AN OVERVIEW OF THE WOOD PRODUCT IMPORT SECTOR IN THE UNITED STATES WITH AN EMPHASIS ON OPPORTUNITIES FOR SRI LANKAN EXPORTERS

MS Thesis Defense

Rangika Perera

The School of Renewable Natural Resources

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Outline

- Overview of U.S. Wood Product Imports and Sri Lanka exports
- Study Objectives
- The Studies
  - U.S. Wood Product Importers
  - Sri Lanka Wood Product Exporters
- Conclusion and Discussion
**Introduction**

- Growing demand for wood has exerted pressure on global primary old growth forests.

- Alternatives:
  - Secondary timber resources
  - Forest plantations
  - Imports

- Rapid increase in domestic wood demand has driven some nations from being net exporters of wood to becoming net importers.

- These global developments have intensified the need for cross-boundary trade of wood products.
The U.S. wood product import market

- Leading global wood product importer.
- Currently a small consumer of tropical hardwoods.
- Markets for tropical wood products will increase in the future.
- The trend towards higher demand of pre-finished products will create opportunities for suppliers that can provide high quality tropical wood products.
The U.S. wood product import market

- Tropical timber imports/trade in the U.S. is highly fragmented: Even small to medium scale export manufacturers can thrive on these opportunities.

- Design and quality of wood products are means of maintaining or increasing market share.
Sri Lanka’s wood product manufacturing sector is characterized by low volume producers, inefficient production, and quality products.

The wood-based manufacturing sector consists of a variety of industries including:
- lumber, furniture, parquet flooring, wood-based panel products and carvings/crafts.

The sector depends almost entirely on local wood supply for raw materials.
There are over 9,000 furniture and other woodworking manufacturers in Sri Lanka with an estimated employment of 28,000.

These firms predominantly supply their products to the domestic market.

60 manufacturers target export markets.
The studies

Market structure, behaviors and perceptions related to forest certification for:

1. U.S. wood product import market
2. Sri Lanka wood product export market
Objectives

1. Characterize the structure of the U.S. wood product import market.

2. Explore demand factors and opportunities for international exporters selling into the U.S. market.

3. Identify the status and perceived barriers for exporting wood products from Sri Lanka.

4. Identify U.S. importer and Sri Lankan exporter perceptions towards forest certification.
Study 1

U.S. Wood Product Importers
U.S. wood product importers

**Methodology-Mail Surveys**
Tailored Design Method (Dillman 2000)

- Pre-Testing Questionnaires
- Revision
- Pre-Notification Postcards
- 1st Mailing
- Reminder Postcards
- Second Mailing to Non-Respondents
U.S. wood product importers

Response rate

Sample frame:

Adjusted \( R_{\text{rate}} \) = \frac{\text{Usable responses}}{\text{Total sample} - (\text{Undeliverable} + \text{nonusable responses})}

Adjusted \( R_{\text{rate}} \) = 40.6 %
U.S. wood product importers

Distribution of respondent corporate locations
percent of respondents (n=52)

1. **West** (48.0% n=25)

2. **North/Central** (3.8% n=2)

3. **South** (46.2% n=24)

4. **Northeast** (2.0% n=1)

*Including Hawaii & Alaska*
U.S. wood product importers

Wood products imported by respondents
percent of respondents (n=54) (multiple responses possible)

- Shelving: 2.5%
- Particle boards: 2.5%
- Pallets: 2.5%
- MDF: 3.8%
- Hardwood veneer: 4.4%
- Wooden ornaments: 6.0%
- Flooring: 8.2%
- Softwood plywood: 9.5%
- Millworks and moldings: 12.0%
- Hardwood plywood: 12.0%
- Hardwood lumber: 12.0%
- Softwood lumber: 19.0%
U.S. wood product importers

Major export partner countries (2006)
percent of respondents (n=54)

**By purchase value**
- Brazil: 26.4%
- Chile: 11.3%
- China: 11.3%
- Canada: 5.7%

**By product quality**
- Brazil: 22.0%
- Chile: 18.0%
- Finland: 10.0%
- China: 6.0%
- Russia: 6.0%
### U.S. wood product importers

