3	−0.4	−0.4
Allocations of SDRs	0.7															
Private Short Term Flows	**−1.6**	**−6.0**														
Errors and Omissions	−3.1															
NET LIQUIDITY BALANCE	−13.9	−4.0														
Liquid Private Capital	3.5	−1.0														
OFFICIAL SETTLEMENTS BALANCE	−10.3	−5.0														

***Less than $50,000,000.**
[1] May not add due to rounding. 1973 figures estimated (based on three-quarters of a year data).
[2] Australia, New Zealand, South Africa and other Western Europe.
[3] Includes transactions with shipping companies operating under the flags of Honduras, Liberia and Panama
[4] Includes changes in claims on or liabilities to private foreigners reported by U.S. banks and changes in loans or other long-term claims or liabilities of U.S. nonbanking concerns to foreigners other than foreign affiliates.
Source: Table 19, Council on International Economic Policy (1974).

currency of the country with the deficit problem. Floating exchange rates automatically devalue or revalue currency according to the deficit or surplus of a country's balance of payments.

Devaluation of a currency cheapens that country's exports and raises the cost for imports; this should lead to export expansion and import curtailment needed for a balance in the basic balance category. For any time period, if the basic balance shows a surplus or deficit, the balancing items in the double entry accounting system are short-term claims and liabilities and errors and unrecorded transactions. Allocations of Special Drawing Rights are not a factor in the balance of payments since the move to floating exchange rates.

The major changes in our balance of payments have been attributable to swings in merchandise trade. As shown in figure 4, the merchandise trade balance went from a $6.8 billion surplus in 1964 to a deficit of about that much in 1972. Merchandise trade went from a deficit in 1972 to a surplus in 1973 due primarily to devaluation of the dollar effected through floating exchange rates initiated during 1973. Figure 5 shows the magnitude of major currency movements during 1973. Changes in relative currency values have an effect on trade in specific commodities only after a lag of several months to several years. The lag time depends on conditions such as availability of capacity to produce the commodity.

Floating exchange rates cause the basic balance in the balance of payments accounts to be self-correcting; a move to a deficit position will be countered by a devaluation; a move to a surplus position will be countered by an upward valuation of the country's currency. However, fluctuations in

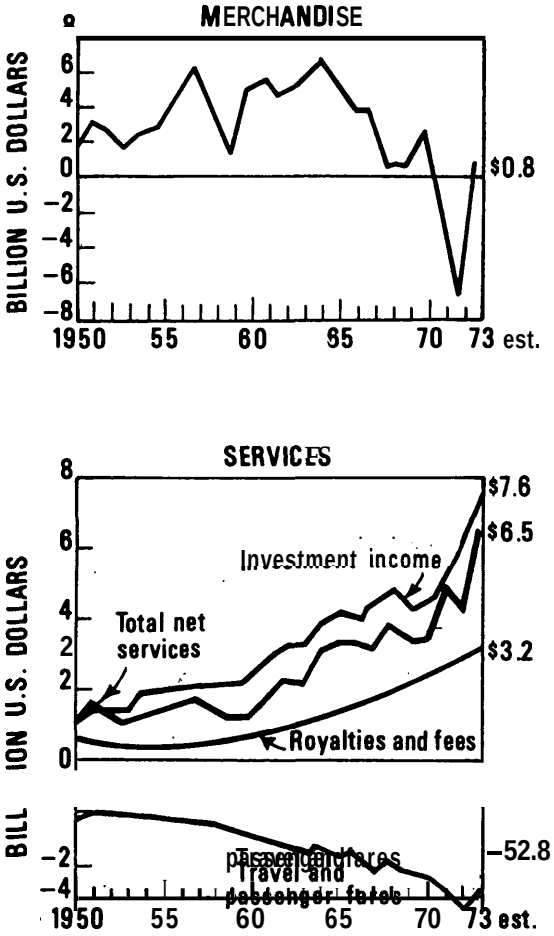

Figure 4.--U.S. basic balance trends. Source: Figure 21, Council on International Economic Policy (1974).

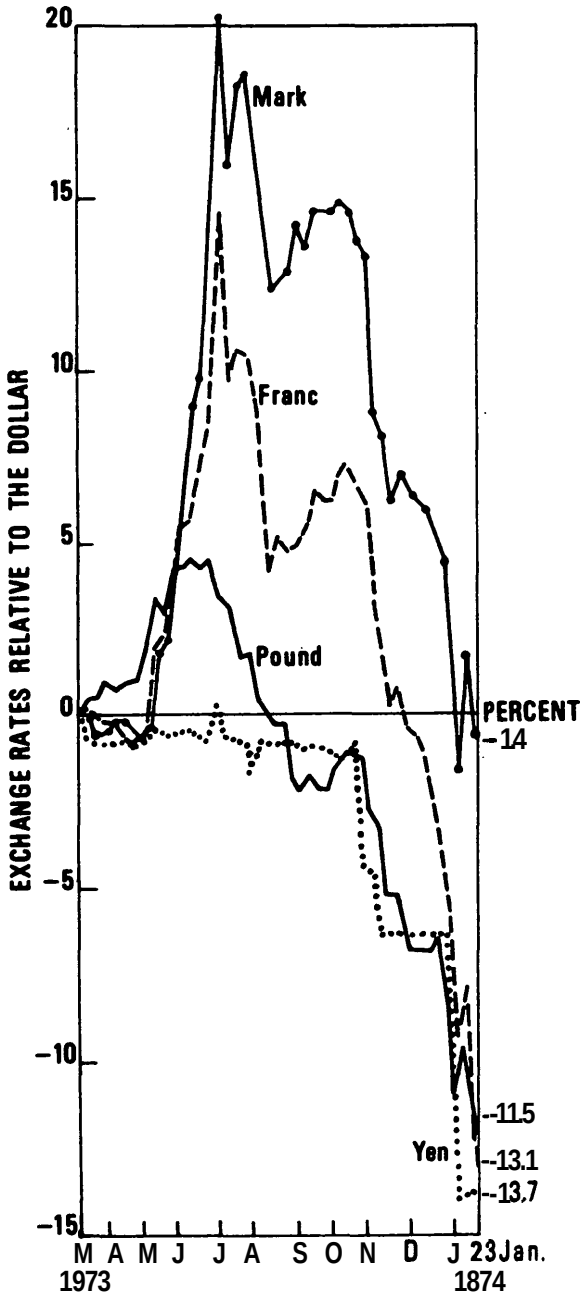

Figure 5.--Currency trends since March 19, 1974. Source: Figure 18, Council on International Economic Policy (1974).

currency cause fluctuations in the supply of imported or exported raw materials and finished products. These fluctuations may not be compatible with employment, price and other domestic policies, or other goals of foreign trade. International trade policy questions are now developing and will probably continue to be based on the impact of changes in exchange rates on domestic policies rather than solely on policies to correct balance of payments problems.

