

**Louisiana Value-Added Wood Products
Industry Development**

**Findings and Recommendations of
The Governor's Forest Industry Development Task Force**

**Volume I
Summary of Findings and Recommendations**

and

**Volume II
Full Report of Findings, Recommendations and Supporting Materials**

Submitted to:

Mr. Kevin Reilly, Secretary
Louisiana Department of Economic Development

and

Mr. Bob Odom, Commissioner
Louisiana Department of Agriculture and Forestry

March 4, 1997

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Summary of Findings and Recommendations

Introduction

In December of 1996, Louisiana Governor Murphy J. “Mike” Foster, by Executive Order, established a Forest Products Industry Development Task Force to identify opportunities for, and barriers to, growth and development in the value-added forest products industry in the State of Louisiana. By fostering growth of existing companies, as well as encouraging corporate recruitment, the goals of the Task Force are to maximize the value of Louisiana’s forest resources and to provide economic and employment opportunities for its citizens.

The Task Force, jointly overseen by the Department of Agriculture and Forestry and the Louisiana Department of Economic Development is comprised of representatives from industry, associations, government and academia. Task Force members were designated by Kevin Reilly, Secretary of the Department of Economic Development and Bob Odom, Commissioner, Department of Agriculture and Forestry.

This report is the culmination of five months of effort by the Task Force. It contains an overview of the wood products industry in Louisiana, a discussion of current problems and specific recommendations to improve industry competitiveness.

*** Note that page numbers in parentheses indicate where each section is discussed in Volume II: Full Report of Findings, Recommendations and Supporting Materials. ***

Summary of Findings

- ⇒ States in regions with abundant forest resources are developing approaches to stabilize rural economies and maximize economic contribution. Further development of the secondary wood products industry in Louisiana can create employment opportunities and increase the value of the state’s forest resources. (pages 43-47)

- ⇒ Research has shown that the secondary wood products industry in Louisiana has significant potential for expansion and development. Louisiana ranks low in adding value to its wood product resources and in other productivity indicators relative to neighboring states with similar resource bases and industry structures. For example, for every dollar of output from sawmills, Louisiana creates an additional \$0.97 of value added. This is over 50 percent lower than the average of \$1.97 of value added for seven southern states. This indicates that Louisiana has potential to add more value given its resource base and employee productivity. (page 40)

- ⇒ As an example of potential jobs creation, using Department of Commerce statistics, if the household furniture sector in Louisiana could increase added value from the current \$12.3 million level to the average of the five lowest value-adding states in the South (Florida, Alabama, Texas, Arkansas, Louisiana), or \$235.2 million, Louisiana could support an industry of an *additional* 5,735 new jobs. (page 41)
- ⇒ The current educational system in Louisiana provides little in the way of work force training and development appropriate for the needs of the state's value added forest products industries. While there are programs under development in select locations for the pulp and paper industry, largely developed by the industry for implementation in the technical college system, there remains a major gap in the skills needed by today's forest products industry sectors. (pages 5-13)
- ⇒ A comprehensive promotional and marketing program to increase the awareness, utilization and applications for value-added wood products does not currently exist in Louisiana. (pages 14-21)
- ⇒ In order for any successful effort to move forward, a state-level forest products sector economic development initiative is necessary. This initiative must have strong government leadership, interagency cooperation, adequate program funding and strong industry support. State government at the legislative and executive levels must be committed to an industry development program. (pages 43-47)
- ⇒ The necessary infrastructure to facilitate secondary or value-added industry development is in place. The foundation of the Task Force's recommendations is to utilize and enhance what already exists. The key element is improved coordination and cooperation to achieve goals and objectives. (pages 2-4)

Summary of Recommendations

The Governor's Forest Industry Development Task Force (the Task Force) respectfully submits the following recommendations to enhance secondary wood products industry development in Louisiana:

Louisiana Wood Products Coordinating Council (LWPCC) (pages 2-4)

- A Louisiana Wood Products Coordinating Council (LWPCC) should be formed to improve and promote competitiveness of Louisiana's secondary solid wood products industry.
- The LWPCC would be comprised of majority representation from industry. In addition, academic and government members would represent a number of agencies including the

Louisiana Department of Agriculture and Forestry, the Louisiana Department of Economic Development, the Louisiana Forest Products Laboratory in the Louisiana State University Agricultural Center, the Louisiana Furnishings Industry Association, the Governor's Office of Rural Economic Development, the Louisiana Cooperative Extension Service and the Louisiana Forestry Association.

- Only industry representatives of the LWPCC would be voting members. Government and academic representatives would be non-voting members.
- A LWPCC chairperson from the secondary solid wood products industry would be appointed by the Governor for a two-year term.
- Primary LWPCC clients would be companies in the secondary solid wood products industry.
- The LWPCC would be charged with the prioritization of projects and activities that support secondary wood products industry development.
- The LWPCC would provide oversight for three primary development areas, each of which would be coordinated by existing agencies as follows:
 - ◆ Employee and Management Training and Development: Louisiana Furnishings Industry Association
 - ◆ Promotion and Market Development: Louisiana Department of Agriculture and Forestry and the Louisiana Department of Economic Development
 - ◆ Information and Research Support: The Louisiana Forest Products Laboratory at the Louisiana State University Agricultural Center
- Each of the coordinating agencies may have a particular expertise (i.e., the Louisiana Forest Products Laboratory in Research), but that should not be construed to mean that agency would be the only one doing work in this area.
- The LWPCC would be charged with developing operating bylaws and a schedule of meeting times and locations.
- LWPCC funding would be established through new public funds dedicated to development of the secondary solid wood products industry. These funds would be channeled through the Louisiana Department of Economic Development and/or the Louisiana Department of Agriculture and Forestry.
- The LWPCC would require and review proposals for projects and services provided to clients and approve or disapprove the allocation of funds.

- There would be no need for administrative funds for this council or any members on the council, therefore, all funds need to be allocated to specific projects. Each project would require anticipated results to be clearly identified and the unit doing the work to be held accountable.

Funding

- \$500,000 in new public funds would be appropriated annually for five years for secondary solid wood products industry development. Given a potential increase in 5,735 new jobs in the household furniture industry alone (if Louisiana can add value at the level of the next four lowest Southern states), this equates to a program cost of \$436/job. (\$2,500,000 over five years divided by 5,735 new jobs).
- These new public funds would be used to leverage additional funding through outside grants and contracts and industry support.
- It is recommended that each coordinating agency develop a five-year strategic plan for their respective areas. The plan would include specific program elements, timetables for implementation, benchmarks of success and progress and budgets. The strategic plans would be reviewed and approved by the Coordinating Council.

For a frame of reference, Table 1 shows funding levels for wood products industry development programs or projects in various states. The higher numbers are part of comprehensive legislated programs while lower figures are typically for discreet research projects or studies. In addition, there is a brief description of efforts in the three most progressive states, Kentucky, Oregon and Pennsylvania.

Table 1. Wood Products Industry Development Programs by State

State	Funding Level
Arkansas	\$ 2,500,000
Oregon	\$ 2,250,000
Kentucky	\$ 1,000,000
Pennsylvania (Annual)	\$ 200,000
Georgia	\$ 200,000
Michigan	\$ 150,000
South Carolina	\$ 67,000
Tennessee	\$ 46,500
Total	\$ 6,413,500
Average	\$ 801,688

Kentucky: Along with other state agencies and representatives from the forest products industry, a long range expansion and development plan was created in 1990 to be implemented over a five year period. House Bill 417 created the East Kentucky Economic Development and Jobs Creation Corporation. The corporation is budgeted **\$1 Million** targeting wood industry development activities for the five year period.

Oregon: An effort to stimulate forest sector development was the establishment in 1991 of the Oregon Wood Products Competitiveness Corporation (WPCC). The WPCC was originally funded through the State Legislature at **\$2.25 Million** but since 1993 became a private sector program with funding supplied by participating wood products industry companies, grants and contracts and fees for services. The WPCC's mission is to assist the state's secondary forest products industry to become "the finest, most competitive value added producer in the world."

Pennsylvania: With the support of the Governor and State Legislature, Pennsylvania initiated a multifaceted aggressive hardwood initiative in early 1989 to elevate the economic yield of the state's forest products industry. This program was funded at **\$200,000** annually. As a result of the hardwood initiative, Pennsylvania has secured several major new hardwood companies and increased employment at existing companies. In addition, millions of dollars in state financial assistance has been provided to existing companies within the industry.

Major Areas of Programmatic Emphasis

Employee and Management Training and Development (pages 5-13)

The current educational system in Louisiana provides little in the way of work force training and development for the state's value-added forest products industries. While there are programs under development in select locations for the pulp and paper industry, largely developed by the industry for implementation in the technical college system, there remains a major gap in the skills needed by today's forest value-added wood products industry sectors.

In order to reach as many owner/managers as possible, educational and training services should be offered utilizing many media including seminars and workshops, computer aided long distance learning, technical videos and others. In addition, outside expertise may provide specialized machine and process training.

The establishment of comprehensive curricula into a production management/operations institute utilizing modular home study methods as well as programs of study at a "center" would also serve as excellent recruitment incentives to attract new industry to the state. Such programs would place Louisiana on par with other southern states' offerings to wood industry companies. This program could be used in concert with such existing incentive programs as Quick Start, the state's current new or expanding company training offering.

Recommendations

The Louisiana Furnishings Industry Association would be charged with coordinating the development of a management and employee training programs targeting the secondary wood products industry.

1. Utilize a facility located at the England Air Park in Alexandria as the cornerstone center of a secondary wood products industry training and development program. The facility, located in central Louisiana, includes a building partially equipped with woodworking machinery, dust collection system, compressed air system, classrooms and administrative areas. In addition, dormitory facilities are available to house students in private rooms, food service, recreation, private police security, warehousing and many other amenities create a ready made site that provides the flexibility and adaptability needed. England Air Park authorities indicate that the facility could be further equipped and the building remodeled to provide floor layout specifications to the lessors specifications. Also located on site and available through other resident organizations are classroom with full distance learning capabilities including interactive compressed video and two way satellite capabilities. Complete state of the art conference facilities round out the total package available at this site. The site is ideally equipped to lower the start up costs of such a training facility and is centrally located in the state. This site may be most appropriate for relative short-term training programs structured in modules which in total would last no longer than eight to ten weeks as well as other short-term event specific and management training programs.
2. The majority of Louisiana secondary forest products companies are located in two major areas of the state: 1) Baton Rouge and points east and; 2) concentrated around the Caddo-Bossier parish areas. Because of these concentrations other training programs should be considered which take advantage of the population densities in the Baton Rouge-New Orleans-Florida Parishes regions and Shreveport-Bossier metropolitan areas. Recognizing this, investments in training programs in these areas may best take the form of a center which is able to provide machine intensive training opportunities for a number of classroom instruction sites within the region. Students would receive classroom instruction on various types of machinery or processes at their respective schools and come to the center on rotating schedules to receive hands-on machine training. It is recommended that two training centers be established, one in each of these locations to be coordinated with the School-To-Work program.

Promotion and Marketing (pages 14-21)

The goal of a promotional program for secondary wood products industry development is to increase the awareness, utilization and applications for Louisiana value-added wood products. The Louisiana Department of Agriculture and Forestry (LDAF) and Louisiana Department of Economic Development (LADED) would jointly be the lead agencies to coordinate the promotion and market development of the Louisiana secondary wood products industry.

Such efforts may include but are not limited to advertising, reports, brochures, trade missions, market studies and other activities designed to make customers and potential customers of Louisiana secondary wood products more aware of the availability and quality of such secondary wood products.

Specific recommended activities are:

1. Develop an industry interactive data base that will include extensive company data, trade leads, buyer and seller matchmaking capabilities and joint venture opportunities.
2. Maintain direct contact with other associations important to industry development marketing program activities.
3. Develop, publish and distribute promotional literature for direct mail distribution.
4. Develop ad copy for publication in trade magazines stressing Louisiana finished products.
5. Promote value-added wood products through domestic and foreign trade shows.
6. Develop and publish an industry newsletter for Louisiana with US and foreign distribution. (Translated as appropriate)
7. Plan and conduct seminars for furniture industry decision-makers to provide an educational overview of value-added wood product benefits in furniture manufacturing.
8. Develop and produce a video on value-added industry in Louisiana.
9. Collect and distribute information regarding value-added wood products. Including pertinent market data, trends, markets, statistics and research.
10. Incorporate incomplete existing programs and develop new approaches and programs to meet the export objectives.
11. Conduct research to promote and better utilize value-added wood products in export markets.
12. Develop a hardcopy and Internet catalog of Louisiana furniture and other value-added wood product manufacturers.
13. Develop a public relations & advertising campaign directed towards the use of value-added wood products such as furniture, flooring, paneling, moulding and millwork.
14. Organize & conduct trade missions.
15. Provide funding to help sponsor Louisiana company participation at trade shows.