**Grouping of Respondent Companies (Cluster analysis)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Scale</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of employees</td>
<td>1-6</td>
<td>1-10 employees</td>
<td>More than 500 employees</td>
</tr>
<tr>
<td>Total gross sales</td>
<td>1-9</td>
<td>$0-$5 million</td>
<td>More than $1 billion</td>
</tr>
<tr>
<td>Number of containers imported</td>
<td>1-4</td>
<td>1-25 containers</td>
<td>More than 10 containers</td>
</tr>
<tr>
<td>Percentage of sales from imports</td>
<td>1-10</td>
<td>1%-9%</td>
<td>90-100%</td>
</tr>
</tbody>
</table>
## U.S. wood product importers

### Grouping of Respondent Companies (Cluster analysis)

<table>
<thead>
<tr>
<th>Group</th>
<th>Number of employees</th>
<th>Total gross sales</th>
<th>Number of containers imported</th>
<th>Percent of sales from imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mean</td>
<td>1.31</td>
<td>1.46</td>
<td>2.23</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>13</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>Mean</td>
<td>4.29</td>
<td>5.21</td>
<td>3.57</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>Mean</td>
<td>1.32</td>
<td>2.08</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>25</td>
<td>25</td>
<td>25</td>
</tr>
</tbody>
</table>

*Differences between clusters are significant at $\alpha = 0.05$ significance level*
Cluster profile: Market segments

Cluster 1: Small to medium scale but moderate importers

Cluster 2: Medium to large scale but minor importers

Cluster 3: Small to medium scale but major importers
U.S. wood product importers
Distinct market segments

**Function 1**: percentage of sales from imports

**Function 2**: total gross sales, number of employee, number of containers import
U.S. wood product importers

**Sources of information**

Scale: 1 = not important at all; 3 = somewhat important; 5 = very important, (n=54)

- E-mail: 4.0
- Word of mouth: 3.9
- Websites: 3.6
- International trade shows: 3.4
- Sales representative: 3.1
- Catalogues: 2.9
- Magazines: 2.7
- Newsletters: 2.5
- Trade magazine adds: 2.5
- Distributors: 2.4
- Workshops: 2.4
- Direct mail: 2.1
**U.S. wood product importers**

**Foreign supplier selection criteria by company grouping**

**Function 1:** supplier speaks English, knowledgeable sales people

**Function 2:** provides certified products, products from sustainable managed forests, consistent supply, fair prices
Function 2 separates group 1 (small to medium scale but moderate importers) from group 2 (medium to large scale but minor importers) & group 3 (small to medium scale but major importers).
U.S. Wood product importers