There are differing philosophies on the need for policies to affect the U.S. balance of payments under a floating exchange rate system (Friedman and Roosa 1967).

One argument is that we should pursue domestic policies to the fullest extent possible and let balance of payments and other international trade aspects of the economy take care of themselves through the floating exchange rate system. Any adverse effects of our trading pattern on the economies of other countries or the U.S. economy will be taken care of by the supply and demand for each country's currency. Proponents of this argument point to the role of trade in the U.S. economy as being of minor consequence compared with total production. For example, in 1972, exports amounted to less than 15 percent of total U.S. production of goods. Pursuit of international policies independent of their effects on domestic programs, according to this argument, is similar to the "tail wagging the dog."

Countering this argument is the rationale that the United States is becoming increasingly dependent on world trade to maintain the U.S. standard of living. Instability in exchange rates translates into instability in trade which is disruptive to the U.S. economy. Domestic policies needed to insure stable growth in trade are essential for increased living standards, not only in the

United States but in the rest of the world.

Both arguments stress the achievement of domestic goals. Neither argument necessarily implies that "more exports are better." Stability in exchange rates, and therefore trade, may require domestic policies which are incompatible with domestic goals. Whether either argument should be used as the basis for trade policies depends on the policymaker's weighing of the trade offs among international and domestic goals.

BALANCE IN SPECIFIC COMMODITIES

The principle of comparative advantage would only by coincidence lead to equality of imports and exports for a specific commodity. On the contrary, the basis for trade should lead to specialization for at least some commodities. Policies to decrease or increase imports or exports develop because of the current or potential impact of trade on domestic industries or goals and not because of an objective of balancing trade in the commodity.

The need for import or export policies to stabilize trade or exchange rates should be evaluated within the framework of the country's total trade position and not on a commodity-by-commodity basis: Surpluses in some commodities are necessary to offset deficits in other commodities. The feasibility of initiating policies to increase exports of one commodity to decrease imports of another depends on the trade offs involved between domestic and international goals.

The basis for trade may also lead to U.S. imbalances in trade with individual countries but an overall advantage. The March 1973 International Economic Report of the President (Council on International Economic Policy 1973) states that: "Our primary objective is to achieve an overall payments balance, not a balance in any particular account or with any individual country or group of'countries."

Exchange rate fluctuations of the U.S. dollar are based on the country's total trade position and not the U.S. trade position with each individual country or with each individual commodity.

THE BALANCE OF PAYMENTS ISSUE WITHIN THE PERSPECTIVE OF THE GOALS OF TRADE

Specific trade policies for the United States depend on the issues which have developed for specific commodities and the overall foreign policy between the United States and each trading partner. The apparent overall philosophy which guides U.S. trade policy negotiations is represented by this statement in the March 1973 International Economic Report of the President (Council on International Economic Policy 1973):

> **Our basic objectives in multilateral trade negotiations are:**
> 1. **to build on and expand international economic efficiency by removing obstacles *to* the freer play of market forces in determining the level and pattern of world trade, while at the same time developing agreed rules under which safeguards could be invoked when abrupt increases in competition threaten to disrupt national markets, and**
> 2. **to obtain changes in the system under which nations conduct their trade relations to ensure that the rules are fair and apply equitably to all parties.**

These objectives aim at fostering economic growth and employment in the United States, liberalizing trade barriers on a basis that secures substantially equivalent competitive opportunities for U.S. commerce in foreign markets, establishing equity in international trading relationships (including reform of trade rules),

providing adequate procedures to safeguard U.S. industry and labor from injurious or unfair import competition, and assisting industries, firms and workers to adjust to trade changes. This policy implies that the United States reserves the right to initiate other policies as a safeguard to counter the effect of exchange rate variations if they undermine negotiated concessions. An example of this philosophy is the temporary restraint on grain exports.

The Trade Act of 1974 (H.R. 10710) sets the terms of U.S. trade negotiations for years to come. These terms are generally consistent with the objectives stated in the International Economic Report of the President (Council on International Economic Policy 1973).

The balance of payments issue within the perspective of these goals is not the only basis for development of trade policies. Rather than a balance between imports and exports, these goals imply policies to expand trade, both imports and exports, consistent with domestic stability. The apparent rationale for the goal of expansion of trade is that trade is mutually beneficial to all participants and ultimately raises the standard of living in participating countries.

The Trade Act of 1974 gives the President authority to negotiate balance of payments problems, but the need for implementation of policies under this authority is to be based on the overall trade balance and not on the balance of any one commodity.

CARTELS

The apparent success of OPEC in the area of crude oil has increased interest in the possibility of cartels which might regulate forest products imports into the United States. Interest is centered not on industrial cartels but on multinational cartels among governments.

Bergsten (1974) points out conditions for a successful cartel:

1. **Demand for the product must be relatively insensitive to price changes,**
2. **Supply of the product must be relatively insensitive to price changes.**
3. **Potential colluding countries must be able to get along with each other.**

These conditions are necessary for formation of a cartel but appear to be incomplete for successful sustained operation of a cartel. The following conditions would facilitate successful cartel operation:

1. Demand for the commodity is growing and not subject to sharp cyclical swings in price and volume. If this condition does not exist, the cartel faces the problems of reconciling production with demand so as to maintain price. In a cyclical downturn situation, the production cutbacks necessary to maintain price may be intolerable to the domestic economies of some cartel members.

2. Several distinct markets for the cartel's products have been developed. This condition enables the cartel to bargain independently with each market. If this condition is not present, the cartel must negotiate terms with just one country and the lack of competing consumers reduces the leverage of the cartel in these negotiations.