Information and Research Support (pages 23-24)

Information maintenance and research support are required to support all areas. The Louisiana Forest Products Laboratory would take the lead role in coordinating the collection and maintenance of research and information about the Louisiana secondary wood products industry including, but is not limited to, industry information, industry markets, compliance and safety issues, workman's compensation issues and the industry work force.

Specific activities that contribute to the research effort may include but are not limited to:

- Surveys of firms, workers, customers and others with information relevant to the secondary wood products industry.
- A periodic census of secondary wood products producers.
- Publications and reports on the relative competitiveness of Louisiana's secondary wood products industry.
- Computerized databases of market, product, production and other relevant information.
- Domestic and international market development research.
- Research on regulatory issues facing the industry in the areas of environmental and safety compliance including the costs for environmental regulation and monitoring compared to neighboring states.
- Research on industry-specific workman's compensation issues.

Summary

The State of Louisiana is well positioned with an existing infrastructure of expertise to execute a value-added wood products industry initiative. The recommendations of the Task Force draw upon this expertise to craft a development program that has a significant probability of success.

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Full Report of Findings, Recommendations and Supporting Materials

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Introduction

Research has shown that the secondary wood products industry in Louisiana has significant potential for expansion and development. Relative to neighboring states with similar resource bases and industry structures, Louisiana ranks low with regard to many productivity indicators and in the State's adding of value to its wood product resources.

In December of 1996, Louisiana Governor Murphy J. "Mike" Foster, by Executive Order, established a Forest Products Industry Development Task Force to identify opportunities for, and barriers to, growth and development in the value-added forest products industry in the State of Louisiana. By fostering growth of existing companies, as well as encouraging corporate recruitment, the goals of the Task Force are to maximize the value of Louisiana's forest resources and to provide economic and employment opportunities for its citizens.

The Task Force, jointly overseen by the Department of Agriculture and Forestry and the Louisiana Department of Economic Development is comprised of representatives from industry, associations, government and academia. Task Force members were designated by Kevin Reilly, Secretary of the Department of Economic Development and Bob Odom, Commissioner, Department of Agriculture and Forestry.

This report is the culmination of five months of effort by the Task Force. It contains an overview of the wood products industry in Louisiana, a discussion of current problems and specific recommendations to improve industry competitiveness.

Following are some key terms referred to in this document. It is important to note that the focus of this effort is on the secondary or value-added solid wood products sector in Louisiana. It does not include primary wood products nor does it include pulp and paper products.

Manufacturing: means the physical transformation of a product from one form to another while adding value.

Louisiana firm: means firms that are located within Louisiana and conduct manufacturing operations within Louisiana.

Primary wood products: means logs, cants and commodity grades of lumber as recognized by the Southern Forest Products Association and commodity grades of plywood, waferboard, oriented strand board and similar building panels as defined by the American Plywood Association.

Secondary wood products: means intermediate components or finished products with a minimum 50 percent solid or reconstituted wood based on volume or value, but not including primary wood products. “Secondary wood products” is the result of the physical alteration of the wood input by a change in the dimension or shape, the chemical composition, the physical appearance or other physical properties of the wood input.

This report and recommendations covers the following areas:

1. Recommended action plan to advance value-added wood products industry development.
2. Productivity and value-added comparisons between Louisiana and other wood products competing states.
3. A discussion of criteria for successful value-added wood products industry growth and development.
4. An overview of the forest resource in Louisiana.
5. A discussion of the solid wood forest products industry in Louisiana.
6. Other issues that impact the industry.

Task Force Recommendations

The Governor's Forest Industry Development Task Force (the Task Force) has developed the following recommendations to enhance secondary wood products industry development in Louisiana.

Establishment of a Coordinating Council

The Task Force recommends that a coordinating entity called the Louisiana Wood Products Coordinating Council (LWPCC) be established to improve competitiveness of Louisiana's secondary wood products industry. The LWPCC would be comprised of representatives from industry, government and academia including the Louisiana Department of Agriculture and Forestry, the Louisiana Department of Economic Development, the Louisiana Forest Products Laboratory in the Louisiana State University Agricultural Center, the Louisiana Furnishings Industry Association, the Governor's Office of Rural Economic Development, Louisiana Cooperative Extension Service, Louisiana Forestry Association and utilities and/or other service companies.

The primary mission of the LWPCC would be to facilitate communication and coordination in furthering industry development.

The LWPCC will be charged with 1) identifying and addressing the needs of existing and potential firms in the secondary wood products industry and 2) facilitating cooperation among existing agencies and programs to promote industry development. The LWPCC, working in conjunction with lead agencies would coordinate development of a comprehensive strategy for addressing competitiveness.

In addition to council meetings, the LWPCC would sponsor meetings, focus groups, conferences and other forums to bring representatives of the industry together to discuss common problems, exchange information and develop cooperative means for improving production, technology, marketing, work force training or other issues of concern.

Major Areas of Programmatic Emphasis

The LWPCC would be coordinate three primary components, each of which would be coordinated by an existing agency. A full discussion of recommendations for each area can be found in the next section.

- ***Employee and Management Training and Development: Louisiana Furnishings Industry Association***
- ***Promotion and Market Development: Louisiana Department of Agriculture and Forestry and Louisiana Department of Economic Development***
- ***Information and Research Support: Louisiana Forest Products Laboratory at the Louisiana State University Agricultural Center***

In addition to these areas of emphasis, the Task Force has identified a number of issues that have broader impact on industry in Louisiana beyond the scope of the secondary wood products sector. These additional issues and concerns are discussed in the next section of the report.

Each of the three major program areas of emphasis, Employee and Management Training and Development, Promotion and Marketing and Research are discussed in depth in the following sections.

Employee and Management Training and Development

The Louisiana Furnishings Industry Association (LFIA) would be charged with coordinating the development of a management and employee training programs targeting the secondary wood products industry. A summary of LFIA programs and capabilities can be found at the end of this section.

An Assessment of Louisiana's Current Wood Products Value Added Training and Development Programs

The current educational system in Louisiana provides little in the way of work force training and development appropriate for the needs of the state's value added forest products industries. While there are programs under development in select locations for the pulp and paper industry, largely developed by the industry for implementation in the technical college system, there remains a major gap in the skills needed by today's forest products industry sectors.

1. Many high schools have abandoned woodworking programs.
2. High school courses that remain face a number of problems:
 - a. lack of centralized source for instructor guidance
 - d. antiquated textbooks
 - c. minimal, old shop equipment
 - d. lack of project materials
3. High school courses present little or no information on career opportunities.
4. Few trade schools in the state offer viable carpentry or furniture building programs.
5. A survey of in-state furniture builders indicates that very few had attended high school or trade school training programs.

1. Many high schools have abandoned woodworking programs. Increasing drop out rates and decreasing average test scores suggests that we have been developing a student population with a decreasing potential for success in career paths requiring college or higher levels of education. Curricula preparing students for non-professional careers, including carpentry and furniture

building, have not responded to the potential demand for trade school training. Instead courses in woodworking and furniture building have regressed at both the high school and trade school levels.

The growing need for non-professional training would be more apparent if more students failed to meet entrance requirements at the college level. Instead, students are accepted with the requirement that they successfully complete remedial courses in mathematics and English. The numbers of such remedial courses have swelled. Many students take these same courses several times before mastering the material. Others never do.

A persisting stigma continues to be attached to the perception of pursuing a non-professional career path. Students retain the belief that successful completion of a college curriculum is a panacea for a successful and financially rewarding adult career.

2. High school courses that remain face a number of problems:

a. Instructors have no centralized or regional source of guidance.

Instructors at the few remaining high schools that offer woodworking courses feel very isolated. There is no one else on the faculty working in their subject area. Further, these instructors often can not locate a cohort at another school in their area. They also function without any centralized regional or statewide office or person they can turn to for instructional guidance.

b. Text books are antiquated.

Textbooks are out of date. Although many methods and techniques have not changed, the text, examples and tooling references often are decades out of date. Instructor guides and assistance manuals are nonexistent.

c. Minimal, old shop equipment is the norm.

The remaining high school woodworking shops typically have only the most basic items of equipment. That equipment is usually very old. It often is in need of repair which could make it dangerous to operate and unreliable. Instructors are constantly seeking used equipment that someone is willing to donate. Such machinery is typically not in working condition. Further time is spent by the instructors trying to locate outdated replacement parts.

d. Lack of project materials

Funds for the purchase of materials for class projects are among the lowest priorities at most schools the still offer a woodworking course. Students frequently must spend their own money to purchase lumber and hardware for the project of their choice. The materials that are available will generally include plywood rather than hardwoods.

Project selection is further impaired by the lack of quality materials. Classes often are reduced to building bookcases and shelving for other classrooms.

3. High school courses present little or no information on career opportunities.

Since there are no statewide guidelines, there is no assurance that the remaining high school woodworking courses will offer any developed material or instruction informing students of career opportunities in our state's secondary wood products industry.

The unspoken impression that students receive is that there must not be much opportunity based on the apparent low instructional priority suggested by the outdated textbooks, malfunctioning machinery and nonexistent quality project materials. Conversely, the students attend other prioritized classes with modern texts and computers.

4. Few trade schools in the state offer viable carpentry or furniture building courses.

The number of state trade schools offering woodworking curriculums has also regressed. The programs that continue are sometimes a shadow of the high quality programs that were once offered.

5. A survey of in-state furniture builders indicates that very few had attended high school or trade school training programs.

A number of Louisiana Furnishings Industry Association furniture building members were questioned regarding training they had received to prepare them for the small businesses they now operate. With few exceptions, these members indicate that they had neither high school or trade school classes. Their typical source of education was a relative, an introductory level job at a woodworking shop followed by self taught adherence to methods and techniques collected from woodworking magazines and trade journals.

In light of these facts it is amazing to find that our state has 600-700 small woodworking companies, some of which have grown over the years to employ well over a hundred employees. This industry seems to be developing in spite of, rather than because of the attention it has received to date. One must wonder what might it be, or could it become should it receive the focus of any concerted economic development effort.

Several attempts have been made to develop programs; to date these efforts have largely failed to develop any programs which have continued beyond the first class. Lacking a high profile industrial and political presence, these efforts have been unsustainable. In fact, much of the equipment and staff associated with these programs are no longer available. Many of the programs were construction industry-oriented and with the demise of the construction industry in the mid-1980s much of the equipment was sold off and staff reassigned.

In addition, with a primarily construction orientation, there is reason to question whether the structure of previous training programs would have been adequate for value added wood processing and manufacturing operations. Further, with competition for scarce educational

resources from other higher profile industry segments such as petro-chemical and gaming, the opportunity for value added wood industry educational programs may simply have been overlooked. Regardless of the reasons for the current state of value added wood industry training programs in Louisiana, in order for Louisiana's value added wood products companies to be able to be competitive in the marketplace appropriate training of the work force must become a priority.

However, based on primary and secondary forest products industry hiring intention surveys conducted by the Louisiana Forest Product Laboratory (LFPL) (Vlosky et al. 1995) the number of new employees forecasted over the next 2-4 years totals nearly 4,000 positions. Given this employment demand, as estimated by survey respondents, the need to develop and sustain training programs for the forest products industry is immediate and critical.

Training in Other States

The emphasis on training for value added forest products industries as a primary tool of enhanced industry competitiveness is demonstrated by several states. In a national survey of state's with forest products industry development programs conducted by the Louisiana Forest Products Laboratory (LFPL) (Vlosky et al, 1995), labor training was one of the top three issues in virtually every state participating in the survey.

The level of commitment varies from state to state with most states undertaking significant programs for industry improvement. For example, Oregon has dedicated approximately \$1million for value added forest products industry labor training to alleviate unemployment and enhance that state's value added forest products industries' competitiveness. Fox Valley Junior College in Michigan has developed an extensive wood products training curriculum as have schools in Mississippi, Kentucky, North Carolina, Virginia, and Pennsylvania to name but a few. The Architectural Woodworking Institute, a national professional architectural association, is currently reworking its apprenticeship program in response to its members' needs for updated labor training programs in order to remain competitive.

