Aftermath of the Asian Economic Crisis:
How Did U.S. Hardwood Lumber Exporters Fare?

by
Matt Bumgardner
Bruce Hansen

Abstract

Slow or negative growth for many Asian countries in the late 1990’s affected U.S. exports of hardwood lumber to Asia. With many of these economies now on the mend, this study attempted to gain an initial understanding of how this crisis affected hardwood lumber exports to Asia and the extent to which export volumes have recovered. Trade statistics compiled by the U.S. Department of Commerce and other sources revealed the volume and value of hardwood lumber exports to Asia have nearly recovered to pre-crisis levels, but also that not all Asian countries/markets have reacted similarly. China/Hong Kong has become the largest market for hardwood lumber in Asia, while traditional major markets -- Japan, South Korea, and Taiwan -- have declined. These shifts seem to be having an effect on the species mix exported and export prices. U.S. exporters generally have fared well against international competition through this period, though they are reminded that there is not “one” Asia, and that many factors contribute to export behavior by customers in individual countries and markets.

INTRODUCTION

In the late 1990’s, Asia endured one of its worst economic recessions in modern times. Most major Asian economies realized substantially negative economic growth in 1998 (Fig. 1). As a consequence, U.S. exporters saw shipments of all major hardwood commodities, i.e., lumber, veneer, and logs, plummet, and hardwood lumber was no exception. Hardwood lumber represents the largest value of exports to Asia among the commodities mentioned, and at nearly $362 million represents twice the value of hardwood veneer and hardwood log exports combined. In 1998, the value of hardwood lumber exported to Asia declined by 34.5 percent from the previous year. This compares to declines of 29.5 and 23.4 percent for hardwood veneer and hardwood logs, respectively (Emanuel and Rhodes 2001).

Figure 1. GDP growth was negative for most Asian countries in 1998, but rebounded quickly (United Nations 2001; NatWest Group 1999).

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The downturn, however, appears to have been short-lived. Asian economies have since been on the mend (with the notable exception of Japan), providing new opportunities for U.S. hardwood exporters. Between 1998 and 2000, the value of U.S. hardwood lumber exports to Asia increased by 35.2 percent and now is approaching pre-crisis levels. The value of veneer exported to Asia in 2000 surpassed all levels achieved during the 1990s. This paper investigates U.S. hardwood lumber exports to Asia before, during, and after the Asian financial crisis to determine the effect of the recession on U.S. exports to the region and on Asian imports from around the world. The Asian market is important to U.S. hardwood lumber exporters, accounting for slightly more than a quarter of the total volume of hardwood lumber exported yearly through the 1990’s. Unless otherwise noted, data were provided by the U.S. Department of Commerce, Bureau of the Census, and others as reported by Nolley (1997) and Emanuel and Rhodes (2001). The following questions were addressed:

1. How did the major hardwood-importing Asian countries react and recover from the economic crisis?
2. Was the species mix of U.S. exports affected or did all species experience similar declines in demand?
3. Were prices of U.S. exports affected in an attempt to maintain market share?
4. How did U.S. exporters fare relative to competitors during the period?
5. Are there lessons for U.S. hardwood exporters?

REACTION AND RECOVERY BY THE MAJOR HARDWOOD-IMPORTING ASIAN COUNTRIES

In terms of both value and volume, U.S. hardwood lumber exports to Asia have largely recovered from the substantial dip in 1998 associated with the economic slowdown. However, reaction to and recovery from the crisis has been inconsistent across markets. Much of the recovery has resulted from growth in China and Hong Kong, while much of the decline has occurred in South Korea, Japan, and Taiwan (Fig. 2). The three latter markets accounted for nearly 85 percent of hardwood lumber exports to Asia in 1994 but less than 40 percent by 2000. China and Hong Kong increased from approximately 8 percent in 1994 to nearly 45 percent by 2000. The smaller markets of Malaysia, Indonesia, and Thailand increased from 8 percent of the total in 1994 to approximately 15 percent in 2000 and generally were not substantially affected by the crisis in 1998.

Figure 2. Asian imports of U.S. hardwood lumber declined in 1998, but reactions differed by country.
The countries/markets investigated (which represent nearly 90 percent of Asian imports of U.S. hardwood lumber) could be grouped into two broad categories based on their reactions to the 1998 crisis: those with steady or declining imports (Table 1). Exports to Hong Kong, China, Malaysia, and Indonesia held relatively steady or increased, while those to Japan, Taiwan, South Korea, and Thailand declined. Thailand was unique among the declining markets in that exports recovered to pre-crisis levels by 2000, while Japan, Taiwan, and South Korea have shown little sign of recovery. It should be noted that Taiwan showed a steady decline through the latter half of the 1990’s (with a more substantial drop in 1998), while Japan and South Korea dropped sharply in 1998.

Table 1. Changes in hardwood lumber exports, GDP, and market size of major Asian markets for U.S. hardwood lumber.