3. The commodity is a necessity to maintain the life style or standard of living of consuming countries. Petroleum and other raw materials are basic to an industrial society. If these raw materials are suddenly not available, the society must change or accommodate the cartel. If this condition does not exist, consuming countries have the option of not negotiating with the cartel.

4. Cartel members must not be wholly dependent on consuming countries for maintenance and development of members' economies. If consuming countries can retaliate against the cartel by withholding other commodities or refusing to purchase other commodities essential to the cartel members, the position of the cartel becomes tenuous.

Multinational cartels are not an issue with U.S. softwood forest products imports. Issues related to volume or price of these imports depend on bilateral relations between Canada and the United States. Although the United States is dependent on Canadian softwood imports, Canadian producers are dependent on the U.S. market. In 1972, the United States purchased 87 percent of Canada's exports of softwood lumber, 79 percent of Canadian newsprint exports, and 57 percent of Canadian woodpulp exports (Food and Agriculture Organization of the United Nations 1974). Canadian producers can be expected to try to get the highest prices possible, but the interdependence of U.S. and Canadian interests works against exploitive pricing policies. In 1.973, Canada accounted for 21 percent of all U.S. exports and 26 percent of U.S. imports. The United States purchases about two-thirds of Canada's total exports (U.S. Bureau of the Census 1974a, 1974b).

The case for hardwood veneer and plywood is not so clear. In 1972, the United States purchased 89 percent of the hardwood plywood exported from South Korea, 75 percent of exports from Taiwan, and 83 percent of exports from the Philippines (Food and Agriculture Organization of the United Nations 1974). The long-standing relationship between the United States and these three countries and the dominance of the U.S. market are arguments against the formation of cartels. The United States takes 47 percent of South Korea's total exports and 42 percent of exports from the Philippines. U.S. imports from Taiwan of $1.8 billion in 1973 amounted to over one-half of total exports from the country. South Korea and Taiwan do not have significant domestic sources of hardwood logs (Hutchison et al. 1974). Uncertainty about raw material supplies strengthens the argument against cartel formation.

Indonesia, Malaysia, and the Philippines are the main sources of hardwood logs in the southeast Asia area as shown in table 6.

	Indonesia	Malaysia	Philippines	Others	Total imports
Taiwan	1,240	906	739	0	2,885
Japan	8,506	6,828	5,146	857	21,337
South Korea	1,855	1,611	368	11	3,845
Singapore	0	1,378	10	11	1,399
Hong Kong	65	259	0	16	340

Source: Food and Agriculture Organization of the United Nations (1974).

Future developments are more likely to be in the form of increased log processing in the country where the logs originate than in cartels in hardwood plywood. This would change the national origin of hardwood plywood exports but does not necessarily imply a cartel. Economies of southeast Asian countries are increasingly becoming intertwined with the Japanese economy. Hardwood log cartels would face the problem of dependence on the Japanese economy.

Hardwood plywood is produced in the Asian countries because of cost. Significant increases in price would increase substitution of plastic overlays and hardwoods from African and South American sources and increase the use of low quality hardwoods in the United States.

DIFFERENT PHILOSOPHIES ON RETENTION OF A RESERVE OF TIMBER INVENTORY

There are differing philosophies on the need for retention of a reserve of timber for reasons of national interest. This is to be expected because each individual has a differing view of how the national interest should be defined.

The argument for a reserve of raw materials in case of war has lost proponents with the development of superpower foreign policy. The rationale is that full-scale war between the United States and potential adversaries would be of short duration. Under these circumstances, several years--or in the case of timber, several decades--of raw material in reserve are not necessary.

In the case of nonrenewable resources, a philosophy has developed for curtailing domestic production and importing as much as we can. The rationale is that if we had followed this policy in oil, Middle East rather than U.S. oil reserves would now be depleted. The case for renewable resources is not so clear. Timber is a renewable resource, given enough time. Japan is currently following this policy in timber production. Domestic timber production has been curtailed and reliance placed on imports to build up domestic inventories.

If a country is in a surplus position in timber inventory, this philosophy can be followed only at the expense of current consumption and lower prices. An attitude of future long-term world shortages of the commodity is an integral part of this philosophy. Implementation of this policy depends on the ability of the country to withhold the commodity from the export market. The country must have export options and be willing to bear the cost of trade opportunities forgone.

Another view of the need for a reserve of timber is that timber represents capital. Timber capital should be managed as efficiently as other capital. Maintenance of an inventory of capital which might be used for other purposes involves unnecessary cost. Capital released in the form of timber helps to build a stronger economic base for the country. A stronger economic base helps to develop options to dependency on any one resource. Efficient management of timber capital does not imply liquidation of all inventories. If future shortages develop, the price of timber products will rise which will increase the cut from the remaining inventory and stimulate investment in forest management which will increase supplies. Rising wood prices will stimulate the move to a fiber-based forest industry and lessen the need for larger trees.

Either the philosophy of retaining a reserve of timber or the philosophy of efficient management can be followed depending on the Nation's goals and view of the future. A reserve of timber implies the willingness to forgo current consumption in favor of protection of future options.

Efficient management of capital implies the willingness to consume more now and accept the potential risks of future events.

BALANCE TRADE ON VOLUME OR VALUE?

Previous discussion has pointed out that trade in a specific commodity would only coincidentally result in a balance between imports and exports. Trade based on the principle of comparative advantage should result in surpluses in some commodities and deficits in others. However, if the Nation were to initiate policies to balance trade in forest products, the question of balance on volume or value must be considered.

Traditional forest management of public lands has concentrated on management of volume rather than of price or value. Management of volume is attractive because of wide fluctuations in price. These fluctuations would cause cyclic variations in management needs. .Management of the balance of payments in terms of volume is not feasible. The dollar is the common denominator which permits the aggregation of the values of different commodities so that the U.S. trade position relative to other countries can be assessed. Exchange rates are based on the monetary value of imports compared with exports. From a standpoint of trade, import or export policies are based on value, not volume.

On the other hand, the feasibility of import or export policies must be related to volume. Volume determines the extent of resources necessary to change production levels of the commodity and the availability of the commodity to meet producer and consumer needs. In the case of forest products, policies to increase exports must be consistent with the ability of timber growers and processors to increase production. Policies to decrease imports must be related to the impact of these policies on domestic availability of the commodity.