Training Dimensions

While the need for trained new employees has been demonstrated, other training areas must also be addressed. For example, many Louisiana wood products company executives report a need for skills upgrade of existing employees. With the advent of computers in the workplace, ever increasing environmental and labor regulation as well the growing diversity of the workforce many of Louisiana's small value added wood products companies find it near impossible to remain abreast of these rapidly changing workplace issues. Further, because of the structure and complexity of Louisiana's educational system there seems to be a great deal of confusion about how to get the training needed at the time needed in the place needed. In essence, existing educational systems have been unable, because of structure and regulation, to meet the needs of this industry.

Many companies report the need for specialized equipment or process training. Again, the current educational system has been unable to provide the flexibility and diversity of training. In many cases, this may be the result of lack of knowledge about where to locate or outsource a particular expertise, or perhaps, because of a lack of communication between education and industry.

Again the emphasis should be placed on how to deliver appropriate multi-dimensional educational and training services to the value added wood products industry. This training must also be able to service the needs of a variety of sectors from which new trainees may be drawn. For example, out-of-school unemployed youth represent one possible pool of trainable labor, high school students involved in school to work programs another, adults changing careers yet another, adults coming into the work force for the first time still another. These groups have different needs and require varying training schedules or needs as well as facility support.

In addition, current owner/managers have indicated a need for management and marketing skills as well as technical training in computers and other technology intensive skills. Such training may require distance learning and other innovative techniques which require significant coordination between existing agencies in order to effectively deliver the service.

Add to this the need for specialized and advanced machinery training opportunities for existing employees and the need for a very flexible, yet industry specific, training program becomes very apparent. While the requirements of much of the training needs to be industry specific, there are various agencies in secondary and post secondary education capable of providing technical support for curriculum development and in some cases technology and facilities for service delivery. The difficulty remains in the coordination of programs and program elements.

While the need for flexible and innovative methods of educational service delivery is imperative, in general, the broad nature of the basic skills training required for new hires falls within the realm of relatively inexpensive and generalized equipment. Research conducted by Drs. Harding, Vlosky and Gazo at LFPL, LSU Baton Rouge indicates that virtually all secondary value added forest products companies in Louisiana utilize the same twenty to thirty basic machines with a limited number of additional specialized machines used in specific instances. This indicates that most of the state's value added wood industry sectors could easily be served from a limited number of training centers. Consequently the funds needed to start an adequate training program would be small when compared to the requirements of other capital intensive industry sectors.

In order to reach as many owner/managers as possible, educational and training services may be offered through various media including seminars and workshops, computer aided long distance learning, and technical videos, to name a few. In addition, outsourcing of experts to provide specialized machine and process training can also be utilized.

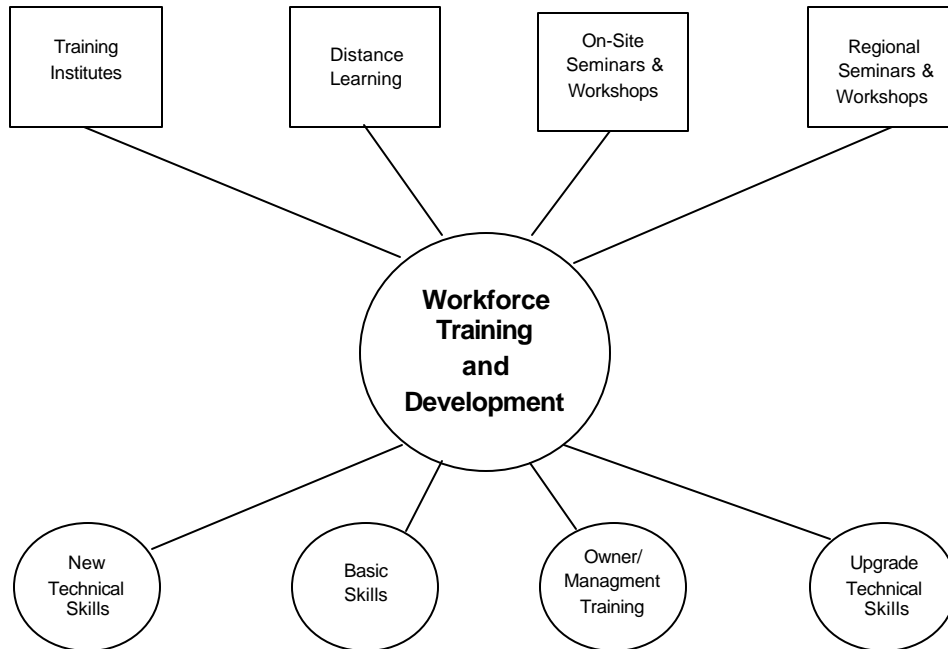
The establishment of comprehensive curricula into a production management/operations institute utilizing modular home study methods, as well as programs of study at a “center”, would also serve as excellent recruitment incentives to attract new industry to the state. Such programs would place the state on par with other Southern states’ offerings to wood industry companies. This program could be used in concert with such existing incentive programs as Quick Start, the state’s current new or expanding company training offering.

Recommendations

The Louisiana Furnishings Industry Association be charged with coordinating the development of a management and employee training programs targeting the secondary wood products industry.

The following recommendations are made under the current status of the educational system in Louisiana. However, because there may be significant changes in the near future to the structure of Louisiana’s educational infrastructure in an effort to reduce redundancies and inefficiencies in that system, these recommendations must be considered as tentative. Even with the foregoing caveat, the need to focus a sustainable educational effort on existing labor, owner/managers and potential new industry employees remains critical and immediate. Figure 1 shows the proposed structure for a value-added wood products industry training program. The main point is that it would be comprehensive and would draw upon the expertise and support that currently exists in the State.

Figure 1. Training and Development Structure



Task Force members visited a facility located at the England Air Park in Alexandria. The facility, located in central Louisiana, includes a building partially equipped with woodworking machinery, dust collection system, compressed air system, classrooms and administrative areas. In addition, dormitory facilities are available to house students in private rooms. Food service, recreation, private police security, warehousing and many other amenities create a ready made site that provides the flexibility and adaptability needed. England Air Park authorities indicate that the facility could be further equipped and the building remodeled to meet the required specifications.

Also located on site and available through other resident organizations are classroom with full distance learning capabilities, including interactive compressed video and two way satellite capabilities. Complete state of the art conference facilities round out the total package available at this site. The site is ideally equipped to lower the start up costs of such a training facility and is centrally located in the state.

This particular location may offer an especially attractive training/education incentive to out-of-state wood products companies considering locating in Louisiana, especially those locating north of Interstate 10. This site is appropriate for short-term training programs structured in modules which, in total, would last no longer than eight to ten weeks as well as other short-term event specific training programs.

However, of concern is the preponderance of Louisiana secondary forest products companies located in two major areas of the state. Because of these concentrations, other training programs should be considered to serve secondary wood products companies in the Baton Rouge-New Orleans-Florida Parishes region and Shreveport-Bossier metropolitan area.

These industry concentrations occur because of very short product distribution channels for Louisiana secondary wood products. Recognizing these influences, one center which is able to provide machine intensive training opportunities could serve a number of classroom instruction sites within each region. Students would receive classroom instruction on various types of machinery or processes at their respective schools and come to the center on rotating schedules to receive hands-on machine training.

Industry groups or industry concentrations which lend themselves to easy access and communication to serve as intern or apprenticeship sites, as well local placement opportunities for new employees after completion of a long-term training program such as “school to work” or other distributive educational student programs, may be the most appropriate strategy for these sites.

Given the current structure of Louisiana’s educational system, a dichotomous structure such as proposed here offers maximum flexibility and access to many resources at a minimal start-up and operating cost. The key is the ability of the system to provide a cornucopia of training programs by developing a network of resources available to accomplish a very complex mission of training and coordination. The proposed program provides an opportunity for all aspects of Louisiana’s educational system to be focused on a broad base of industry training needs. This system could serve as a model for future training and development efforts as other industry development opportunities are discovered.

The total program creates an educational value which greatly exceeds the cost to implement the program. While a complete proforma has not been developed for this proposal, the fact of the inherent flexibility and adaptability of the proposed programs through the application of network concepts and modular curriculum structures indicates that the value to the State of Louisiana in the establishment of such a program would be immense.

An Overview of the Louisiana Furnishings Industry Association

The LFIA currently offers:

- 5,000 square foot Ponchatoula showroom open 7 days a week for sales, display and references
- Member store featuring member's lumber and supplies available only to other members at prices well below retail
- Lake Charles showroom (opening Fall '96)
- Louisiana Furnishings and Art Showcase & Trade Show held in conjunction with the New Orleans Home & Garden Show every March. Over 100,000 attendees, designers, decorators and dealers see and buy member's products. Members save \$400 off the Home & Garden Show promoter's standard booth prices
- Full color member product catalog available at showroom and on the Internet
- Monthly newsletter
- Educational seminars held throughout the state
- Grant funds from federal, state and private sources to help fund various members services
- Member grant application assistance and/or grant administration
- Publicity of members and their products in all media within and outside the state
- Monthly meetings
- Interaction with statewide designer and decorator community
- Interaction with local and state government offices and departments to encourage support for Louisiana Forest Products and Furnishing Industries
- Coordination and networking with members to exchange ideas and to do cooperative production to meet contract quantity, deadline or special needs specifications

Benefit and services that will soon be available:

- Additional showrooms. Locations in Ruston, Natchitoches and Slidell are currently being evaluated
- Statewide credit card charging and fund verification to facilitate member sales
- Statewide and showroom financing on high value purchases
- Lay-a-way purchase plans
- Supplemental health insurance
- Workmen's Compensation insurance
- Health insurance
- General liability insurance
- Business vehicle insurance
- Business property and equipment insurance
- Woodworking classes for members and non-members
- Labor training courses
- Booth fee subsidy for members participating in out-of-state trade shows
- Additional products available through member store

Promotion and Marketing

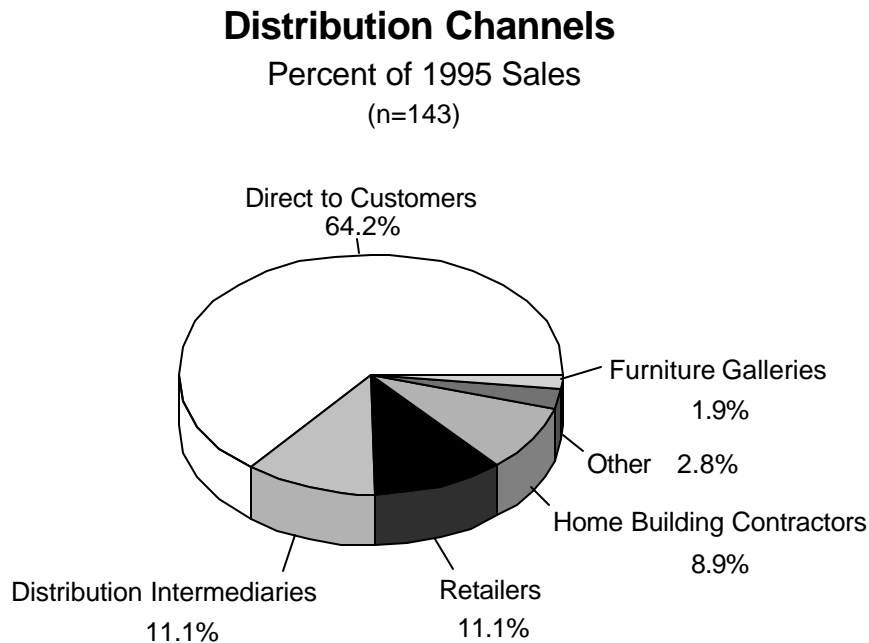
The second area of emphasis is promotion and marketing of the secondary industry in local, regional, national and international markets. Following is a brief overview of how Louisiana secondary producers currently market their products, a discussion of the marketing and promotion elements that would lend themselves to industry promotion, and a list of recommended activities.

The Louisiana Department of Agriculture and Forestry and the Louisiana Department of Economic Development would jointly be charged with coordinating the development of promotion and market development programs targeting the secondary wood products industry. A summary of these agency programs and capabilities can be found at the end of this section.

Distribution Channels and Markets Served

Almost two-thirds of 1995 Louisiana secondary manufacturer sales were made directly to customers or end-users (Figure 1). Given the small size of most companies, and the fact that only 2% of respondents have a budget dedicated for marketing activities, it is no surprise that such a large percentage of sales are made directly to customers. This is consistent with a 1994 Louisiana Forest Products Laboratory study which found that nearly 65 percent of Louisiana secondary wood products producers market their products within a 250 mile radius, a very limited market. Beyond direct sales, the remaining distribution channels, in order of importance are distribution intermediaries, retailers and home building contractors.

