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TRADE LIBERALIZATION AND USA LUMBER EXPORTS, 1982-1986

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The world lumber market has become increasingly important to the United States forest products industry and the Southeast has benefited from this expansion. Southeastern lumber exports rose from $22.9 million in 1967 to $93.4 million in 1980 (1). In 1982, 36%, or 13.4 million board feet (MMBF) of the total 37.1 MMBF of total USA lumber exports was from the South (2).

Total United States lumber exports increased from 1967 to 1986 from 1,129 to 2,427 MMBF (Urlich, 1988). From 1982 through 1986, total USA hardwood lumber exports increased 42% from 385 to 549 MMBF, increasing to $344.2 million in value in 1986 (3). USA softwood lumber exports increased 15% from 1634 to 1878 MMBF from 1982 to 1986 (3). Dollar value for national softwood exports was $643.8 million in 1986 (3).

Development and expansion of markets in the Far East has been a major factor in the in expansion of United States hardwood exports (4). Increased competition from domestic demand for softwood, on the other hand, is one reason for sluggish growth in softwood exports. Domestic softwood consumption rose from 33 MMBF to 47 MMBF from 1982 to 1986 (3). The strong value of the USA dollar relative to other currencies and a worldwide recession also made USA softwood lumber products less competitive in world markets (4).

Total Southern timber exports have grown strongly through the 1980s. Hardwood lumber exports from the South increased an average of 12% annually from 1967 through 1987 from 20 to 209 MMBF increasing to $157 million in 1987 (3). Southern softwood exports also have remained strong through the 1980s. Southern softwood exports increased from 81 MMBF in 1967 to 238 MMBF in 1987, reaching a $96 million value in 1987 (3).

Vast forest resources have enabled Georgia to be a leader in national lumber production. Georgia accounted for 2.479 billion board feet, or approximately 5.6%, of total USA lumber production in 1986 (Butts, 1987). Access to ports and the Southern region's proximity to major world markets also have helped Georgia become a leading lumber product exporter. Wood products exports from Georgia increased in value from $5.9 million in 1967 to $91.3 million in 1980 (1). During the period 1978 through 1982, exports of solid wood products increased fivefold through the

Savannah custom district (ports of Brunswick and Savannah).

COMPARISON: GA-SOUTHEAST-USA

The analysis reported in this study examines Georgia's lumber export performance form 1982 to 1986 by comparing Georgia export growth to export growth in the Southeastern region and to national export growth. The study uses shift- share analysis with data for total USA and Southeastern exports during the period 1982 through 1986.

Shift-share analysis was utilized to examine the changing relative share of Georgia's lumber exports to both the USA and Southeastern lumber export markets. The data used in the analyses were obtained from the United States Department of Commerce, Forest Products Office in Washington, D.C. Lumber export data for 1982 and 1986 for individual Schedule B Export Classification Numbers by dollar value and volume in thousand board feet (MBF) for each USA Custom District were used in the analyses.

Export data represent the dollar value and volume of forest products shipped through custom districts. No data are available on products' point of origin. Georgia lumber exports were defined as lumber shipped from the ports in the Savannah, Charleston, and Tampa custom districts. While this clearly includes exports of non-Georgia lumber products, for this study these ports are assumed to be the primary shipping points for timber products produced and processed in Georgia because of their location. What is being referred to as Georgia timber exports in this analysis, therefore, actually includes some exports from South Carolina and Florida. The Georgia export data are presented Table 1.

National export volumes and values were computed by aggregating export data for all custom districts. These data are presented in Table 2. Southeastern exports were computed by aggregating volume and dollar values for timber products exported through Charleston, El Paso, Houston, Loredo, Miami, Mobile, New Orleans, Norfolk, Port Arthur, Savannah, Tampa, and Wilmington, N.C. These data are presented in Table 3.

Lumber export data were aggregated into total timber exports and into two major categories, hardwoods and softwoods. Both of

these categories were divided into rough lumber and dressed lumber. Rough lumber is unfinished lumber that is shipped to another manufacturer for processing and conversion to a higher value use. Dressed lumber is lumber that has had value added to it through processing. It is ready to be used without further processing. The data aggregation to rough and dressed softwoods and hardwoods implicitly assumes that woods within each group are substitutes for each other.