In 1973, forest products imports amounted to $4.4 billion and exports $3 billion, a deficit of $1.4 billion. 'If the Nation had a policy to balance imports and exports, at what level should imports balance exports? Should exports be increased by $1.4 billion, imports be decreased by $1.4 billion, should we not trade forest products at all, or what? There is no obvious answer. Rationales can be developed for increasing or decreasing either imports or exports of a specific commodity. These rationales would include consideration of both domestic and international goals. There is no reasonable basis, either in theory or in existing trade policies, for achieving a balance of trade in a specific commodity.

The goal of increasing exports and decreasing imports where possible is feasible only if developed within the context of domestic and international needs. These needs may conflict. Fulfillment of this goal would only coincidentally result in a balance between imports and exports.

TRADE OFFS BETWEEN DOMESTIC AND INTERNATIONAL GOALS: THE EXAMPLE OF SOFTWOOD LOG EXPORTS

Trade policies either implicitly or explicitly weigh trade offs among domestic interests and international goals. Issues develop about the weights to be given various interests in considering different policies. The softwood log export issue is described here as an example of the trade offs which can be involved in framing policy options. No attempt is made to weigh pro and con arguments. In the U.S. system, these weights are determined through the political process.

The continuing debate over softwood log exports is centered on exports from Washington and Oregon to Japan. Exports from these two States amount to over 90 percent of total west coast shipments. Over the past

5 years, export volume from the west coast has generally ranged between 2 billion and 2.5 billion board feet. Japan generally takes over 90 percent of annual west coast softwood log exports. The United States also exports softwood logs to Canada, South Korea, and other countries; but this trade is peripheral to the main issue.

The issue has developed since 1962. Over the period 1962-70, export volume from Washington and Oregon increased from about 300 million to 2.2 billion board feet (Ruderman 1975). Increased trade with the Soviet Union, political factors, and leveling of demand in Japan were major factors in the leveling off of volume in the 1970's.

The export market was initially looked upon favorably as an outlet for timber from salvage operations in the wake of the 1962 Columbus Day storm. The increasing volume of the mid-1960's caused questions about the impact of log exports on the timber-based economy of the Pacific Northwest. The debate on these questions led in 1968 to the Morse Amendment which limited log exports from federal lands to 350 million board feet. After a relative lull in the log export debate after passage of the Morse Amendment, the issue again came to the forefront in 1972 and 1973 when unprecedented U.S. and Japanese housing demands forced log prices and U.S. lumber and plywood prices to record highs.

Prior to expiration of the Morse Amendment in 1973, log exports from Federal lands west of the 100th meridian were banned by riders to appropriation bills of the affected agencies. The ban, in effect for fiscal year 1974, was renewed for fiscal year 1975. Lands owned by the State of Washington account for about 25 percent of total log exports from the two States. Most of the remaining 75 percent comes from private lands (Bergvall and Ormrod 1974, Schuldt and Howard 1974). Log exports from State of Oregon lands were banned in the 1960's.

The issue continues to center on the impact of an export market on domestic raw material markets. Gains from the trade have accrued primarily to the owners of stumpage and individuals and firms involved in logging, transporting, and processing logs in the export market. Their representatives have argued in favor of log exports.

On the other side of the issue, firms and individuals which purchase stumpage in competition with exporters have argued against log exports. In addition, representatives of conservation- and preservation-minded groups have raised questions about the impact of log exports on timber harvesting. Representatives of the U.S. construction industry have opposed both log and softwood lumber exports because of their possible impact on final product prices.

A resource-short Japan relies on wood imports for about one-half its domestic needs. Softwood timber products are preferred for construction in Japan, and most softwood log imports are used for this purpose. The three areas of the world which have substantial inventories of softwood timber are the U.S. west coast, British Columbia, and the Soviet Union. British Columbia prohibits log exports unless surplus to needs of domestic industries. Japan imports lumber from British Columbia and logs from the other two areas. From the Japanese viewpoint, the increasing worldwide debate over controls of basic raw materials raises many questions about the ability of the country to provide for the needs of its people. Preferences for logs rather than processed products are based in part on maintaining a long-standing small-business timber processing industry in Japan and the

unique sizes required by the Japanese housing industry.

Timber processors in the Pacific Northwest are geared to the sizes of lumber and plywood consumed in U.S. markets. There has been little organized effort to develop the Japanese market. On the other hand, the Japanese have done little to foster development of processing capacity in the United states geared to Japan's needs.

Controls on exports of softwood logs and other raw materials from the United States to Japan have become intertwined with the foreign policy-based relations which determine bilateral trade in all commodities.

Proposed solutions to the conflicts among interests generally contain one of two elements: export more processed products instead of logs or increase timber sales from National Forest lands.

The Japanese are moving toward the use of the so-called "2X4" housing construction method which uses lumber with dimensions similar to the lumber consumed in the United States. Whether this construction method means more imports of softwood lumber is not clear. Maintenance of a politically sensitive domestic processing industry geared to the "2X4" materials is another possibility. If the Japanese would purchase these materials from existing U.S. sawmills, many of the arguments against forest products exports would subside. However, the issue of the impact of exports of construction materials on U.S. housing costs would remain.

National Forest timber output could be increased with the funding necessary to intensify management. Whether this option would provide enough timber for both the export and domestic markets and thereby alleviate conflicts among interests is uncertain. An increase in National Forest output may be necessary to sustain existing capacity in some areas of the Pacific Northwest. In other areas, increased output might be the basis for expansion of domestic capacity to process timber for the domestic market. In either case, questions about the impact of log exports would still remain.

The log export issue grew from a regional controversy centered in the Pacific Northwest to become in part the basis of multinational trade policies. Proposed solutions involve trade offs among Japanese and United States domestic interests and international goals.

Potential forest products trade policies within the apparent U.S. trade philosophy

Any potential forest products trade policy should be measured against the terms of the Trade Act of 1974 (H.R. 10710); policies not consistent with the act would probably find little support in Congress.

The overall negotiating objective under the act is to obtain more open and equitable market access for U.S. exports of goods and services and to harmonize, reduce, and eliminate barriers to international trade.

The act also makes it a principal U.S. negotiating objective to obtain competitive opportunities for U.S. exports to developed countries with respect to appropriate sectors on manufacturing and the agricultural sector. These should be equivalent to the competitive opportunities afforded similar products in U.S. markets. U.S. negotiators are directed to obtain, to the extent consistent with maximum overall economic benefits to the United States, equivalent competitive opportunities. An example would be bargaining U.S. import concessions within one sector of manufacturing for foreign concessions

resulting in equivalent market opportunities for U.S. exporters in that sector.