Figure 1.

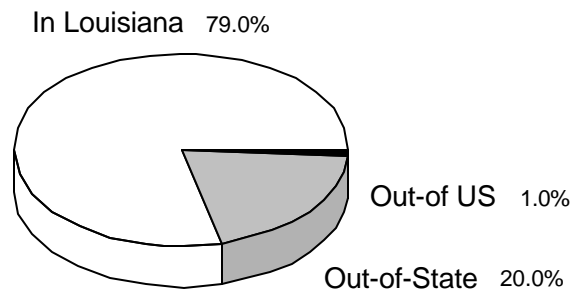


Looking at market scope another way, a vast majority of companies market their products in Louisiana, with very few occurrences of respondent companies selling products in international markets (Figure 2). As is expected, larger companies tend to have a greater market reach into other U.S. states and into export markets. A comprehensive industry promotion initiative can help expand Louisiana forest product sales to both Louisiana and non-Louisiana customers.

Figure 2.

Markets for Louisiana Secondary Wood Products Producers

Percent of 1995 Sales
(n=147)

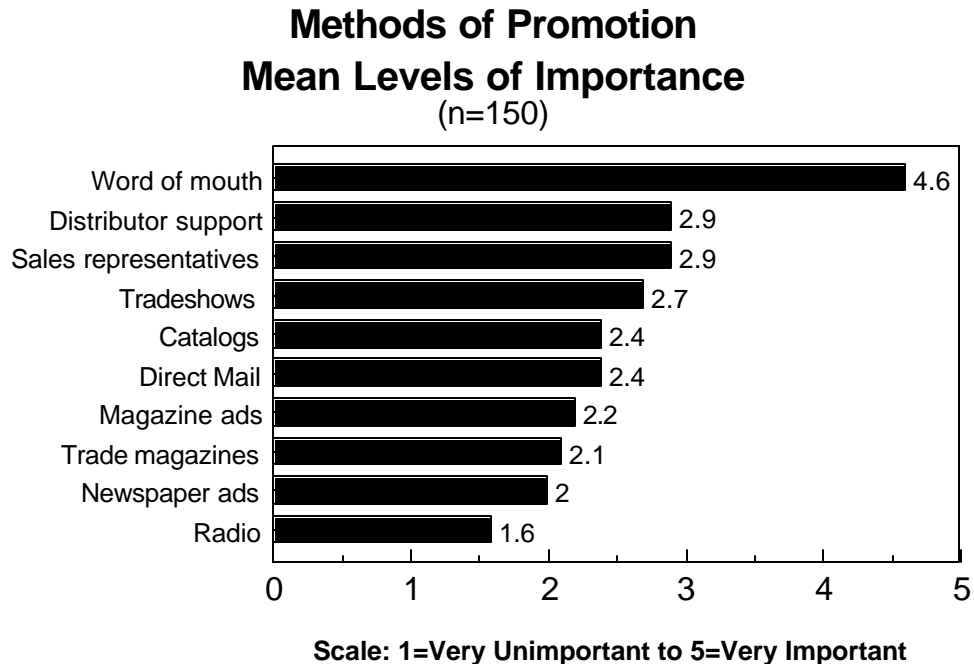


In addition to company size factors, respondents were asked if there were any other factors that led them to sell their products to customers outside of Louisiana. Conscious decisions are being made in this area. The desire to spread risk and diversify markets geographically was the number one cited reason. Economics also play a role. The ability to receive higher prices from out-of-state customers was acknowledged by some respondents. To a lesser extent, insufficient in-state demand and ease of doing business out-of-state were cited.

Promotion

Word-of-mouth was the only promotional method cited by study respondents with a ranking above 3.0 on a 5-point scale of importance (Figure 3). This is consistent with studies conducted on the secondary wood products industry in Louisiana and the hardwood dimension industry that found that word-of-mouth was the most cited promotional method (Vlosky et al. 1994; Vlosky 1996). A comprehensive set of promotional activities including tradeshows, direct mail and electronic media hold promise to increase awareness for Louisiana products.

Figure 3.



Industry Promotion-An Overview

Introduction

Industry promotion is only one aspect of the entire industry development strategy and must be integrated with other components in order to achieve strategic goals. Modern marketing calls for more than developing good products, pricing them attractively, and making them accessible to target customers. Companies in the Louisiana value-added forest products industry must also communicate with their present and potential customers.

The Promotion Mix

The promotion mix appropriate for industry development consists of three major tools:

Advertising:

Any paid form of nonpersonal presentation and promotion of ideas, goods, or services by an identified sponsor.

Direct Marketing:

Use of mail, telephone, and other nonpersonal contact tools to communicate with or solicit a response from specific customers and prospects.

Public Relations & Publicity:

A variety of programs designed to promote and/or protect a company's image or its individual products.

Potential Communication/Promotion Tools

- Print and broadcast ads
- Brochures
- Informational Booklets
- Directories
- Reprints of articles
- Audio-visual materials
- Symbols and logos
- Trade Show Exhibits
- Speeches
- Seminars
- Industry Reports
- Sponsorships
- Publications
- Community relations

Promotional Media and Activities

Although the message is vital to promotional success, an equally important factor is the medium through which it is presented. One decision is whether to use trade publications, direct mail, electronic media or all three. Selection of particular media also involves budgetary considerations.

Direct Mail Promotion

Direct mail delivers the promotion message first-hand to selected individuals. Possible mailing pieces range from a letter to a lengthy brochure. Direct mail can accomplish all of the major promotion functions, but its real contribution is in delivering the message to a precisely defined set of prospects. Direct mail is commonly used for industry image promotion, product and service promotion, and special marketing or industry development needs.

Direct mail is a viable promotion medium when potential targeted customers or business partners can be clearly identified and easily reached through the mail. It can be a wasteful medium if the prospect lists are so general in nature that it is difficult or impossible to find a common denominator among the prospects.

Exhibits and Trade Shows

Most industries stage a business show or exhibition annually to display new advances developments in the industry. Some recently published figures indicate that total attendance at 8,000 trade shows approximated 31.5 million, that 91,000 firms displayed their merchandise to potential buyers, and that firms were reported to have spent \$7 billion in order to exhibit. Generally, sellers present their products and services in booths visited by interested industry members.

A trade-show exhibit offers a unique opportunity to publicize a significant contribution to technology or to demonstrate new and old products. An effective selling message can be delivered to a relatively large and interested audience at one time.

Catalogs

Suppliers of products can develop catalogs describing their products and potential applications to likely buyers. Catalogs are an efficient way companies to generate sales. Catalogs can be a powerful promotional device; if properly distributed, can be on the shelves of every important potential buyer or client in the industry. Catalogs are a form of direct marketing. They generally contain enough information for the reader to make a purchase. In effect, a good catalog is like having a salesperson in the buyer's office at all times. In addition, the catalog will supplement Personal selling by providing information between sales calls. Some business marketers find that catalogs may in fact substitute for a salesperson or a rep in peripheral market areas.

Summary

Managing the promotion program begins with the determination of promotion objectives, which must be written and which must be directed to a specific audience. Once objectives are specified, funds must be allocated to promotion efforts.

Promotion messages are created with the understanding that the potential client or customer's perceptual process will influence receptivity to the message. The most effective appeal is one that projects product benefits sought by the targeted buying influential.

Promotion media are selected on the basis of their circulation and effectiveness; that is, how well their audience matches the desired audience of buying influentials. Direct mail places advertisements in the hands of precisely defined audiences. Finally, promotion effectiveness must be evaluated against the communication objectives established for the promotion campaign. Recognition, awareness, attitudes, and intention to buy are typical measures of business-to-business promotion performance.

Recommendations

The goal of a promotional program for forest products industry development is to increase the awareness, utilization, and applications for Louisiana value-added wood products. Jointly, the Louisiana Department of Agriculture and Forestry and the Louisiana Department of Economic Development would coordinate the promotion and market development of Louisiana secondary wood products. Such efforts may include but are not limited to advertising, reports, brochures, trade missions, market studies and other activities designed to make customers and potential customers of Louisiana secondary wood products more aware of the availability and quality of such secondary wood products. Efforts could also include promoting special qualities and properties of secondary wood products in contrast to competitive products manufactured from nonrenewable resources.

Specific recommended activities are:

1. Develop an industry data base that will include extensive company data, trade leads, buyer and seller matchmaking capabilities and joint venture opportunities.
2. Maintain direct contact with other associations important to industry development marketing program activities.
3. Develop and publish promotional literature for direct mail distribution.
4. Develop ad copy for publication in trade magazines stressing Louisiana finished products.
5. Promote value-added wood products through domestic and foreign trade shows.
6. Develop and publish an industry newsletter for Louisiana with US and foreign distribution. (Translated as appropriate)
7. Plan and conduct seminars for furniture industry decision-makers to provide an educational overview of value-added wood product's benefits in furniture manufacturing.
8. Develop and produce a video on value-added industry in Louisiana.
9. Collect and distribute information regarding value-added wood products. Including pertinent market data, trends, markets, statistics and research.
10. Incorporate incomplete existing programs and develop new approaches and programs to meet the export objectives.
11. Conduct research in promotion and greater utilization of value-added wood products in export markets. Consultants may gather, analyze and prepare market information as requested by SIC category.
12. Develop a catalog of Louisiana furniture and other value-added wood product manufacturers.
13. Develop a public relations & advertising campaign directed towards the use of value-added wood products for interior applications, including furniture, flooring, paneling, moulding, millwork.
14. Organize & conduct trade missions.

15. Funding to sponsor companies at trade shows (offset costs).

Louisiana Department of Agriculture and Forestry

The following is a description of the Louisiana Department of Agriculture and Forestry's responsibilities and activities and how they relate to the concerns and needs of the Governor's Forest Industry Development Task Force.

The Louisiana Department of Agriculture and Forestry was created in accordance with the provisions of Article IV, Section 10 of the Constitution of Louisiana. The commissioner of agriculture and forestry heads the department and exercises all functions of the state relating to the promotion, protection, and advancement of agriculture and forestry, except research and educational functions expressly allocated by the constitution or by law to other state agencies. Seven offices operate within the department: the Executive Office; the Office of Agricultural and Environmental Sciences; the Office of Agro-Consumer Services; the Office of Animal Health Services; the Office of Forestry; the Office of Management and Finance; the Office of Marketing; and the Office of Soil and Water.

The Office of Forestry and the Office of Marketing conduct programs and activities relating to the interests expressed by the Governor's Forest Industry Development Task Force. The Office of Forestry's mission is to protect, conserve and replenish the forest natural resources of the state. The mission of the Office of Marketing is to promote the development and growth of markets for Louisiana agricultural and forestry products and to develop the channels of distribution through which these products are sold.

Activities include general market promotion, product directories, promotional brochures, trade shows, sales missions, reverse trade missions, industrial recruitment, business start-up and industrial expansion assistance, financing, technical and marketing information, legislative representation and assistance, governmental assistance and policy needs, coordination, and any other needs relative to agri-forestry industries, the Commissioner and the department.

Louisiana Department of Economic Development

The Louisiana Department of Economic Development (DED) is the state agency charged with promoting, protecting, and enhancing the economic interests of all Louisianians. To accomplish its mission DED utilizes a wide array of programs and incentives. These include marketing, advertising, special promotions, financial and managerial assistance, plus the various tax incentives enacted by the legislature. Major operating entities that may affect the wood products industry are described below.

Office of the Secretary

Small Business Bonding Assistance Commission

This commission administers the Louisiana Small Business Bonding Assistance program. The program provides guaranty bonds to small business contractors who have been accredited through the Louisiana Contractor Accreditation Institute.

Office of Commerce and Industry

Financial Incentives Division

The Financial Incentives Division is responsible for the administrative handling of the economic development incentives of the state. Programs include: the Industrial Ad Valorem Tax Exemption, Enterprise Zones, Restoration Tax Abatement, Industry Assistance, Corporate Jobs Tax Credit, Industrial and other programs.

National Marketing Division

The National Marketing Division markets Louisiana's advantages as a business and industrial location to executives throughout the other contiguous 47 states. The division also helps Louisiana entrepreneur, businesses and industries start up and expand by providing business owners with information on tax incentives and sources of technical and financial assistance from both governmental and private sectors. It can also serve as a liaison between the business community, state agencies and local economic development allies. In addition the Division can open doors for Louisiana companies to network with one another to achieve cost savings and to obtain access to new technology, training, and matchmaker (Buy Louisiana) opportunities.

International Trade Division

The International Trade Division provides guidance to Louisiana firms interested in exporting goods or services overseas.