Foreign supplier selection factors
(Factor analysis)
<table>
<thead>
<tr>
<th>Variable</th>
<th>Certification and marketing</th>
<th>Product attributes</th>
<th>Client contact</th>
<th>Quality / product supply</th>
<th>Timber species and supplier reputation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Products from sustainable managed forests</td>
<td><strong>0.893</strong></td>
<td>-0.041</td>
<td>0.089</td>
<td>0.151</td>
<td>0.058</td>
</tr>
<tr>
<td>Ability to provide certified products</td>
<td><strong>0.837</strong></td>
<td>0.263</td>
<td>-0.029</td>
<td>-0.018</td>
<td>-0.002</td>
</tr>
<tr>
<td>Uniqueness</td>
<td><strong>0.614</strong></td>
<td>0.365</td>
<td>0.446</td>
<td>-0.055</td>
<td>0.273</td>
</tr>
<tr>
<td>Distribution capabilities</td>
<td><strong>0.555</strong></td>
<td>0.445</td>
<td>0.269</td>
<td>0.178</td>
<td>0.162</td>
</tr>
<tr>
<td>Marketing skills</td>
<td><strong>0.508</strong></td>
<td>0.434</td>
<td>0.504</td>
<td>-0.029</td>
<td>0.147</td>
</tr>
<tr>
<td>Warranty</td>
<td>0.096</td>
<td><strong>0.852</strong></td>
<td>0.034</td>
<td>0.160</td>
<td>-0.003</td>
</tr>
<tr>
<td>Design</td>
<td>0.300</td>
<td><strong>0.712</strong></td>
<td>0.062</td>
<td>-0.058</td>
<td>0.330</td>
</tr>
<tr>
<td>Fast delivery</td>
<td>0.330</td>
<td><strong>0.546</strong></td>
<td>0.168</td>
<td>0.362</td>
<td>0.071</td>
</tr>
<tr>
<td>Supplier speaks English</td>
<td>0.024</td>
<td>0.089</td>
<td><strong>0.844</strong></td>
<td>-0.156</td>
<td>0.086</td>
</tr>
<tr>
<td>Long term customer relationship</td>
<td>-0.007</td>
<td>-0.356</td>
<td><strong>0.738</strong></td>
<td>0.154</td>
<td>0.290</td>
</tr>
<tr>
<td>Computer capabilities</td>
<td>0.262</td>
<td>0.277</td>
<td><strong>0.713</strong></td>
<td>0.178</td>
<td>0.055</td>
</tr>
<tr>
<td>On time delivery</td>
<td>0.000</td>
<td>0.110</td>
<td>0.052</td>
<td><strong>0.897</strong></td>
<td>-0.043</td>
</tr>
<tr>
<td>Quality</td>
<td>0.235</td>
<td>-0.031</td>
<td>-0.124</td>
<td><strong>0.730</strong></td>
<td>0.330</td>
</tr>
<tr>
<td>Consistent supply</td>
<td>-0.033</td>
<td>0.184</td>
<td>0.214</td>
<td><strong>0.625</strong></td>
<td>0.139</td>
</tr>
<tr>
<td>Products from traditional species</td>
<td>0.054</td>
<td>-0.085</td>
<td>0.273</td>
<td>0.012</td>
<td><strong>0.820</strong></td>
</tr>
<tr>
<td>Supplier reputation</td>
<td>-0.026</td>
<td>0.163</td>
<td>-0.088</td>
<td>0.288</td>
<td><strong>0.644</strong></td>
</tr>
<tr>
<td>Products from lesser used species</td>
<td>0.142</td>
<td>0.296</td>
<td>0.372</td>
<td>-0.046</td>
<td><strong>0.579</strong></td>
</tr>
<tr>
<td>Fast response to my inquiries</td>
<td>0.187</td>
<td>0.323</td>
<td>0.007</td>
<td>0.260</td>
<td><strong>0.540</strong></td>
</tr>
</tbody>
</table>
Does your company currently import certified wood products?

- Yes: 64%
- No: 36%
Q1: Certified products can help my company reach diversified markets.

Q2: Certified products can capture price premiums.

Q3: Certified products help to protect the environment.

Q4: I would like to get information about certification.

Q5: I would pay a premium for certified products.

Q6: If available, I would seek out certified wood products.
U.S. wood product importers

Comparison of perceptions towards forest certification between Group 1 and Group 2

*Q1: Certified products can help my company reach diversified markets.

*Q2: Certified products can capture price premiums.

*Q3: Certified products help to protect the environment.

Q4: I would like to get information about certification.

*Q5: I would pay a premium for certified products.

*Q6: If available, I would seek out certified wood products.

* Mann Whitney statistics: P-value is significant at $\alpha=0.05$ significance.
U.S. wood product importers

Accepted certification programs

percent of respondents (n=54) (multiple responses possible)
Would you like to receive information about Sri Lanka wood products?

- Yes: 61%
- No: 39%

Are you seeking new suppliers?

- Yes: 60%
- No: 40%

Do you plan to diversify the wood products you import in the next 5 years?

- Yes: 53%
- No: 47%
Study 2

Sri Lanka wood product exporters
Sri Lanka wood product exporters

Methodology - Personal interviews

Pre-Testing Questionnaires

Revision

Pre-Notification Postcards

Follow Up Phone Calls

Personal interviews
Response rate

Sample frame:
All 60 registered wood product exporters in 2006. (Export Development of Board of Sri Lanka, 2007)

\[
R_{\text{rate}} = \frac{\text{Usable responses}}{\text{Total sample – nonusable responses}} = 43.4\%
\]
Sri Lanka wood product exporters

Number of employees

Percent of respondents (n= 26)