Private advisory committees will advise the negotiators on how goals in the negotiations can best be accomplished. If the special representative for trade negotiations fails to accept their recommendations, he is required to inform the advisory committees of this decision; and the President's annual report to the Congress on the trade agreements program must include an explanation by the special representative for rejecting committee advice. Private sector advisory committees, established by the act, will issue formal reports at the conclusion of agreements affecting their sectors, evaluating the equity and mutuality of the agreements within their sectors. The Congress, therefore, will be better able to judge whether this negotiation achieved mutual benefits for the commerce of the United States.

A further negotiating objective is to obtain international safeguard procedures designed to permit the use of temporary measures to ease the adjustment to change brought about by any change in policy.

The act establishes as a principal negotiating objective, the entering into of foreign trade agreements to assure the United States of fair and equitable access at reasonable prices of articles of commerce important to U.S. economic requirements, and for which the United States does not have, or cannot easily develop, the necessary productive capacity.

The act authorizes and encourages the President to enter into bilateral trade agreements where such agreements would better serve U.S. economic interests than agreements undertaken on a multilateral basis. In addition, the act provides that the President may enter into a trade agreement with Canada aimed at eliminating or moving to eliminate trade barriers between the two countries on a reciprocal basis.

Forest product trade policies which involve U.S. unilateral raising of trade barriers to forest products imports or exports and subsidies or other government intervention in the comparative advantage of U.S. exports would run counter to the philosophy implied by the Trade Act.

Potential forest products trade without a change in policy

The current and prospective U.S. timber resource situation is discussed in the "Timber Outlook" report (USDA Forest Service 1973).

Under the range of conditions considered in the report, the United States will continue to be a net importer of forest products in volume (table 7). Total exports would remain at 1.8 to 1.9 billion cubic feet from 1980 to 2000. Imports may rise from 2.4 billion cubic feet in 1970 to 4.6 billion in 2000. Potential increases in imports are mainly woodpulp, paper, and softwood lumber from Canada at higher U.S. prices than in 1970. Imports exceeded exports by 1 billion cubic feet in 1970. The maximum excess of imports over exports would be 2.8 billion cubic feet in 2000 with "rising relative prices"; net imports would then equal 15 percent of U.S. consumption of all forest products. The minimum excess of imports over exports would be 0.8 billion cubic feet in 1980.

This analysis indicates a continuing dollar deficit in U.S. forest products trade. At a minimum, the deficit would probably be $1 billion to $1.5 billion; and it might be several billion dollars. A deficit is neither good nor bad until weighed with options according to their effect on domestic and international goals.

The future potential for exports and imports of specific forest products has been discussed by Holland (1973) and the USDA Forest Service (1973).

TABLE 7.—*Summary of roundwood consumption, exports, imports, and production from U.S. forests, 1952, 1962, and 1970, with projections (medium level) under alternative price assumptions to 2000*

(Billion cubic feet, roundwood equivalent)

Item	1952	1962	1970	1970 relative prices			Rising relative prices[1]			Relative prices above 1970 averages[2]		
				1980	1990	2000	1980	1990	2000	1980	1990	2000
SOFTWOODS												
U.S. consumption	8.4	8.5	9.7	12.1	14.1	15.8	11.2	12.4	13.5	10.7	12.7	14.3
Exports	.2	.4	1.2	1.7	1.6	1.6	1.7	1.6	1.6	1.7	1.6	1.6
Imports	1.3	1.7	2.1	2.3	2.3	2.3	3.1	3.7	4.0	3.2	3.6	3.7
Production from U.S. forests[3]	7.3	7.2	8.8	11.5	13.4	15.1	9.8	10.3	11.1	9.2	10.7	12.2
HARDWOODS												
U.S. consumption	3.5	3.1	3.0	4.3	5.5	7.0	4.0	4.7	5.7	3.9	4.9	6.4
Exports	(4)	.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2
Imports	.1	.2	.3	.4	.4	.4	.5	.5	.6	.6	.6	.6
Production from U.S. forests[3]	3.5	3.0	2.9	4.1	5.3	6.8	3.7	4.4	5.3	3.5	4.5	6.0
ALL SPECIES												
U.S. consumption	11.9	11.6	12.7	16.4	19.6	22.8	15.2	17.1	19.2	14.6	17.6	20.7
Exports	.2	.5	1.4	1.9	1.8	1.8	1.9	1.8	1.8	1.9	1.8	1.8
Imports	1.4	1.9	2.4	2.7	2.7	2.7	3.6	4.2	4.6	3.8	4.2	4.3
Production from U.S. forests[3]	10.8	10.2	11.7	15.6	18.7	21.9	13.5	14.7	16.4	12.7	15.2	18.2

[1]Relative prices rising from 1970 trend level as follows: lumber—1.5 percent per year; plywood, miscellaneous products, and fuelwood—1.0 percent per year; paper and board—0.5 percent per year.

[2]Relative prices of lumber and plywood—30 percent, miscellaneous products and fuelwood—15 percent, and paper and board—10 percent above the 1970 averages.

Source: Table 152, USDA Forest Service (1973).

[3]The data for 1952 1962. and 1970 are estimates of actual harvests and are not directly comparable with the trend level estimates of supply shown in Chapter 11.

[4]Less than 50 million cubic feet.

Note: Data may not add to totals because of rounding.

Sources: 1952-70—Based on data published by the U.S. Departments of Commerce and Agriculture.

Projections: U.S. Department of Agriculture, Forest Service.

Policies to decrease imports or increase exports

Options for decreasing current and prospective imports of forest products are limited primarily to softwood lumber, newsprint, and woodpulp from Canada and to a lesser extent, hardwood veneer and plywood from Asia. Policies to decrease these imports include forcing a reduction of imports through restriction, improving the efficiency of domestic processing capacity relative to the efficiency of competing producers in other countries, and increasing domestic timber supplies to lower prices and reduce the incentive and need to import. The latter two policies have potential for increasing exports as well as reducing imports.