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<tr>
<td></td>
<td>Percent</td>
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<td>Steady Imports</td>
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<tr>
<td>Hong Kong</td>
<td>-5.1</td>
<td>-5.1</td>
<td>53.1</td>
<td>70.1</td>
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<tr>
<td>China</td>
<td>-5.0</td>
<td>+7.8</td>
<td>14.4</td>
<td>55.0</td>
</tr>
<tr>
<td>Malaysia</td>
<td>+35.3</td>
<td>-7.5</td>
<td>5.4</td>
<td>10.9</td>
</tr>
<tr>
<td>Indonesia</td>
<td>-2.1</td>
<td>-13.7</td>
<td>7.0</td>
<td>10.9</td>
</tr>
<tr>
<td>Declining Imports</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Japan</td>
<td>-44.6</td>
<td>-2.9</td>
<td>104.0</td>
<td>50.3</td>
</tr>
<tr>
<td>Taiwan</td>
<td>-24.1</td>
<td>+4.8</td>
<td>63.6</td>
<td>39.9</td>
</tr>
<tr>
<td>South Korea</td>
<td>-66.8</td>
<td>-5.8</td>
<td>40.8</td>
<td>20.2</td>
</tr>
<tr>
<td>Thailand</td>
<td>-23.9</td>
<td>-9.4</td>
<td>20.5</td>
<td>20.2</td>
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As shown in Table 1, reaction often was not related to GDP. For example, Taiwanese exports declined in 1998 despite positive growth, Indonesia held steady but had strongly negative growth, and Japan declined while experiencing only slightly negative growth. In broader perspective, the 1998 crisis can be seen as exaggerating underlying structural changes already taking place in Asia. The fastest growth has been in "newer" markets like China and Malaysia (Fig. 3). The former major markets of South Korea, Japan, and Taiwan grew little (if at all) through the latter half of the 1990s, and were affected most by the crisis. There has been major relocation of furniture production from Japan and Taiwan to China and other Southeast Asia countries since the mid-1990s (Tsuij 1997). An unfavorable exchange rate with the United States during this period has also been a factor in countries such as Indonesia, Thailand, Malaysia, and South Korea, but seems to have especially affected exports to South Korea.

However, China has experienced strong growth in both domestic and export markets. China’s GDP grew at an annual rate of 10.1 percent from 1981 to 1996 and remained strong through the 1998 crisis. China also has experienced a 30-percent annual increase in residential housing since 1990 (Zhang et al. 1998). On the export side, China/Hong Kong has become the leading wood furniture exporter to the United States, surpassing Europe in 1999 and drawing even with Canada in 2000. China also has become a major exporter of wood furniture to Japan, second only to Thailand in value and surpassing Malaysia, Indonesia, and Taiwan by 1996 (Tsuij 1997).

IMPACT ON THE SPECIES EXPORTED

There were substantial changes in the species mix exported to Asia during the second half of the 1990’s (Table 2). While red oak was by far the most important species in 1995, it was surpassed by...
red alder in 2000. Many of these shifts reflect changes in the importance of individual markets. White oak apparently was affected most by the 1998 crisis, partly because of the importance of Japan as a major importer of U.S. white oak and the corresponding decline in the Japanese market. Red alder accounted for nearly half of China's 55 million board feet of hardwood lumber imports from the United States in 2000, and red alder imports from the U.S. to China grew by 22 million board feet from 1996 to 2000. This quantity of alder equals the Malaysian and Indonesian markets for all U.S. hardwood lumber combined. The somewhat steady decline in red oak exports to Asia is shadowed by the decline in Taiwanese imports, which was a major importer of U.S. red oak. Imports of U.S. red oak lumber by Taiwan have dropped by 68.1 percent since 1994. Another factor is design trends in major furniture export markets for Asian countries. For example, red alder is a substitute for black cherry and maple and can be stained to a variety of colors. Much of the red alder produced in the United States is manufactured by a few large companies that seem to have been well positioned to take advantage of the growing Chinese market.

Table 2. Trends in the top U.S. hardwood lumber species exported to Asia.

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<tbody>
<tr>
<td>red oak</td>
<td>0.23</td>
<td>0.19</td>
<td>0.19</td>
<td>0.20</td>
<td>0.17</td>
<td>0.16</td>
</tr>
<tr>
<td>red alder</td>
<td>0.11</td>
<td>0.14</td>
<td>0.15</td>
<td>0.15</td>
<td>0.16</td>
<td>0.16</td>
</tr>
<tr>
<td>white oak</td>
<td>0.16</td>
<td>0.15</td>
<td>0.17</td>
<td>0.11</td>
<td>0.13</td>
<td>0.13</td>
</tr>
<tr>
<td>ash</td>
<td>0.11</td>
<td>0.09</td>
<td>0.07</td>
<td>0.08</td>
<td>0.08</td>
<td>0.06</td>
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<tr>
<td>hard maple</td>
<td>0.10</td>
<td>0.09</td>
<td>0.11</td>
<td>0.09</td>
<td>0.07</td>
<td>0.07</td>
</tr>
<tr>
<td>yellow-poplar</td>
<td>0.09</td>
<td>0.10</td>
<td>0.10</td>
<td>0.08</td>
<td>0.10</td>
<td>0.12</td>
</tr>
</tbody>
</table>