Shift-share analysis involves the calculation of three components, a national growth component, a product type component and a local share component (5). The national growth component, NG, is the export growth change that would have occurred in the local area's exports had grown at the same rate as total national timber exports. This component is calculated by multiplying local exports for a specific product in the base year (1982 in this analysis) times the overall USA (or Southeastern) lumber export growth rate.

The product type component, PT, measures the impact that national export growth for a specific lumber type has on export growth for the lumber type. It is calculated by multiplying local exports for a specific product type in the base year times the difference between the national (or regional) growth rate for the same sector and the overall national (or regional) growth rate.

The competitive share component, CS, measures how the State's exports for a specific sector have changed relative to the change in the regional or the USA exports. It indicates whether the amount of lumber a local economy exports is growing at a faster or slower rate than exports from the rest of the nation (or the Southeast). This component is calculated by multiplying base year local timber exports for a specific product type times the difference between the local economy's growth rate for exports of the product and the national export growth rate for the product.

GEORGIA-UNITED STATES

Georgia ports are a major shipping point for USA timber exports. In 1986, 79,034 thousand board feet (MBF) of lumber valued at $56.3 were exported from these ports (Table 1). This was a 31% increase from 1982. Rough and dressed hardwood lumber exports increased 244% and 197%, respectively, from 1982 to 1986. Softwood lumber exports, on the other hand, decline 26% and 73% for rough and dressed lumber, respectively. Approximately 60% Georgia lumber exports were hardwoods, both rough and dressed lumber. Hardwood exports, however, represented almost 74% of the total value of lumber products exported. Eighty percent of hardwood exports and 68% of the softwood exports were rough lumber. Georgia lumber exports represent about 4% of the 2,314,000 MBF of United States lumber exports, or 6% of the $954.2 million value of exports (Table 2).

United States lumber exports increased 25% from 1982 to 1986 to a total value of $954.2 million. Hardwood exports increased 56% in value while softwoods increased 13%. Softwood exports account for about 83% of total lumber export volume nationally. This compares to 40% for Georgia. National softwood export value in 1986 was approximately $617.1 million, 65% of total export value.

The shift-share analysis results comparing Georgia lumber exports to total United States lumber exports are presented in Table 4. The results indicate that in both dollar value and volume, lumber exports for three of the four wood classifications, rough and dressed hardwoods and dressed softwood, expanded at a rate faster that total exports did nationally. Rough softwood, on the other hand, expanded at a rate much slower than national exports. The competitive share component was positive for the two hardwood categories and negative for both rough and dressed softwood. This indicates that Georgia increased its share of both rough and dressed hardwood exports relative to the national economy. Georgia's share of rough and dressed softwoods, however, declined.

The results of the Georgia-United States shift-share analysis indicate that Georgia's lumber product exports have out preformed those of the national economy for both rough and dressed hardwoods. These are two product types that have grown in export importance by 54% and 66%, respectively, at the national level from 1982 through 1986. Georgia's softwood exports, however, have not kept pace with national trends, with the rough softwood exports declining at a more rapid rate than at the national level and dressed softwoods increasing at a slower rate than at the national level.

GEORGIA-SOUTHEAST

Georgia lumber exports were compared to Southeastern exports using the Georgia export data in Table 1 and the Southeastern export data in Table 3. The shift-share results are presented in Table 5.

Total lumber exports for the Southeast increased 6% from 1982 through 1986, compared to a 1% decline for Georgia (Tables 1 and 3). As at the national and Georgia levels, Southeastern hardwood exports grew strongly for the period with rough hardwood exports increasing 112% and dressed hardwood exports increasing 39% in MBF. In dollar value, hardwood exports increased 97% to $54.9 million while softwoods declined 18 percent to $19.6 million.

The Georgia-Southeastern shift-share analysis indicates that Georgia's hardwood exports preformed well compared to the Southeastern region, while the softwoods did poorly. The two hardwood product categories both had positive product type components, indicating that exports of these two products expanded at a greater rate than total lumber

exports in the region. Both softwood categories, on the other hand, had negative product type components meaning that they grew at a slower rate than total lumber exports. The competitive share components indicate that Georgia's hardwood lumber exports grew at a rate faster than the region's. The negative competitive share components for the two softwood types indicate that Georgia lost some of its share of softwood exports relative to the region.