Office of Policy And Research

The Office of Policy and Research supports Departmental activities through research and information resources. It is responsible for conducting target industry studies; monitoring economic trends, issues and opportunities; identifying innovative approaches to economic development; analyzing Louisiana's economic development infrastructure; and providing targeted research for specific recruitment proposals.

Louisiana Economic Development Corporation

This is the investment review board for financial assistance programs administered by the Department. It allows for comprehensive assistance to be offered to new and small Louisiana businesses. Programs administered by the Corporation are intended to stimulate the creation of venture capital and other forms of innovative financing in order to facilitate the development of small businesses.

Information and Research

Research is an umbrella requirement that would support all areas of emphasis. The Louisiana Forest Products Laboratory (LFPL) would take the lead role in developing and maintaining information and coordinating research regarding the Louisiana secondary wood products industry. An overview of the LFPL can be found at the end of this section.

Areas of emphasis may include general industry information, industry markets, compliance and safety issues and workman's compensation issues. Specific activities that contribute to this effort may include but are not limited to:

- Surveys of firms, workers, customers and others with information relevant to the secondary wood products industry.
- A periodic census of secondary wood products producers.
- Publications and reports on the relative competitiveness of Louisiana's secondary wood products industry.
- Computerized data bases of market, product, production and other relevant information.
- Domestic and international market development research
- Research on regulatory issues facing the industry in the areas of environmental compliance, safety, etc.

Louisiana Forest Products Laboratory

**LSU Agricultural Experiment Station
LSU Agricultural Center
Baton Rouge, Louisiana**

Background

The Louisiana Forest Products Laboratory (LFPL) was established in June 1992 through Legislative allocation of state funds to the LSU Agricultural Center in response to a need to help increase the manufacturing of value added forest products.

LFPL Framework

All except one member of the LSU faculty and staff on 100% research appointments. Louisiana Tech's faculty has split appointments between teaching and research. To fulfill LFPL's mission, however, research must be combined with outreach efforts in cooperation with the LSU Agricultural Center's Cooperative Extension Service and with educational activities associated with graduate students. The framework, therefore, includes all three areas of research, outreach and education.

Mission Statement

The Louisiana Forest Products Laboratory was created to enhance the wise use of our forest resources by helping Louisiana forest products industries expand production of value-added products become more competitive in the marketplace and increase employment opportunities.

CURRENT PROGRAM AREAS

Program Area: ENVIRONMENTAL & SAFETY PROGRAM

Provide information that will enhance worker productivity and safety, and mill efficiency while minimizing detrimental environmental effects.

Program Area: MARKETING AND ECONOMIC DEVELOPMENT

Conduct marketing and economic development research in the forest products industry in Louisiana to identify opportunities for sustainable industry growth, increased rural employment and enhancing the value of the State's forest resources.

Program Area: PROCESSING TECHNOLOGIES

Conduct research in forest products processing to improve raw material quality, product performance characteristics, and production efficiency and capability for the value-added wood panel industry in Louisiana.

Program Area: RECYCLING AND RESIDUE USE TECHNIQUES

Program Area: WOOD PRODUCTS TRADE

Enhance the trade of wood products domestically and internationally through increasing the knowledge of wood product properties and how their markets can be enhanced through processing techniques.

**Program Area: WOOD QUALITY INFLUENCES ON WOOD PRODUCTS
MANUFACTURING PROCESSES**

Provide information on the quality of Louisiana's wood resource that will foster a better understanding of wood as a raw material for a wide range of manufacturing processes, encourage efficient and competitive use of wood within the state, and maximize the sustainability and productivity of our forests.

LOUISIANA FOREST PRODUCTS LABORATORY CURRENT & COMPLETED PROJECTS

MARKETING AND ECONOMIC DEVELOPMENT

- A Market-Based Strategy for Louisiana Secondary Wood Products Industry Development and Growth. (R. P. Vlosky, N. P. Chance)
- A Market-Based Analysis of Secondary Wood Products Industry Growth and Development Opportunities in Louisiana. (R.P. Vlosky)
- Environmental Wood Products Certification: Implications for Corporate Strategy. (R. P. Vlosky, L. K. Ozanne, D. T. Wilson)
- Promoting Wood Products on the Internet. (R.P. Vlosky, R. Gazo)
- Home Page Development for Louisiana Forest Products School of Laboratory, School of Forestry, Wildlife, & Fisheries (R. Gazo)
- A Market Based Strategy for Secondary Wood Products Industry Economic Growth and Development. (R. P. Vlosky)
- Internet Forest Products Marketing. (R. P. Vlosky)
- Implications of Timber Certification in Central America & Impacts on Sustainable Management of the Tropical Rain Forest (R. P. Vlosky, J. Aguirre, L. Ozanne)
- Distributor-Supplier Partnership Relationships. (R. P. Vlosky, E. Wilson, D. Wilson)
- Macon Ridge: Strategy for Louisiana Secondary Wood Products Industry Development and Growth. (R. P. Vlosky, P. Chance)

PROCESSING TECHNOLOGIES

- Increasing lumber value & quality through quality drying. (Q. Wu)
- Selecting panel materials by furniture and cabinet manufacturers in Louisiana (Q. Wu)

- Dimensional stability and durability of oriented strand board. (Q. Wu)
- Workshop assistance, lumber drying. (Q. Wu & W.R. Smith) On-going
- Cypress Lumber Stain. (W.R. Smith, Q. Wu)

SECONDARY WOOD PROCESSING

- WOOD - Modeling Program For Furniture Production. (R. Gazo, C. F. de Hoop, R. Beasley)
- Workshop Assistance, Plant Layout & Technical Issues. (W.R. Smith, R. Gazo, L. Hannaman)
- Plant Analysis and Incentive Programs. (R. Gazo, T. Ray, W. R. Smith)
- Opportunities for Horizontal Diversification in Manufacturing Value-added Wood Products. (R. Gazo, R. P. Vlosky)
- LAM - Labor and Material Tracking. (R. Gazo, R. P. Vlosky)
- Increasing Productivity in Cabinet Shops. (R. Gazo)
- Small Cabinet Shop Facts: Face-Frame vs. Frameless Cabinets. (R. Gazo)
- Benefits of Sorting Lumber by Grade Prior to Rough Mill Processing. (R. Gazo)

RECYCLING AND RESIDUE USE TECHNIQUES

- An Investigation of Wood/Plastic Composites From Recycled Solid Waste. (E.T. Choong, C.Y. Hse)
- An Information Database on Biomass Energy Development in Louisiana (W. R. Smith, C. F. de Hoop)
- Recycling of Utility Poles for Useful Engineered Wood Products. (E.T. Choong, C.Y. Hse)
- An Investigation of Rice Husk as a Supplemental Raw Material for Manufacture of Wood Composite Products. (E.T. Choong, C.Y. Hse)

WOOD PRODUCTS TRADE

- Timber Supply in the Lower Mississippi Valley (C.F. deHoop, W.R. Smith, M.E. McDill)
- Consortium for Research on Renewable Industrial Materials (W. R. Smith)
- Hardwood Lumber Market Perceptions with Respect to Origin (W.R. Smith)
- Wood Export Database Development (W.R. Smith)
- Develop International Trade Consortium for Southern States.(W. R. Smith)

Additional Issues

The Task Force concluded that, in addition to the core components of the industry development structure and emphasis, there are a number of areas of concern that affect industry competitiveness. Although the Louisiana Wood Products Competitiveness Corporation would not be a lead entity on these issues, it would serve as an industry voice to offer input. Following are discussions of the most pressing issues identified by the industry.

Access to Capital/Loan Programs

Background Information

A plethora of loan programs are available to Louisiana businesses through a multitude of federal, state and local agencies. These organizations include the SBA, Louisiana Economic Development Corporation, Louisiana Department of Agriculture, Rural and Community Development (formerly Farmers Home Administration), Rural Utilities Service (RUS), the Louisiana Venture Capital Network and the various local and regional Revolving Loan Funds in the state.

At first glance, it would appear that the abundance of these loan programs would insure that they would serve virtually any Louisiana company that needed access to financing. In reality, this is not the case, particularly as it affects the majority of companies currently involved in secondary wood processing. In the majority of cases, these companies are small with relatively few employees, under capitalized, located in rural areas, and unaware of the financing programs that are offered through the agencies listed above. These companies often lack a knowledge of business planning and credit establishment skills.

Recommendations

- Update and distribute information on existing loan programs.
- Identify potential programs for capital access and lending to the secondary wood products industry.
- Support joint workshops with industry and lenders on how to secure business loans.
- Support identifying opportunities and support for the industry from Small Business Development Centers and other business development entities.

Conclusion

Many of Louisiana's small wood processing companies produce specialized, high-quality, craftsmanship products that with special help in a number of areas, not just financing, could generate hundreds, if not, thousands of new jobs using Louisiana's own forest products.

Tax Incentives for Industry Development

Background Information

Three recently released studies on Louisiana's business taxing structure show that Louisiana businesses pay more on several major taxes than their counterparts in other Southern States. The studies were conducted by the Public Affairs Research Council and the Select Council on Revenue and Expenditures (SECURE) and the Louisiana Association of Business and Industry (LABI).

These reports look at the taxes that most effect the higher tax burden in Louisiana, including the Corporate Income, Franchise, Sales/Use taxes, as well as the Inventory Tax Credit programs, comparing Louisiana policies with selected Southern States, including our three neighbors -- Mississippi, Arkansas, and Texas.

Louisiana Corporate Income Tax

An analysis of the per capita cost of Louisiana's Corporate Income and Franchise Taxes shows that the State's businesses pay nearly 50% more than the US average and nearly 75% of the Southern Average. (Source: "A Report on Louisiana's Tax Structure" by Dr. James A. Richardson, Alumni Professor of Economics at Louisiana State University, prepared for SECURE, February 1995.) The following chart was developed by the Louisiana Association of Business and Industry based on Dr. Richardson's findings and appears in LABI's recently released "Tax Report."

A comparison of the Corporate Income Tax rate of selected southern states follows:

Alabama	Arkansas	Georgia	Louisiana	Mississippi	South Carolina	Tennessee	TEXAS
5% NI	1-6.5% NI	6% NI	4-8% NI	3-5% NI	5% NI	6% NI	None

(NI = Net Income)

While the State's Enterprise Zone or Corporate Jobs Tax Credit Programs do much to offset the state's high taxing rates, other Southern states also offer Corporate Tax reduction incentives. For example, Arkansas offers a credit against the corporate income tax of the average wage of a new worker times 100 if the business is participating in the enterprise zone program, or times 200 if the business is located in a high unemployment county; Mississippi offers income tax credits from \$500 to \$2,000 for each new job created by a new or expanding business. (Source: *Area Development Magazine Online*, State Financial Incentives Programs.)

The tax credit for aviation and aerospace industries under the Enterprise Zone Program is currently \$5,000. The increase in allowable credit was enacted to promote employment in

those particular industries. To promote employment in the value-added wood products industry also, the tax credit under the Enterprise Zone Program should be increased to \$5,000 for each net new job.

Franchise Taxes

Louisiana is the only Southern state that includes long-term debt in its Franchise Tax base. This practice particularly hurts financially unstable businesses, and small, family-owned or closely held companies, the type of businesses that compose the vast majority of the secondary wood processing companies in Louisiana.

Recommendations

Eliminating long-term debt from consideration in the State's Franchise Tax would appear to be a solution toward making Louisiana more competitive with other Southern States when it comes to attracting new businesses. However, due to budget restraints total elimination of long-term debt may not be practical at this time. At the same time, in order to jump start the secondary wood processing industry, the possibility of eliminating long-term debt in franchise taxes for a certain period (five to 10 years) for companies with net worth of less than \$250,000 should be considered.

Inventory Tax Credit

Thanks to a law passed in 1991 that phased in an inventory tax credit program over five years, Louisiana allows manufacturers, distributors and retailers to receive a credit against the state corporate and franchise taxes for ad valorem inventory taxes paid to local governments. While this helps reduce the burden of the corporate and franchise taxes, it still must be paid which can be a truly burdensome proposition for financially unstable and family owned businesses.