- 101-500 Employees: 11.5%
- 51-100 Employees: 23.1%
- 26-50 Employees: 50.0%
- 11-25 Employees: 7.7%
- 1-10 Employees: 7.7%
Sri Lanka wood product export
Percent of sales from exports in 2006
Percent of respondents (n= 26)

- 1-9%: 84.0%
- 10-19%: 12.0%
- 20-29%: 4.0%
Sri Lanka wood and wood product exporters
Company experience with exporting-number of years
percent of respondents (n= 26)
Sri Lanka wood product exporters

Wood Products exported by respondents
percent of respondents (n=26) (multiple responses possible)

- Flooring: 11.5%
- Shelving: 15.4%
- Kitchen utensils: 15.4%
- Ornaments: 19.2%
- Wooden toys: 19.2%
- Molding and millwork: 23.1%
- Cabinets: 26.9%
- Furniture and parts: 30.8%
Sri Lanka wood product exporters

**Importer partner countries**

percent of respondents (n=26) (multiple responses possible)

- Pakistan: 4%
- Japan: 4%
- Indonesia: 4%
- Germany: 4%
- China: 8%
- Australia: 8%
- India: 12%
- USA: 20%
- UK: 36%
Sri Lanka wood product exporters
Marketing efforts
percent of respondents (n=26)

S1 - doing market research prior to introduction of their products

S2 - having a strategic plan for wood product exporting

S3 - understanding competitor strengths and weaknesses

S4 - prepare a marketing plan

S5 - targeting specific markets

---

![Graph showing the percentage of respondents agreeing with each statement.

- **S1**: Strongly disagree (0%), Somewhat disagree (0%), Neither agree nor disagree (0%), Somewhat agree (0%), Strongly agree (0%)
- **S2**: Strongly disagree (0%), Somewhat disagree (0%), Neither agree nor disagree (0%), Somewhat agree (0%), Strongly agree (0%)
- **S3**: Strongly disagree (0%), Somewhat disagree (0%), Neither agree nor disagree (0%), Somewhat agree (0%), Strongly agree (0%)
- **S4**: Strongly disagree (0%), Somewhat disagree (0%), Neither agree nor disagree (0%), Somewhat agree (0%), Strongly agree (0%)
- **S5**: Strongly disagree (0%), Somewhat disagree (0%), Neither agree nor disagree (0%), Somewhat agree (0%), Strongly agree (0%)
**Sri Lanka wood product exporters**

**Sources of market information**

Mean values of scale: 1=not important at all; 2=somewhat important; 3=very important, (n=26)

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newsletters</td>
<td>1.9</td>
</tr>
<tr>
<td>Direct mail</td>
<td>2.5</td>
</tr>
<tr>
<td>Trade magazine adds</td>
<td>2.8</td>
</tr>
<tr>
<td>Distributors</td>
<td>3.1</td>
</tr>
<tr>
<td>Workshops</td>
<td>3.4</td>
</tr>
<tr>
<td>Sales representative</td>
<td>3.4</td>
</tr>
<tr>
<td>E-mail</td>
<td>3.5</td>
</tr>
<tr>
<td>International trade shows</td>
<td>3.6</td>
</tr>
<tr>
<td>Magazines</td>
<td>3.6</td>
</tr>
<tr>
<td>Catalogues</td>
<td>3.9</td>
</tr>
<tr>
<td>Web</td>
<td>3.9</td>
</tr>
<tr>
<td>WOM</td>
<td>4.7</td>
</tr>
</tbody>
</table>
Sri Lanka wood product exporters

Certification issues
percent of respondents (n=26)

Q1 - Certified products can help my company reach diversified markets

Q2 - Certified products can capture price premiums

Q3 - Certified products help to protect environment

Q4 - I would like to get information about forest certification

Q5 - I would incur an extra cost to certify my wood products

Graph showing responses to the questions with color-coded bars for strongly disagree, somewhat agree, neither agree nor disagree, somewhat disagree, and strongly agree.
## Sri Lanka wood product exporters

### Export limitations

Mean values of Scale: 1 = Strongly disagree; 3 = Neither agree nor disagree; 5 = Strongly agree