The results of the Georgia-Southeastern lumber exports analysis suggest that Georgia's export of hardwood lumber is strong and exceeding a strong regional growth rate. In the softwood export market, however, a much weaker market at the regional and national levels, Georgia is not faring as well as the region.

SUMMARY AND CONCLUSIONS

Lumber exports are becoming an increasingly important component of the USA forestry industry. In 1986, lumber exports accounted for 954,217 MBF of production valued at $2.314 billion. Strong growth in exports of rough and dressed hardwoods offset a 7% decline in rough softwood exports for a net increase of 25% in lumber exports from 1982 to 1986.

The Southeastern region also experienced significant increases in lumber products exported between 1982 and 1986. Export volume increased 6% to 343,948 MBF. The value of exports increased 21% to 203.5 million. Rough and dressed hardwood exports had a combined growth rate of 97%. Rough and dressed softwoods, which both declined over the 1982 to 1986 period had a combined growth rate of -18%.

Georgia lumber exports had strong growth for hardwoods combined with a strong decline for softwoods. Actual export volume for Georgia declined 1% from 1982 to 1986. The value of exports, however, increased 31% from $42.9 million to $56.3 million on the strength of the expansion of higher valued hardwoods.

The shift-share analysis results, both regional and national, indicate that Georgia's hardwood exports are performing strongly. Georgia's hardwood exports are expanding faster than both rough and dressed hardwood exports regionally and nationally. Hardwoods represent the higher value lumber exports. The gains in hardwood exports are largely the result of United States expansion into European and Asian markets for woods to be remanufactured into furniture, moldings, flooring, and other high value products (6). Georgia's relative location to these markets and access to port facilities has enabled the State's lumber industry to compete favorably with other USA hardwood exporters.

Georgia softwood exports, however, have not performed well. Regional and national softwood exports for both rough and dressed

softwoods have out performed Georgia's softwood export markets. Examination of the domestic market may explain the apparent inferior softwood export performance. Domestic softwood consumption in the Southeast exceeds the region's production by approximately 40% (7). Foreign marketing of softwood lumber, therefore, would only be expected if foreign market prices equaled domestic prices. In the Pacific Northwest, an area of abundant softwood supply, regional consumption is less than half of the production (7). The Pacific Northwest and other regions with excess supply must aggressively seek markets for their surplus production while areas like Georgia face strong local demand and have little incentive to seek nonlocal buyers for softwoods.

The hardwood export results suggest that Georgia hardwood producers compete well in international markets. Potential expansion in hardwood exports could have continued positive benefits for the Georgia lumber industry as well as for rural economies across the state. The 40% shortfall in domestic regional softwood production, however, suggests that international markets will not be a major factor in Georgia softwood markets until domestic demand declines or until there are dramatic shifts away from excess softwood production in other USA production regions.

IMPLICATIONS OF TRADE LIBERALIZATION

Georgia's transportation infrastructure, physical plant and equipment, and lower labor and raw material costs make the state a regionally and nationally competitive lumber producer (9). Continued expansion of Georgia's forest products industry will increase the sector's importance as a source of income and employment.

Lumber trade with Canada has been a major USA-Canadian trade issue in recent years. Tariffs on Canadian export of softwood lumber to USA markets cost the Canadian lumber manufacturers up to 9% of its share of the USA softwood lumber market (10). The tariffs also would result in higher prices to USA producers (11). Liberalization of trade, on the other hand, would allow Canadian lumber to displace locally produced lumber from domestic markets (12).

Expansion of Georgia lumber product exports can help the forest products industry maintain itself as a thriving sector of the economy. The Pacific Rim nations of Taiwan, Korea, and Japan are forecasted to increase demand for hardwood lumber (13). This increased demand, combined with depletion of traditional Asian hardwood lumber sources, offers Georgia producers access to relatively new and expanding markets.

State governments have increased their efforts to promote exports in response to greater awareness of market potential. In the late 1970s (1976-1980), the number of state operated overseas promotion offices tripled to

66 (14). This increased export focus, along with reduction in trade barriers, could help the Georgia lumber industry significantly expand overseas sales.