REDUCING IMPORTS THROUGH RESTRICTIONS

Imports from Canada in 1973 included $1,315.7 million of softwood lumber, $1,132.6 million of newsprint, and $626.3 million of woodpulp. The total came to $3,074.6 million out of aggregate U.S. forest products imports of $4.4 billion. Tariffs, duties, or quotas to significantly reduce the import value of any one of these commodities might bring retaliation. Total 1973 Canadian exports amounted to $25.2 billion. Exports of softwood lumber, newsprint, and woodpulp to the United States amounted to about 12 percent of the total (Statistics Canada 1974).

U.S. imports of newsprint amount to about one-half of Canadian production of all grades of paper and board and about 79 percent of Canadian newsprint exports. In 1972, the United States took 87 percent of Canada's exports of softwood lumber and 57 percent of Canadian pulp exports (Food and Agriculture Organization of the United Nations 1974). Lack of other markets for this kind of volume strengthens the argument for Canadian retaliation.

Canada would have leverage for retaliation. In 1973, Canada accounted for 21 percent of U.S. exports and 26 percent of U.S. imports (U.S. Bureau of the Census 1974a, 1974b). In addition, investments of U.S. firms in Canada amounted to $24 billion in 1971 (Council on International Economic Policy 1973). Retaliation could take the forms of withholding essential commodities--especially raw materials--from the U.S. market, duties, quotas, or elimination of imports from the United States, and confiscation or other treatment of U.S. investment in the country. Canadian energy policy is especially important to bordering U.S. States.

Hardwood veneer and plywood imports amounted to $464.7 million in 1973. The value of hardwood plywood imports amounted to $388.3 million. South Korea, Taiwan, Japan, and the Philippines were the most important sources in terms of value of shipments.

The United States is the major market for plywood produced in South Korea, Taiwan, and the Philippines. In 1972, exports from these countries, expressed in units of 1 000 cubic meters, were:

	Country of origin		
Country of destination	South Korea	Taiwan	Philippines
United States	1 062	864	277
Canada	31	177	33
Other	102	105	22
Total	1 195	1 146	332

Source: Food and Agriculture Organization of the United Nations (1974).

Further restriction of imports from these three countries would run counter to the U.S. trade philopsophy to less developed countries. As stated in the February 1974 International Economic Report of the President (Council on International Economic Policy 1974):

> **Our objectives in the areas of trade, investment, and monetary reform can be jeopardized if the poorer countries are not brought into successful participation in a more open world economic system, and thereby afforded the opportunity to progress toward their development aspirations.**

Any unilateral increase in U.S. import restrictions would be especially difficult in view of longstanding relationships between these three countries and the United States. These restrictions would probably also raise doubts in Malaysia and Indonesia about U.S. trade philosophy and might stimulate cartel activity in rubber and tin. Further restrictions on hardwood plywood imports might complicate future negotiations conducted according to the terms of the Trade Act of 1974. Japan will be one of the participants in these negotiations.

The Trade Act of 1974 gives the President authority, as part of negotiated trade agreements, to increase (or impose) rates of duties not to exceed 50 percent above the rate existing on January 1, 1975, or 20 percent ad valorem above the rate existing on January 1, 1975, whichever is higher. Whether an increase in the import duty would have a significant impact on U.S. forest products imports is not clear. U.S. demands for most forest products are generally believed to be inelastic. An increase in import duty would tend to raise rather than lower their total cost.

THE POTENTIAL FOR INCREASED EFFICIENCY OF DOMESTIC PROCESSING CAPACITY TO REDUCE IMPORTS AND INCREASE EXPORTS

The competitiveness of the U.S. forest products industry forces the members to keep their operations efficient. Forest products producers in Canada and Scandinavia have a similar incentive. Programs to increase the productivity of U.S. processing capacity would probably have only a marginal effect on U.S. trading patterns. Existing programs to increase productivity of U.S. processing capacity are periodic and implied in the investment tax credit and other provisions of the tax code.

THE POTENTIAL FOR INCREASED DOMESTIC SUPPLIES TO REDUCE IMPORTS AND INCREASE EXPORTS

Potential responses of U.S. timber supplies to intensified management have been discussed in the "Timber Outlook" report (USDA Forest Service 1973). The response of supply to one program amounted to 1.6 billion board feet in 1980, 2.7 billion in 1990, and 4.7 billion in 2000 (table 8). Net import volume under the assumed price conditions was 4 billion board feet in 1980, 5.2 billion in 1990, and 5.2 billion in 2000. Thus, the United States would

TABLE 8.—*Summary of softwood timber demand, exports, imports, and demand on and supply from U.S. forests, 1952, 1962, and 1970, with projections to 2000 (medium level) under alternative price and management assumptions*

BILLION CUBIC FEET

Item	1952	1962	1970	Projections: 1970 relative prices			Rising relative prices[1]			Relative prices above 1970 averages[2]		
				1980	1990	2000	1980	1990	2000	1980	1990	2000
Total U.S. demand	8.4	8.5	9.7	12.1	14.1	15.8	11.2	12.4	13.5	10.7	12.7	14.3
Exports	.2	.4	1.2	1.7	1.6	1.6	1.7	1.6	1.6	1.7	1.6	1.6
Imports	1.3	1.7	2.1	2.3	2.3	2.3	3.1	3.7	4.0	3.2	3.6	3.7
Demand on U.S. forests	7.3	7.2	8.8	11.5	13.4	15.1	9.8	10.3	11.1	9.2	10.7	12.2
Supply from U.S. forests—base projections[3]	7.3	7.2	8.8	10.1	10.7	11.5	10.1	10.7	11.5	10.1	10.7	11.5
Supply-demand balance	------	------	------	−1.4	−2.7	−3.6	+0.3	+0.4	+0.4	+0.9	------	−.7
BILLION BOARD FEET, INTERNATIONAL ¼-INCH LOG RULE												
Total U.S. demand	39.9	41.7	47.6	58.9	66.5	72.6	51.5	54.1	55.0	48.7	55.8	61.9
Exports	.6	1.1	4.6	5.6	5.6	5.6	5.6	5.6	5.5	5.6	5.6	5.6
Imports	2.4	4.6	5.9	6.6	6.5	6.4	8.9	10.8	11.4	9.6	10.8	10.8
Demand on U.S. forests	38.1	38.2	46.2	57.9	65.6	71.8	48.2	48.9	49.1	44.7	50.6	56.7
Supply from U.S. forests—base projections[3]	38.1	38.2	46.2	48.8	50.9	54.2	48.8	50.9	54.2	48.8	50.9	54.2
Supply-demand balance	------	------	------	−9.1	−14.7	−17.6	+0.6	+1.0	+5.1	+4.1	+0.3	−2.5
Supply from U.S. forests—economic projections[4]	------	------	------	46.8	47.4	47.0	48.0	49.6	51.0	50.8	50.0	48.6
Supply-demand balance	------	------	------	−11.1	−18.2	−24.8	−0.2	−0.7	+1.9	+6.1	−0.6	−8.1
Increased supply from U.S. forests with intensified management[5]	------	------	------		------	------	------	------	------	+1.6	+2.7	+4.7
Supply-demand balance	------	------	------	------	------	------	------	------	------	+7.7	+2.1	−3.4