Recommendations

Monitor and contest any efforts that may be organized in the Louisiana Legislature to overturn the Inventory Tax Credit law. This law does nothing more than put Louisiana on an even keel with most of our Southern neighbors. For example:

Texas allows local municipalities and counties to designate areas within their jurisdiction as reinvestment zones. Companies located in these zones may qualify for property tax abatements for a maximum of ten years. Additionally, Texas' Freeport Law is much more flexible than Louisiana, allowing local governing bodies the option to exempt personal property consisting of goods, wares, merchandise, and petroleum products if the property is detained for assembling, storing, manufacturing, processing or fabricating. (Under

Louisiana's Freeport Law, goods are only exempt if they remain in their original packaging.)*

In **Alabama** all stocks of goods, wares, and merchandise are exempt from property taxation. Manufactured articles are exempt for 12 months after production. *

In **South Carolina** no inventories or intangible properties are taxed at either the state or local level. *

* Source: *Area Development Magazine Online*, State Financial Incentives Programs.

Sales and Use Taxes

Louisiana is one of only three (3) states in the nation that fully taxes manufacturing machinery and equipment. Combined with the state sales tax of 4%, the sales tax paid on these items can range up to 8.5%, depending upon local sales taxes.

The following table (next page) is modified from a table included in the recently released LABI Tax Report, and shows Louisiana's uncompetitive position in this area. Source cited for the information is the Public Affairs Research Council of Louisiana, Inc. (PAR) Analysis, *Corporate Tax Burden in the Southern States: A Comparison*, December 1994,

State	Sales Tax on Initial Purchase
Alabama	Lower rate applies (2.7%)
Arkansas	Exempted
Florida	Exempted
Georgia	Exempted
Louisiana	Fully Taxed
Mississippi's	Lower rate applies (1.5%)
No. Carolina's	Lower rate applies (1.0%)
Oklahoma	Exempted
So. Carolina	Exempted
Tennessee	Exempted
Texas	Exempted

Recommendations: Work with Louisiana Legislators in an effort to greatly reduce, if exemption is not possible, the amount of sales taxes paid for new machinery and equipment.

Other State Business Incentive Programs:

There are two little known State Business Incentive Programs, the Tax Equalization and the Industry Assistance Programs, that offer existing structures that might be modified to apply to the Secondary Wood Processing Industry. Both programs should be closely examined for

possible implementation in order to help develop the industry, especially during the next five to ten-year period. These two programs are described in the *Louisiana Business and Industry Incentives* Handout, Revised 10/22/96.

Tax Equalization:

New manufacturing establishments, new corporate headquarters, or new warehousing and distribution establishments which are considering sites in other states because of tax rates lower than those in Louisiana, may be eligible for tax equalization.

At the invitation of the Governor, such corporate establishments locating in Louisiana may enter into a five-year contract to have the total state and local taxes imposed upon such establishments reduced to the levels imposed by other states. The contract may be renewed for an additional five years.

The exemption is calculated annually after all other tax incentive for specific sites are applied. The exemption amount is applied first to state sales and use taxes on machinery and equipment, followed by the corporation franchise tax, state corporation income tax and state sales or use taxes paid on all other procurements.

Industry Assistance Program:

Provides exemption or reduction of taxes to encourage existing manufacturing industries to maintain, and thereby retain existing jobs. **Approval of these Incentives must be made by the Governor, the Legislative Budget Committee, and the Board of Commerce and Industry.** Exemptions may be granted for corporate income taxes, corporation franchise taxes, state sales/use taxes, or other taxes normally applied to businesses in the state. The total amount of exemption may not exceed 4% of the franchise tax, income tax or state sales/use taxes collected during the prior fiscal year. Applications must be made to the Office of Commerce and industry.

WORKERS COMPENSATION ISSUE

FACTS:

1. Louisiana has the highest average total claim cost - \$18,878.00 per claim.
2. Return-to-work days in Louisiana - 72 days - second highest in the nation.
3. Construction workers in Louisiana took 137 days to return to work, the median time is 92 days. (Source: NCCI)

BACKGROUND:

Beginning in the mid 1980's legislation has been directed at cost containment, change of system (creation of Office of Worker's Compensation) to an earnings-based compensation system (Florida, as a model) and elimination of the Worker's Compensation "Risk Pool". High claim costs resulted in many insurance companies unwilling to write Worker's Compensation coverage for Louisiana employers (creation of Louisiana Worker's Compensation Corporation).

Problems: High cost of coverage and claims(s). In spite of legislative efforts, creation of Office of Worker's Compensation and the institution of an administrative system of dispute resolution, Louisiana Worker's Compensation costs are higher than costs in 45 other states. Insurance analyst advise that Louisiana experiences a higher cost per claim and longer lengths of disability than the national average (NCCI).

MEDICAL COSTS:

Medical costs have increased, although somewhat limited by Office of Worker's Compensation's Fee Schedule. As fees increased for services rendered by Health Care Providers, it is reflected in Office of Worker's Compensation's determination of "reasonable and customary charges". Rising medical costs are consuming an increasingly higher percentage of Worker's Compensation payments and escalating already high Worker's Compensation insurance rates. Where it once was considered that the attorneys and the judicial system were driving Worker's Compensation costs upward, it is now a consensus that medical providers are "fueling" the escalating costs of Worker's Compensation. From 1983 to 1991 medical payments as a percentage of total payments rose from 38.4% to 47.4% or 9% while the Indemnity percent declined 9% (NCCI).

Much of the medical legislation rules and procedures developed by Office of Worker's Compensation have resulted in additional costs or have been neutralized by the courts.

The medical section of Office of Worker's Compensation and its mission are in need of review and an oversight system established. Basic problems are the cost of medical care, excessive

length of treatment and liberal interpretation of Louisiana's Worker's Compensation Statute by the judiciary.

Problem: Judicial interpretation and application of Statute.

Legislatively, local district courts were removed from Worker's Compensation and court of first jurisdiction established with the Office of Worker's Compensation with an appeal right to Appellant courts and the Louisiana Supreme Court (court's option).

The purpose of establishing an Administrative Adjudication System was:

- 1) To decrease cost of litigation,
- 2) To expedite dispute resolution and
- 3) To provide an informal forum for dispute resolution via mediation.

Insurers, employers or claimants need not be represented by legal counsel at mediation hearings. However, attorneys are involved in all aspects of these proceedings.

Office of Worker's Compensation's mediation has not produced the desired results. Generally, attorneys use mediation to conduct discovery and serve the suit (OWC-1008) upon the defendant.

Office of Worker's Compensation's Administrative Adjudication System has failed to provide expedited hearings and resolution of disputes at any significant legal cost savings.

Administrative Law Judge's (ALJ) interpretations of key statutory provisions lack consistence between districts. ALJ's rulings are as liberal as the District Judges they replaced. Their liberal interpretation of Worker's Compensation Statute is exceeded only by the imaginative rulings from some Appellant Courts, notably the Third Circuit Court. These judgments and reasons for same disregard existing Statutes to the extent of creating new Worker's Compensation Law. In the past few years much legislation in the area of Worker's Compensation was to overturn and repair judicial rulings.

Office of Worker's Compensation has established employment qualifications for ALJs and has performance evaluation criteria. The deviations from both reflect Louisiana's politics and the previous administration. ALJs are afforded the protection of Civil Service.

Louisiana's Worker's Compensation Statute contains fraud provisions and Office of Worker's Compensation has a fraud unit. Fraudulent claims are as prevalent as ever and seldom is a fraudulent claimant prosecuted. Local district attorneys are reluctant to prosecute.

Problem: Legislation.

Louisiana's current Statute is basically a workable set of laws. Much of the recent legislation has been to overturn court decisions and attempt to restore the integrity of the Statute as drafted by the Louisiana Legislature.

Future legislation should be targeted toward the reinforcement of the Office of Worker's Compensation, medical cost containment and uniformity in adjudication. Some changes can be made by rule and do not require legislation.

The Legislature should make clear to the judiciary system that the legislative intent of reforms should be respected and observed.

SUMMARY OF PROBLEMS:

- 1) High medical cost of claims as reflected by the number of lost-time injuries, length of treatment and weeks of disability paid in Louisiana, as compared to other states.
- 2) Lack of administrative performance by the Office of Worker's Compensation.
- 3) Excessive time delay in adjudication and delayed issuance of judgments.
- 4) Liberal interpretation of Statute by the judiciary.
- 5) Higher labor costs as a result of Worker's Compensation is definitely deterrent to business development, especially labor intense industries.

RECOMMENDATIONS:

- 1) Administration's review of Off. W.C. structure and performance.
- 2) Establish and enforce performance criteria for ALJs.
- 3) Legislation which establishes a form of employer/insurer choice of treating physicians and medical provider and limit "provider shopping". (Management Care)
- 4) Establish medical protocols for treatment and a system of medical oversight. (Management Care)

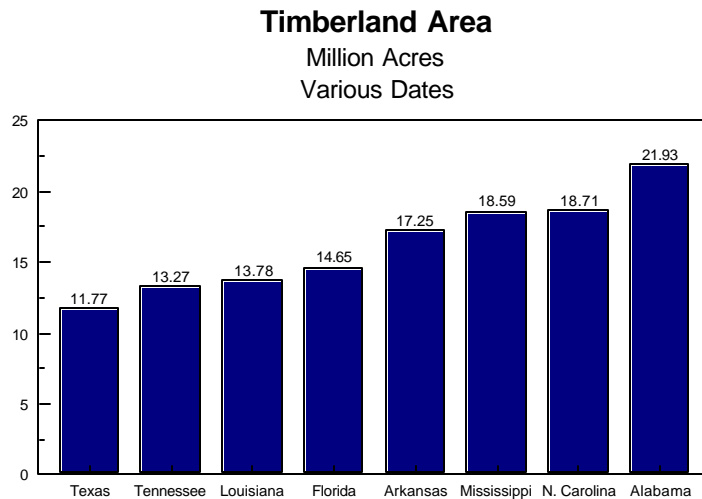
Regulatory Compliance

The Task Force identified safety, environmental and other regulatory issues as having significant impacts on the secondary wood products industry. It is recommended that research be conducted on regulatory issues facing the industry in the areas of environmental compliance, safety, etc. This research would entail fee and fine comparisons with other states and identification of ways to facilitate information exchange between Louisiana companies and regulatory agencies. In addition, the LWPC would update and distribute information on existing regulatory issues and support joint workshops with industry and regulatory entity.

A Comparison of Solid Wood Forest Products Industry Value-Added and Productivity Indicators

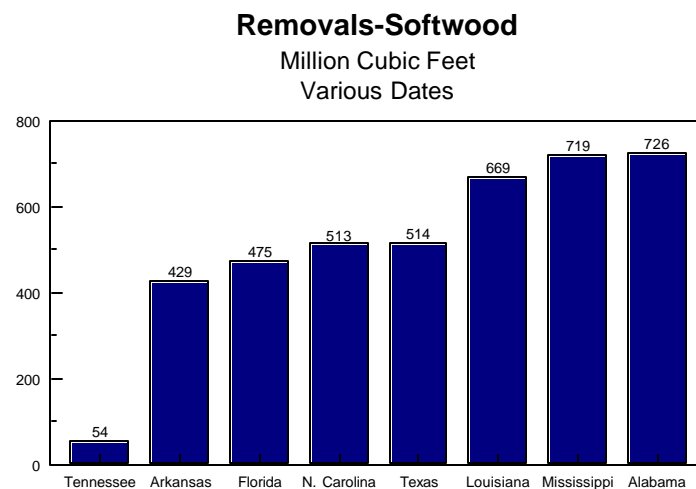
Before a discussion of comparative value-added and productivity indicators, it is important to get a sense of the relative sizes of the forest bases of Louisiana relative to neighboring states. As seen in Figure 1, Louisiana has about fourteen million acres of timberland, about 15 percent below the average of the states shown (16.24 million acres). The point is that Louisiana has a comparable timber base to the states indicated.

Figure 1.



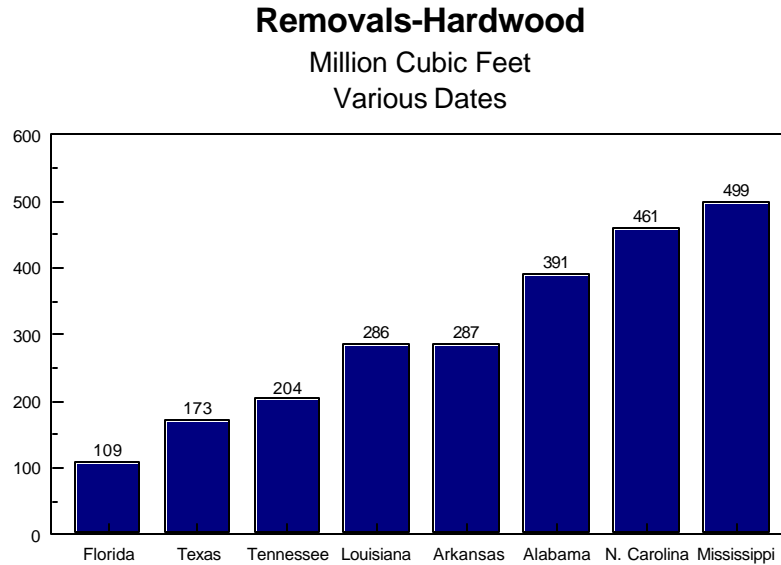
In terms of harvests or removals, Louisiana ranks in the upper strata of the states listed with an annual harvest in 1992 of about 669 million cubic feet (figure 2). Most of the softwood resource is used for primary wood product production (lumber, plywood, etc.) or is chipped for use in pulp and paper manufacturing.