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Table 1. Georgia Lumber Export Data, 1982, 1986

	1982	1986	Change	Percent change
Exports in thousands of dollars				
Total exports	42935	56325	13390	31
Hardwood	12461	41476	29015	233
Rough	9533	32783	23250	244
Dressed	2928	8693	5765	197
Softwood	30474	14849	-15625	-51
Rough	14000	10426	-3574	-26
Dressed	16474	4423	-12051	-73
Exports in thousand board feet				
Total exports	79850	79034	-816	-1
Hardwood	15053	47950	32897	219
Rough	11283	38489	27206	241
Dressed	3770	9461	5691	151
Softwood	64797	31084	-33713	-52
Rough	30597	20811	-9786	-32
Dressed	34200	10273	-23927	-70

Source: Compiled by authors from data obtained from data obtained from Department of Commerce Forest Products Office, 1982, 1986.

Table 2. United States Lumber Export Data, 1982, 1986

	1982	1986	Change	Percent change
Exports in thousands of dollars				
Total exports	762074	954209	192135	25
Hardwood	216132	337145	121013	56
Rough	177286	272829	95543	54
Dressed	38846	64316	25470	66
Softwood	545942	617072	71130	13
Rough	378167	349959	-28208	-7
Dressed	167775	267113	99338	59
Exports in thousand board feet				
Total exports	1886718	2314100	427382	23
Hardwood	334304	498284	163980	49
Rough	271375	379166	107791	38
Dressed	62929	119118	56189	89
Softwood	1552414	1815817	263403	17
Rough	968937	898655	-70282	-7
Dressed	583477	917162	333685	57

Source: Compiled by authors from data obtained from data obtained from Department of Commerce Forest Products Office, 1982, 1986.

Table 3. Southeastern Lumber Export Data, 1982, 1986

	1982	1986	Change	Percent change
Exports in thousands of dollars				
Total exports	168197	203522	35325	21
Hardwood	56630	111530	54900	97
Rough	45566	97356	51790	114
Dressed	11064	14174	3110	28
Softwood	111567	91992	-19575	-18
Rough	74024	64284	-9740	-13
Dressed	37543	27708	-9835	-26
Exports in thousand board feet				
Total exports	323858	343948	20090	6
Hardwood	66867	132466	65599	98
Rough	53827	114365	60538	112
Dressed	13040	8101	5061	39
Softwood	256991	211482	-45509	-18
Rough	167148	131078	-36070	-22
Dressed	89843	80404	-9439	-11

Source: Compiled by authors from data obtained from data obtained from Department of Commerce Forest Products Office, 1982, 1986.

Table 4. Georgia-United States Export Analysis, 1982-1986

	National Growth Component	Product Type Component	Competitive Share Component	Actual Export Change
Dollars				
Hardwoods				
Total	3412	3835	22038	29015
Rough	2403	2734	18112	23250
Dressed	738	1182	3845	5765
Softwoods				
Total	7683	-3713	-19595	-15625
Rough	3530	-4574	-2530	-3574
Dressed	4153	5601	-21805	-12051
Volume				
Hardwoods				
Total	3410	3974	25513	32897
Rough	2556	1926	22724	27206
Dressed	854	2512	2325	5691
Softwoods				
Total	14678	-3684	-44707	-33713
Rough	6931	-9150	-7567	-9786
Dressed	7747	11812	-43486	-23927

Table 5. Georgia-Southeastern Lumber Export Analysis, 1982-1986.

	National Growth Component	Product Type Component	Competitive Share Component	Actual Export Change
Dollars				
Hardwoods				
Total	2617	9463	16935	29015
Rough	2002	8833	12415	23250
Dressed	615	208	4942	5765
Softwoods				
Total	6400	-11747	-10278	-15625
Rough	2940	-4782	-1732	-3574
Dressed	3460	-7776	-7735	-12051
Volume				
Hardwoods				
Total	934	13834	18129	32897
Rough	700	11990	14516	27206
Dressed	234	1229	4228	5691
Softwoods				
Total	4020	-15494	-22238	-33713
Rough	1898	-8501	-3183	-9786
Dressed	2122	-5715	-20334	-23927