[1] Relative prices rising from their 1970 trend levels as follows: lumber—1.5 percent per year, plywood, miscellaneous products and fuelwood—1.0 percent per year: paper and board—0.5 percent per year. This would mean a cumulative increase of 62 percent for lumber by the year 2000, and 17 percent for paper and board.

[2] Relative prices of lumber and plywood 30 percent, miscellaneous products and fuelwood 15 percent, and paper and board 10 percent above their 1970 averages.

[3] Base projections of supply are defined as the amounts of timber that would be available for harvesting if: (1) forestry programs continued at 1970 levels, (2) timber removals in the East changed on a straight line basis from actual removals in 1970 to a balance with growth in the year 2000 and thereafter, (3) removals on private lands in the West followed trends suggested by recent management and operating practices, and allowable cuts on public lands remained at the 1970 level.

Source: Table 155, USDA Forest Service (1973).

[4] Projections of supply related to alternative price levels, and 1970 level of management, with some adjustments for recent environmental constraints on National Forests harvests.

[5] Increases on supply from a program of $69 million annually for commercial thinnings, planting, and timber stand improvement on areas of nonindustrial private and National Forest lands that will yield more than 5 percent return on investments. Supplies could be further increased with other investment criteria, investments in other management or utilization opportunities, or investments on other ownerships.

Note: Data may not add to totals because of rounding.

Sources: Data for 1952, 1962, and 1970 based on information published by the U.S. Departments of Commerce and Agriculture.

Projections: U.S. Department of Agriculture, Forest Service.

be a net importer, especially during the first two decades of the program. The report points out that much of the increase in supply from intensified management programs would become available only after 2000.

Only by coincidence would the product mix from intensified management programs match the mix of softwood imports. Lower prices would tend to increase consumption of forest products, including products manufactured from the timber attributable to intensified management programs. Because of this increased consumption and the product mix of imports, intensified management programs would probably not provide enough timber to eliminate imports.

EXPORT PROMOTION PROGRAMS

Reduction of barriers *to trade*.--Other countries have import tariffs on forest products. For example, Australia, Japan, and the European Economic Community (EEC) have tariffs on softwood lumber. Canada, EEC, Japan, Norway, Mexico, Australia, New Zealand, and Sweden have tariffs on softwood plywood. Nontariff barriers such as regrading of imported U.S. lumber and preferential tariff agreements also affect U.S. export volume. Major U.S. trade barriers are tariffs on veneer and plywood imports and a prohibition of log exports from Federal lands west of the 100th meridian.

The United States would probably have a net gain in forest products export value from free trade. A major question would be the effect on value if the restriction on log exports from Federal lands were to be lifted. This action would increase supplies of exportable logs and probably reduce export prices. If the Japanese demand for logs is inelastic, as is generally believed, the total value of log exports would decline despite increased volume.

Trade restrictions on forest products are only part of the international trade picture. The feasibility of reducing restrictions on international trade in forest products must be tested against the possible impacts on U.S. domestic and international goals. Future negotiations based on the Trade Act of 1974 will presumably include forest products trade restrictions.

Formation of *U.S. export* associations.--The Webb-Pomerene Act permits U.S. companies to join in export trade and, in their export sales activities, be exempt from the Sherman Antitrust Act. The act, passed in 1918, has never been a big factor in U.S. exports (Beuter 1969). Cooperation in the export market and competition in the domestic market are arduous, especially in the highly competitive forest products industry. Traditional orientation to domestic rather than to foreign markets is another indication that export associations would have only a marginal effect on forest products trade.

Subsidies for *exports*.--The United States has had a history of production and export subsidies for certain products, including agricultural commodities, but these subsidies are being phased out.

A subsidy for only exports would have some effects on the domestic situation also. It would be an incentive to decrease production for the home market, and this might raise domestic prices. A subsidy would, in effect, cause a redistribution of income from the general public to the forest products industry.

Government-sponsored sales programs.--The Department of Commerce cooperates with U.S. firms in foreign trade fairs and other export promotion activities. Although successful in more highly processed manufactured products, trade fairs are generally recognized as having limited success for commodities such as forest products.

Potential effects of policies to change U.S. trade flows

In the U.S. economy, response to policies is achieved through price. A change in relative prices of raw materials and producer or consumer goods initiates reactions that change output, distribution, and consumption. These changes impinge on the criteria that measure the achievement of domestic and foreign goals. Changes in relative prices caused by a change in U.S. timber supply depend on the elasticities of supply and demand of foreign and domestic forest products, substitutes, and complements.

The effectiveness of changes in timber supply for meeting domestic and international goals depends in part on policies or market forces in other parts of the economy. Price movements initiated by a change in timber supply may be countered or accentuated by price movements for substitute commodities. Trade in other commodities affects floating exchange rates which ultimately determine the ability of the United States to import or export forest products.

Without any change in policy on net imports, the "Timber Outlook" (USDA Forest Service 1973) analysis shows that substantial increases in prices of timber products relative to the general price level will be necessary to balance demands for and available supplies of timber. Intensive management programs initiated now would not have much effect on this situation until after the year 2000.

Changes in U.S. policy on net imports of forest products would reinforce the expected price increases in forest products. Tariffs or quotas to reduce forest products imports would reduce supply and raise prices. Export promotion programs would tend to raise prices by increasing demand on U.S. forests.

In the general equilibrium U.S. economy, changes in relative prices have many effects.