Figure 2.



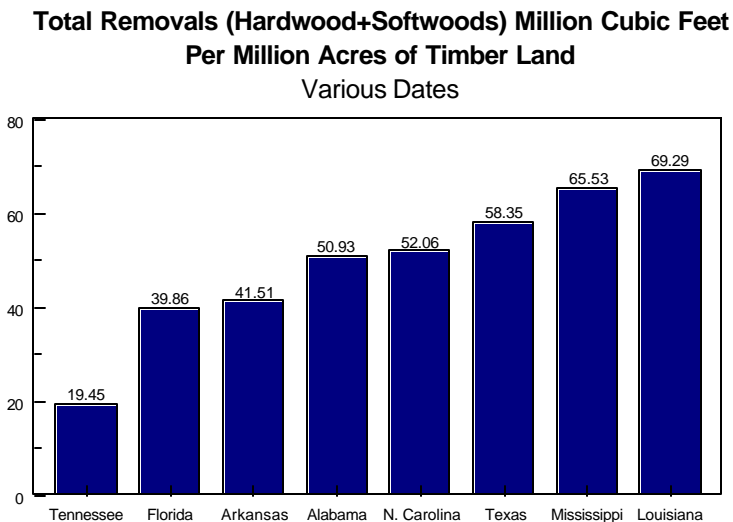
With regard to hardwood removals, Louisiana ranks slightly below the average of the states listed in Figure 3 (301 million cubic feet). It is the hardwood resource that is most often used in the production of secondary or value-added solid wood products (furniture, cabinets, etc.).

Figure 3.



If total removals are viewed in terms of total timberland base, Figure 4 indicates that Louisiana is at the top of the list with 69 million cubic feet harvested for every million acres of timber land. A note of caution needs to be made at this point. Figure 4 does not reflect the amount of timber land available for timber production but merely serves to compare Louisiana to other states with regard to total harvest relative to the total timber base.

Figure 4.



Secondary Wood Products

Preceding a discussion of comparative value-added indicators, the way wood products are defined needs to be addressed. The following section describes how wood products are classified and then indicates the relative importance of various value-added products in the United States.

The Standard Industrial Classification System

Most government data and much of the privately collected data on US industries and markets is organized according to the Standard Industrial Classification (SIC) system. The SIC system divides economic activity into eleven divisions, each of which contains major industry groups classified by a two-digit number. For example, one of the eleven divisions represents manufacturing industries with two-digit codes ranging from 20 to 39. The two manufacturing groups SIC24 and SIC25, representing solid wood products, are presented in Table 1. The other major wood product group, SIC26: Paper and Allied Products, is not considered in this report.

Within each two-digit group, industry subgroups are further defined by three- and four-digit codes. SIC coding extends to seven digits for specific products. For example, SIC 243 refers to “millwork, plywood, and structural members, not elsewhere classified,” SIC 2431 refers specifically to millwork, and SIC 24311 refers to wood window units. Each business establishment at a single physical location is assigned a four-digit code according to the principal product produced sold, or exchanged in that facility.

The four-digit industries are often regrouped by analysts according to the nature of raw material used (cants or logs versus lumber or plywood) or the extent of value-added activity reflected in the final product (lumber or plywood versus a window unit or a piece of furniture). The term “primary industry” refers to processing centers that convert raw materials such as logs or cants into lumber, plywood, or similar products. In contrast, the term “secondary” or “remanufacturing” industry refers to establishments that convert lumber, plywood, or other output from primary industries into products such as moldings, windows, furniture, etc.

Many of the industries in Table 1 are commonly considered to comprise the secondary industry. The secondary industries comprise a diverse group. Some produce industrial products such as component parts that are used by other secondary industries while others produce finished consumer goods such as furniture.

Census of Manufactures

Economic censuses, known as the Census of Manufactures, are conducted by the US Department of Commerce, Bureau of the Census. They are the major source of facts about the structure and functioning of the US economy. They provide valuable data on measures of the well being of the economy, to aid government in formulating policies, and for studying trends in industries and markets. Since 1967, economic censuses have been conducted as an integrated

program every five years. Prior to 1967, individual industry censuses were taken separately at varying intervals. In each of the four years between the Census of Manufactures, an Annual Survey of Manufactures is conducted, gathering the same information as the Census but from a sample of establishments.

Using Census data for analyzing forest product industries has certain limitations. The Census places an establishment into a four-digit SIC class according to its principal product. As a consequence, Census data may under-represent the full scope of activity in an industry. Table 4 shows secondary forest products industry value of shipments by SIC code in 1990.

Table 1. SIC Industries Concerning Forest Products

SIC Industry Group 24: Lumber and Wood Products

- 2411 Logging
- 2421 Sawmills and planing mills, general
- 2426 Hardwood dimension and flooring mills
- 2429 Special product sawmills, n.e.c.
- 2431 Millwork
- 2434 Wood kitchen cabinets
- 2435 Hardwood veneer and plywood
- 2436 Softwood veneer and plywood
- 2439 Structural wood members, n.e.c.
- 2441 Nailed and lock corner wood boxes and shooks
- 2448 Wood pallets and skids
- 2449 Wood containers, n.e.c.
- 2451 Mobile homes
- 2452 Prefabricated wood buildings and components
- 2491 Wood preserving
- 2493 Reconstituted wood products
- 2499 Wood products, n.e.c.

Industry Group 25: Furniture and Fixtures

- 2511 Wood household furniture, except upholstered
- 2512 Wood household furniture, upholstered
- 2514 Metal household furniture
- 2515 Mattresses, Foundations and Convertible Beds
- 2517 Wood television, radio, phonograph and sewing machine cabinets
- 2519 Wood furniture, n.e.c.
- 2521 Wood office furniture
- 2522 Office furniture, except wood
- 2531 Public building and related furniture
- 2541 Wood office and store fixtures, partitions, shelving and lockers
- 2542 Office and store fixtures, partitions, shelving and lockers, except wood

2591 Drapery hardware and window blinds and shades

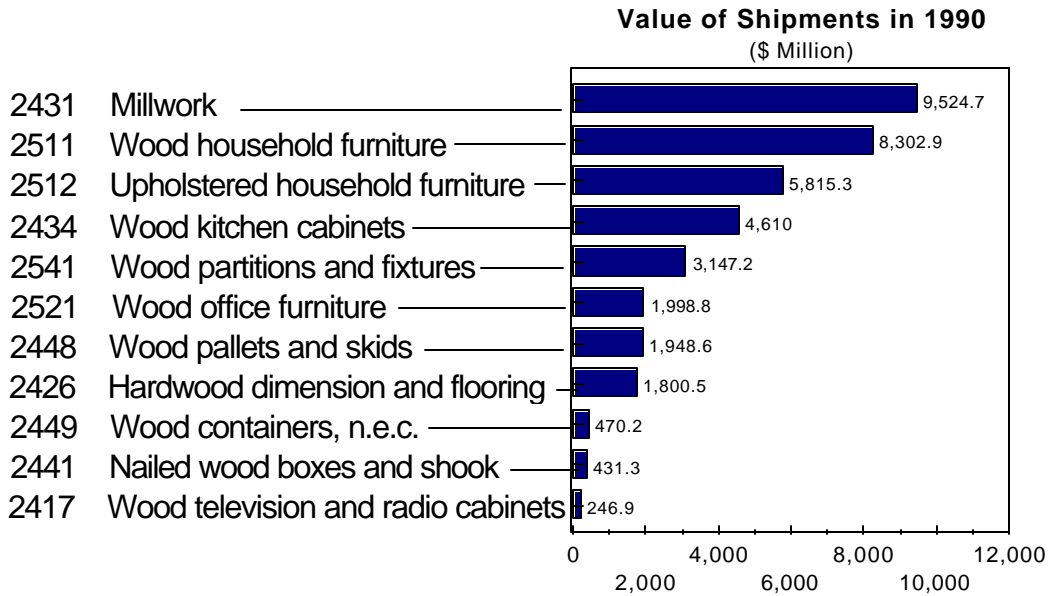
2599 Furniture and fixtures. n.e.c.

Table 2 and Figure 5 indicate the relative importance in terms of value of shipments for secondary wood products in the United States in 1990.

Table 2. Secondary Forest products Industry Value of Shipments, 1990.

SIC Code	Description	Value of Industry Shipments (million \$)	Percentage of Total Shipments
2426	Hardwood dimension and flooring	1,800.5	3.1 %
2431	Millwork	9,524.7	16.2%
2434	Wood kitchen cabinets	4,610.0	7.8%
2439	Structural wood members, n.e.c.	2,028.4	3.4%
2441	Nailed wood boxes and shook	431.3	0.7%
2448	Wood pallets and skids	1,948.6	3.3%
2449	Wood containers, n.e.c.	470.2	0.8%
2491	Wood preserving	2,642.7	4.5%
2499	Wood products, n.e.c.	3,871.8	6.6%
2511	Wood household furniture	8,302.9	14.1 %
2512	Upholstered household furniture	5,815.3	9.9%
2417	Wood television and radio cabinets	246.9	0.4%
2521	Wood office furniture	1,998.8	3.4%
2531	Public building and related furniture	3,112.4	5.3%
2541	Wood partitions and fixtures	3,147.2	5.3%
2599	Furniture and fixtures, n.e.c.	2,547.3	4.3%
Total		58,970	100.0%

Figure 5.



Source: Department of Commerce, Annual Survey of Manufactures.

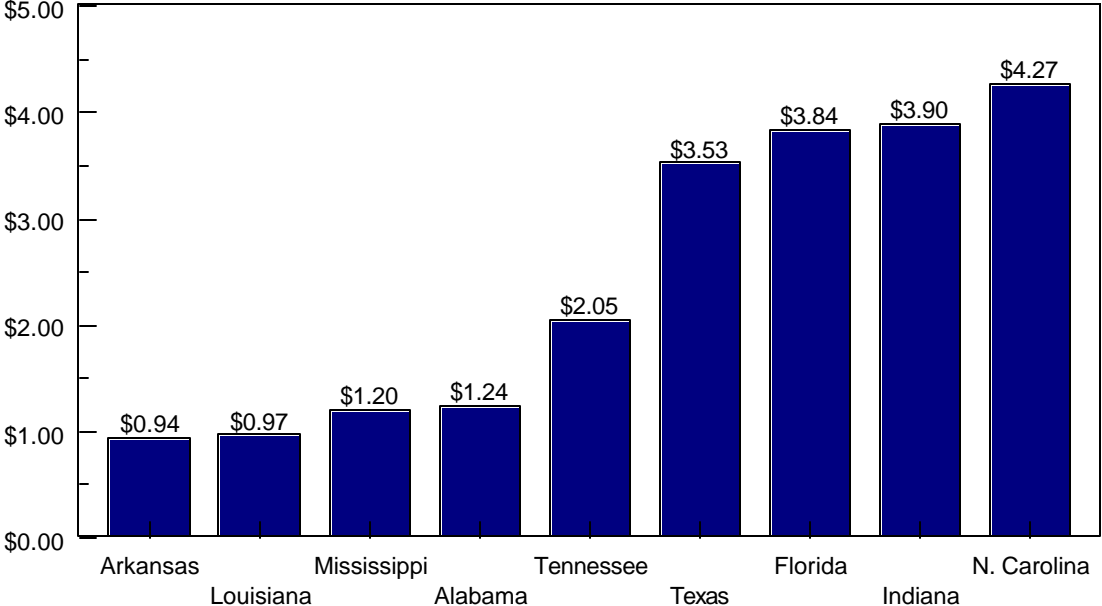
One way to compare a state's performance in adding value in the solid wood products industry is to compare the value of output to the value-added from downstream SIC industries. Using Department of Commerce data (1992) Figure 6 shows one such indicator of performance. As shown, for every dollar of output from the SIC 2421 category, Louisiana's other SIC 2400 industries (less sawmills) plus SIC 2500 industries create an additional \$0.97 of value added. This is low relative to six of the eight states shown. This indicates that Louisiana has potential to add more value given its resource base and employee productivity. It needs to be pointed out that this is but one measure of performance. Other indicators include value-added per employee, value-added relative to industry size and value-added per capital investment.