<table>
<thead>
<tr>
<th>Policies</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of flexible forest policy regulations</td>
<td>4.0</td>
</tr>
<tr>
<td>Research findings are not readily available</td>
<td>4.0</td>
</tr>
<tr>
<td>Lack of policies to encourage existing investments</td>
<td>4.1</td>
</tr>
<tr>
<td>Lack of policies to encourage new investments</td>
<td>4.1</td>
</tr>
<tr>
<td>High export duties/tariff</td>
<td>4.8</td>
</tr>
<tr>
<td>Difficulty in meeting delivery schedules</td>
<td>4.0</td>
</tr>
<tr>
<td>Lack of information on buyers</td>
<td>4.4</td>
</tr>
<tr>
<td>Lack of production technology</td>
<td>4.5</td>
</tr>
<tr>
<td>Lack of skilled labor</td>
<td>4.8</td>
</tr>
<tr>
<td>Inadequate and inefficient sea cargo transportation</td>
<td>4.4</td>
</tr>
<tr>
<td>Inefficient custom procedures</td>
<td>4.8</td>
</tr>
<tr>
<td>High shipping/handling cost</td>
<td>4.9</td>
</tr>
<tr>
<td>Bad transportation infrastructure</td>
<td>5.0</td>
</tr>
</tbody>
</table>

### Labor & Technology

- Lack of production technology
- Lack of skilled labor
- Inadequate and inefficient sea cargo transportation

### Transportation

- Bad transportation infrastructure
Sri Lanka wood product exporters
Future exports to the U.S. for respondents not currently doing so
percent of respondents (n=14)

- Not certain, 35.7%
- Definitely in the future, 14.3%
- Definitely not, 50.0%

* 38.4 % of respondents are currently exporting to the U.S. market
Three market segments in U.S.:
- Small to medium scale but moderate importers
- Medium to large scale but minor importers
- Small to medium scale but major importers

*Exporters can tailor marketing strategies and plans to target market segments.*

Most important buyer selection factors for U.S. wood product importers: Certification and marketing, product attributes, client contact, quality products supply, and timber species and supplier reputation

*Exporters should focus on selected factors to penetrate or maintain presence in the U.S. market.*
Conclusion and Discussion

- Word of mouth, e-mail, and web sites are the most used sources of information for U.S. importers. Suppliers should develop relationships and use Internet technologies to effectively convey product information to U.S. buyers/importers.

- Most popular certification programs for U.S. importers are FSC, SFI, and ISO 14000. If wood products exporters wish to exploit U.S. certified wood products markets, they should gain an understanding of these programs.
Both U.S. and Sri Lanka respondents are unlikely to pay a cost for certification. Neither importers nor exporters agree that certified products can capture price premiums. 

*Need to bring down the cost of certification or make certification profitable.*

Wooden toys are a major exported product from Sri Lanka. 

*Lead contaminated toys has become a serious issue in U.S. particularly for products from China. This can be an opportunity for Sri Lanka exporters to export certified lead-free wooden toys.*
Conclusion and Discussion

- Sri Lanka respondents was interested in receiving more information about forest certification. 
  *Need for outreach and extension, build awareness about certification.*

- Major limiting factors for Sri Lanka wood product export expansion: Inefficient internal and external transportation, lack of supportive government policies and lengthy custom procedure, lack of experienced labor, old production technology, and difficulty meeting buyer required delivery schedules. 
  *Government institutions could play an expanded role in supporting industry export development.*
Conclusion and Discussion

- Sri Lankan respondents were interested in exporting their products to the U.S. in the future.
- U.S. importers are seeking new suppliers and would like to obtain information about Sri Lanka wood products.
- Half of U.S. respondents are intending to diversify their import product mix in the next 5 years.

These findings suggest that there is an opportunity for Sri Lanka exporters to take advantage of new markets in the U.S.
Dr. Richard Vlosky, School of Renewable Natural Resources: Committee Chair

Dr. Michael Dunn, Department of Ag. Economics and Agribusiness: Committee Member

Dr. Niels de Hoop, School of Renewable Natural Resources: Committee Member

Dr. Todd Shupe, School of Renewable Natural Resources: Committee Member

Louisiana Forest Products Development Center

The School of Renewable Natural Resources, LSU