EFFECTS ON PRICE

There was some softness in price during the 1998 crisis, followed by a strong recovery in 1999 (Fig. 4). The average unweighted price series was calculated by dividing the total value of exports to each country by the total quantity exported (across all species and grades), and averaging the eight resulting values. However, when average prices are weighted by market share (i.e., proportion of total Asian hardwood lumber imports from the U.S.), prices have been declining since 1995. This reflects the increasing importance of China and Hong Kong to U.S. hardwood lumber exporters, as average prices for exports to China and Hong Kong are somewhat lower than exports to South Korea and Japan. This is partially a function of the primary species imported: red alder represents a large proportion of China's U.S. imports and yellow-poplar accounts for a significant portion of Hong Kong's U.S. imports.

Figure 4. Average price (unweighted and weighted by market size) for U.S. hardwood lumber exports to Asia.

U.S. EXPORTERS VERSUS THE COMPETITION

Official international trade statistics compiled by the USDA Foreign Agricultural Service indicate that U.S. hardwood lumber exporters to Asia gained share in some markets while losing share in others through the crisis (Fig. 5) (Chao 2000; Miller 2000; Choi and Henney 2000; Nagahama 2000). U.S. exporters maintained a somewhat stable share in China, which can be characterized as a growth market, and Taiwan, which can be characterized as a declining market. Temperate species constitute the majority of hardwood lumber imports in these countries. U.S. firms have increased their market share in Japan even though the overall hardwood lumber import market has been declining there since 1996. In Japan, imports of tropical hardwood lumber species have declined more rapidly than imports of temperate species. U.S. importers have lost share in the shrinking South Korean market, where tropical species represented a larger proportion of the hardwood lumber import market than temperate species in the 1990's.
LESIONS FOR U.S. HARDWOOD LUMBER EXPORTERS

Perhaps the most important and obvious lesson for U.S. hardwood lumber exporters is that there is not “one” Asia. Asian markets are changing and dynamic, with distinct import trends. Japan, South Korea, and Taiwan have decreased in importance, demonstrating little evidence that their historical market levels will be restored anytime soon. China and Hong Kong now represent the largest Asian market and continue to show strong growth. Malaysia, Indonesia, and Thailand represent relatively small but fast-growing markets for U.S. hardwood lumber exports. Most of the growth nations, if they were affected at all, have rebounded quickly from the economic crisis in 1998.

An important consideration is the emergence of China/Hong Kong as the major hardwood lumber importer in Asia, and how quickly this has taken place. China’s growth is being spurred by strong demand both domestically and in exports, and U.S. exporters should understand both components to more fully take advantage of the opportunities afforded. For example, it seems likely that the growth in red alder exports to China is a function of the popularity of cherry designs in the U.S. furniture market. Much of the growth in the China market has come from the relocation of production from higher cost countries such as Japan and Taiwan. It has been estimated that one-third of China’s furniture exports result from Taiwanese investment (Miller 2000).

Another consideration is the impact of changing markets on the species exported and associated export prices. As China/Hong Kong grows in importance and traditional markets like Taiwan, Japan, and South Korea decline, it is reasonable to expect changes in the products that are exported. Evidence of this is seen in the declining weighted price for all hardwood lumber exports to Asia through the latter half of the 1990’s. It is unclear from this preliminary analysis whether end markets will dictate the species mix exported to Asia (regardless of the country) or if manufacturers in some countries have more expertise, knowledge, or comfort in selecting certain species over others.

There are many other factors that could affect hardwood lumber exports to Asia in individual countries and markets. In South Korea, for example, there is some indication that increasing focus will be placed on veneer versus lumber as the result of changes in building and construction systems, e.g., proposed mandatory use of “built-in” furniture in high-rise apartment complexes, and strong demand for veneered flooring (Choi and Henney 2000). Exchange rates will continue to play a role in exports to individual Asian countries, and seems to have been a particularly severe impediment to exports to South Korea during the period. Much of the furniture production in Japan and Taiwan has relocated to China and other Southeast Asian countries in order to take advantage of cheaper labor and operating costs. However, many of the key operational decisions such as raw material purchasing remain in the hands of executives in the “home” countries (Miller 2000), which complicates the export picture.

The recovery in Asia came quickly, masking some of the possible longer-term reactions to the crisis. There was little evidence of shifts to other markets by U.S. exporters in 1998, and coupled with a strong domestic market, most exporters seemed to simply wait out the storm concerning exports to Asia during the 1998 economic crisis. China could now represent a stabilizing market in Asia to offset downturns in the U.S. economy, but also poses new challenges for the smaller, export-oriented Asian economies (Economist 2001).

LITERATURE CITED