A price increase for forest products causes a redistribution of income from consumers to producers of forest products. In the case of a subsidy for exports, income goes from the general public to the forest products industry both through the subsidy and through higher prices. Income, in general, would be redistributed from urban areas where consumption is centered to rural producing areas.

Higher forest products prices raise the returns from growing timber relative to other uses of land. This would cause conversion of some farmland to forest land.

A price increase for forest products is an incentive for intensified forest management on private lands. Much of this investment would be concentrated in the South and the Pacific Northwest. These areas would feel the most direct impact from effects of rising forest products prices.

A price increase for forest products would tend to increase recycling of paper. However, higher prices would tend to increase the use of steel, concrete products, and aluminum. As pointed out in the "Timber Outlook" report (USDA Forest Service 1973), energy requirements

and other costs of processing competing materials are much higher than for timber products.

A price increase for forest products would be felt across all sectors of the U.S. economy. Forest products are widely used for construction, packaging, and for packing in transportation; and higher prices would be reflected in higher costs for these goods and services. Effective import tariffs or quotas would initially cause shortages or other dislocations which would accentuate the tendency to higher prices.

U.S. energy consumption would probably increase in the event of either import controls or increased exports. Replacement of imported Canadian pulp and newsprint would require the equivalent of more than 50 new pulpmills. Much of this expansion would be in the South and West. Effects on energy consumption are not certain because production of other commodities would probably decline in the event of increased production of forest products. If these other industries are energy intensive, energy consumption might decrease.

The pulp industry would have difficulty finding 50 new millsites and the hundreds of millions of dollars required for major expansion. Investment in pollution control equipment continues to drain a large share of the industry's capital. Environmental effects of pulp industry expansion would probably be concentrated in the South.

The effect of import restrictions or increases in exports on U.S. employment is not clear. In a full employment situation, increases in employment in one industry are at the expense of decreases in employment in other industries (Mintz 1973). If the country has unemployment, increased forest products prices may force unemployment in other industries which must compete for labor and raw materials.

The potential effect of different import and export policies on foreign policy considerations has already been discussed.

A policy to limit forest products imports would probably not have a positive effect on the U.S. balance of payments. Exports of forest products and employment in other U.S. industries would decline in response to rising forest products prices. Exports of products from other industries would decline or imports of the products would increase. In addition, increased use of substitutes for forest products means increased use of imported materials (Mintz 1973).

A policy to promote forest products exports would probably not have a positive effect on U.S. balance of payments. Imports of forest products would rise. Employment in other industries would decline, possibly reducing their exports and increasing imports of products manufactured by those industries in other countries. Relative prices of forest products would rise, causing increased imports of substitutes.

Sources of forest products imports appear secure for the foreseeable future. Imports have kept down the rate of increase in prices. In this atmosphere, programs such as a tax on forest products consumption or additional incentives for investment in forest products processing capacity do not appear realistic. For this reason, their potential effects on domestic and international goals were not discussed.

Summary

The Nation has a mix of domestic and international goals. Policies to change forest products trade will impinge on these goals primarily

through changes in the prices of forest products and other commodities. These price changes would conflict with some goals and contribute to the achievement of others. Decreases in imports or increases in exports stimulated by a change in policy would probably accentuate these effects.

This report has described options for decreasing forest products imports and increasing forest products exports. Some prpbable effects of these options were discussed. Evaluation of individual policies to change the pattern of forest products trade should be based on a weighting of these effects. Each policymaker can be expected to attach different weights to the effects of different policies.

The forest products trade deficit of $1.4 billion in 1973 may grow to several billion dollars by the year 2000. Under a floating exchange rate, this deficit should be of interest only as it affects domestic goals. U.S. trade in all commodities, not just forest products, determines the value of the dollar relative to other currencies. If the forest products deficit is not offset by a surplus in other commodities, the value of the dollar relative to other currencies will decline. This would cause U.S. exports to increase and imports to decrease until a balance is reached.

The United States is becoming increasingly dependent on world trade to maintain its standard of living. U.S. exports went from $48.8 billion in 1972 to $69.9 billion in 1973. The need for trade in other commodities will tend to decrease the relative importance of forest products trade in the perspective of total U.S. imports and exports.

Options to change the pattern of U.S. forest products trade are constrained because the United States is an integral part of the world economy. Policies to force changes from the status quo would cause disruptions in the world trade pattern which has developed from each country's comparative advantage and existing constraints on free trade. In the current world political climate, any policy to force a decrease in imports or an increase in exports would probably be countered by other countries.

Options to change the pattern of U.S. forest products trade are constrained because of the apparent U.S. trade philosophy. Unilateral restriction of forest products imports or subsidized exports would run counter to the idea of "fair trade" embodied within the Trade Act of 1974. The option of free trade in forest products will probably be considered in future negotiations based in part on terms of this act.

Options to change the pattern of U.S. forest products trade are constrained because of the ability of the Nation's timber resource and timber processing industry to respond to a policy which requires increased domestic production. National policies to increase domestic timber supplies would not have a significant effect on timber production until after the year 2000 even if initiated now. Capital requirements and environmental constraints would limit the ability of the industry to significantly increase capacity. This is especially true of the pulp industry. The concentration of imports in newsprint and softwood lumber would make implementation of domestic policies to replace this volume especially difficult.

Options to change the pattern of U.S. forest products trade are constrained because other trade policies and a flexible exchange rate play roles in forest products imports and exports. Under a floating exchange rate, U.S. policies on energy, agriculture, and other industries determine the total value of imports and

exports. The exchange rate which evolves from this trade pattern determines in part the competitiveness of U.S. exports and the U.S. demand for imports. The effectiveness of policies designed to change forest products trade will vary with variations in the exchange rate.

These constraints lead to an apparent lack of options to significantly affect the current and prospective U.S. forest products trade pattern over the next 10 to 20 years. Within these constraints, a goal of eliminating net imports is unrealistic for the next two to three decades.

There is no clear rationale as to why the Nation should strive to eliminate net imports of timber or even to change the pattern of imports and exports of forest products. Trade policies are based on the overall balance of trade and not the balance for any one commodity or any one country. Import sources appear secure for softwoods and reasonably dependable for hardwoods. A continued reliance on forest products imports is compatible with some U.S. domestic goals and may conflict with others. A growing U.S. demand should tend to increase the compatibility of forest products imports with most domestic goals and not increase the status quo conflict with other domestic goals.

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