Figure 6.

Value-Added \$/\$1 of Primary Production

(Less Logs & Sawmills)

1992



One example of the impact of creating an industry that adds value, is the effect on employment. Taking the household furniture as an example, in 1992 Louisiana added about \$12.3 million in value in this sector. As seen in Figure 7, this was the lowest relative to the states listed.

Figure 7.

Value-Added \$ Million Household Furniture

1992

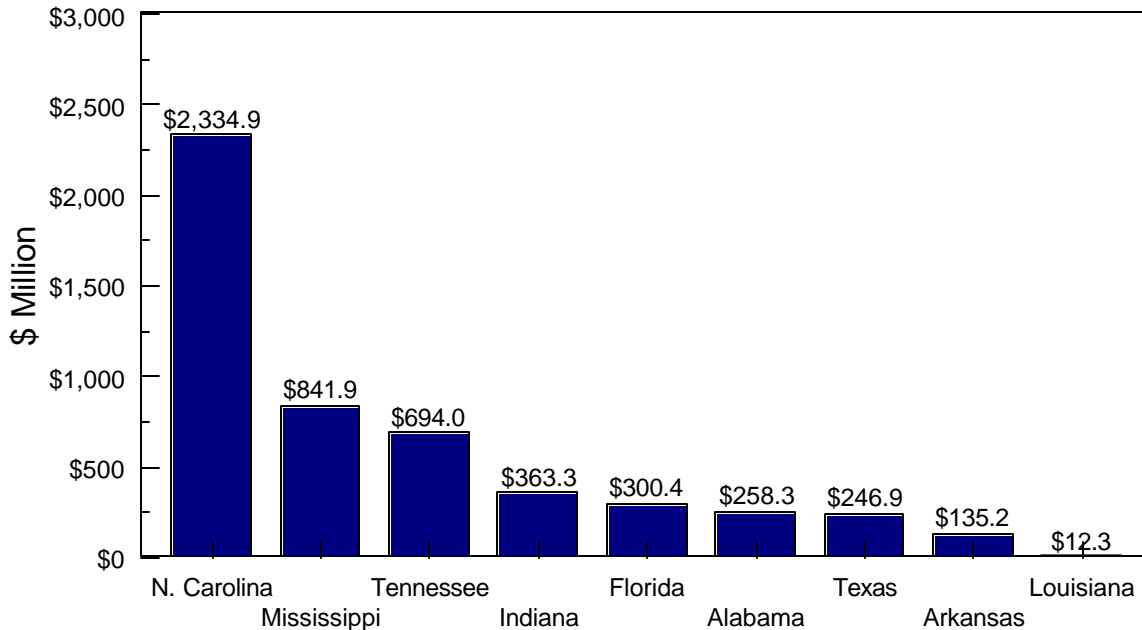
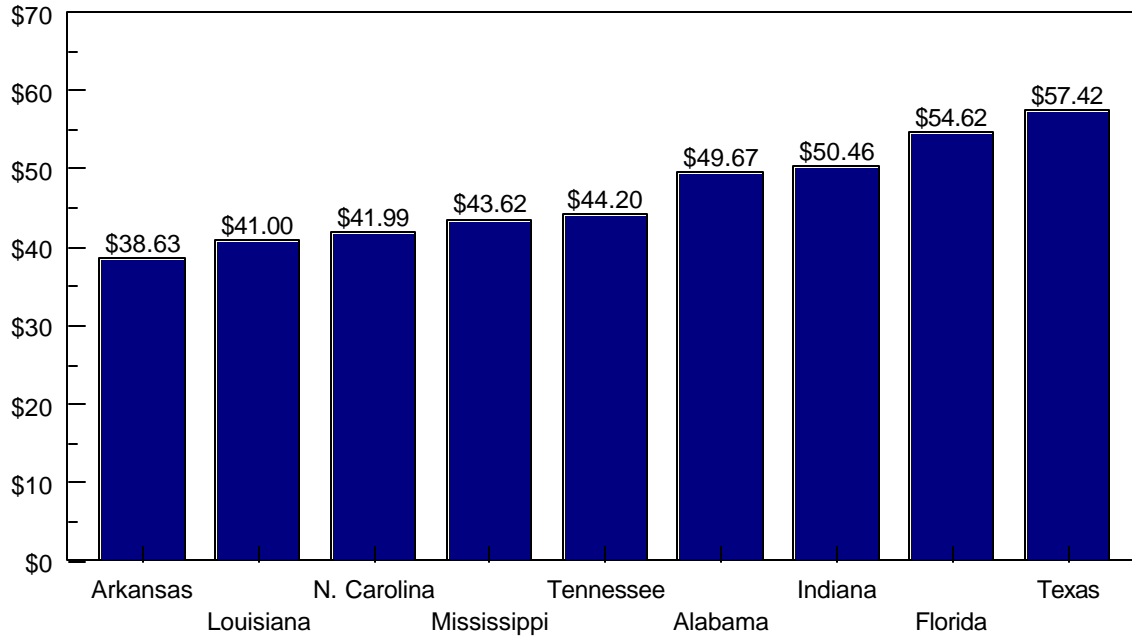


Figure 8 looks at value-added in the household furniture industry in terms of value-added per employee. Taking the analysis one step further, using Department of Commerce statistics, if this one sector in Louisiana could add value to the level of the average of the next four lowest states (Florida, Alabama, Texas, Arkansas as seen in Figure 7), or \$235.2 Million, it could support an industry of an *additional 5,735* new jobs.

Figure 8.

Value-Added Per Employee Household Furniture 1992



In summary, the adding of value in the wood products industry through further processing of raw and semi-finished materials can have a significant impact on the economy of Louisiana. Not only is there the potential to add new jobs, but there also the immediate and downstream positive impacts on the economy.

Criteria for Secondary Wood Products Industry Growth and Development¹

Key Points

- Numerous states have a commitment to secondary wood products industry economic development.
- Development and expansion of the value-added industry is the number one ranked strategy.
- To support this strategy, the top three programmatic goals in ranked order are to:
 - Increase Employment
 - Attract and Expand Value-Added Industry
 - Support Rural Economic Development.
- The most important component for programmatic success is having an adequate forest resource base to sustain development efforts. This is closely followed by:
 - The need for strong government leadership
 - The need to have favorable state economic conditions
 - Interagency cooperation
 - The need to have the program adequately funded
 - Strong industry support.
- State economic development agencies are most often the impetus for development programs followed by state government at the legislative and executive levels.
- State Forestry Departments take the lead role in most industry program initiatives and rank second only to State Legislatures and the U.S. Forest Service in an advisory role.

Introduction

Economic development of the secondary forest products industry is a high priority in many areas of the United States. While policies and strategies differ between regions, the common denominator seems to be focusing on region- or state-specific opportunities based on unique constraints or parameters. Recent thinking calls for greater local input in program development as well as increased local control of implementation and greater coordination among agencies to improve efficiency of operation of the programs being planned or implemented.

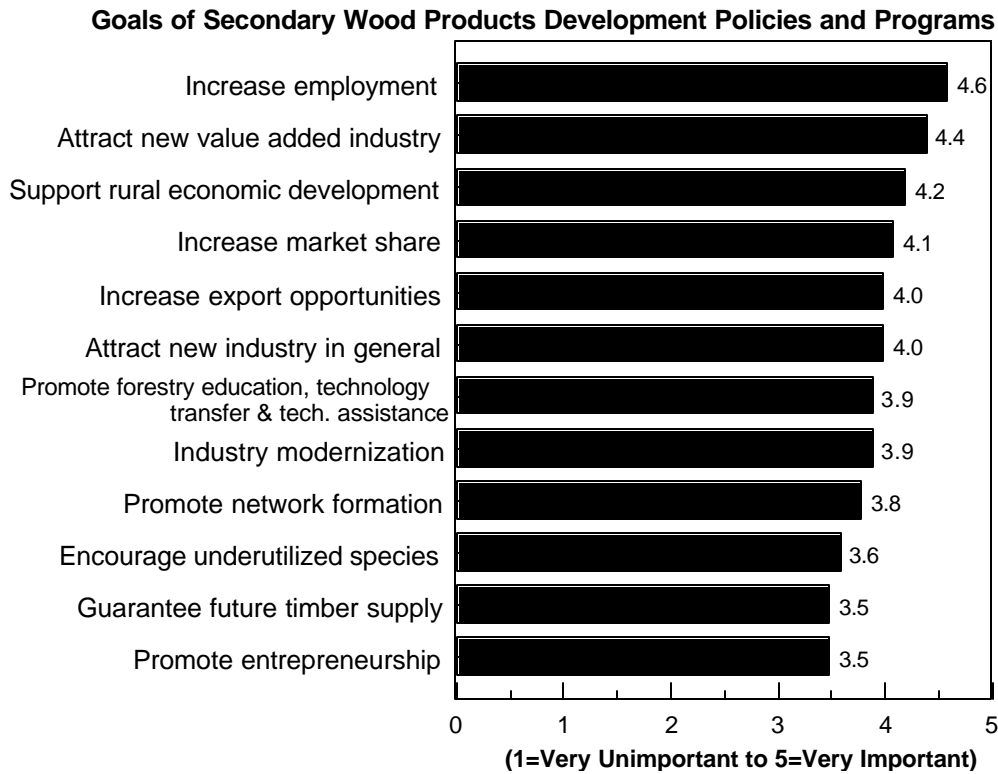
¹ From: Vlosky, R.P., N. Paul Chance. 1996. "An Analysis of State Level Economic Development Programs Targeting the Wood Products Industry." *Forest Products Journal*. Vol. 46. No. 9. pp. 23-29.

For those states that have developed secondary wood products initiatives, development of an existing secondary value-added wood products sector has the highest priority (33 percent of responses) of development efforts followed by attracting new secondary industry (23 percent), developing the existing primary industry (23 percent) and attracting new primary industry (20 percent). The majority of programs target market development for wood products industries, economic development in rural areas and enhanced utilization efforts.

A milieu of agencies and other entities are involved in wood sector economic development efforts. While state economic development agencies are most often the impetus for development programs, state government at the legislative and executive levels initiated programs in many states. Beyond initiating development activities, a number of entities are involved in program development. State forestry oriented agencies have the highest frequency of leading program efforts while universities are most often found in a planning role. Many entities play an advisory role including, in ranked order of responses, private industry, private land owners, the United States Forest Service and state forestry agencies, to name a few.

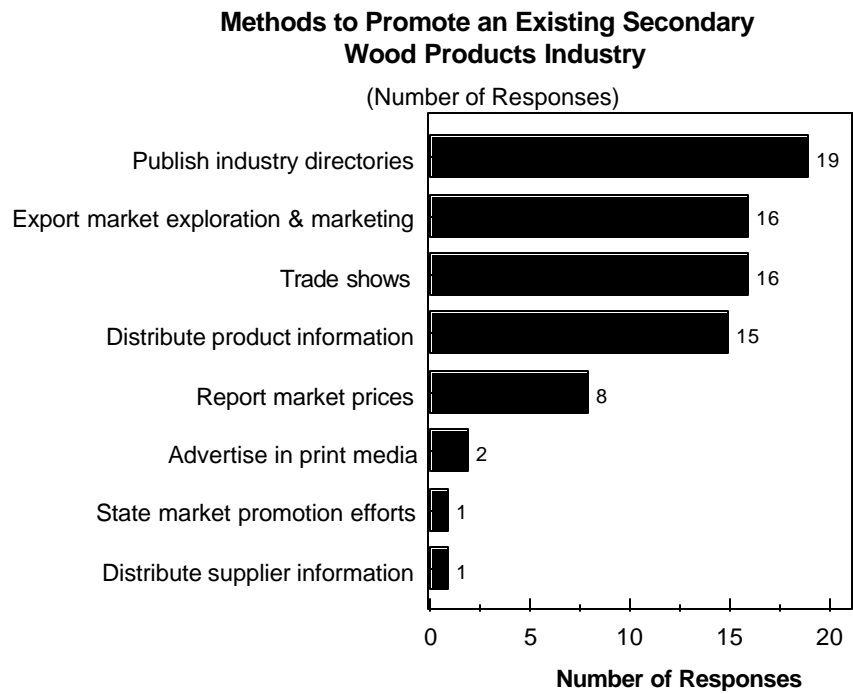
Figure 1 illustrates the goals of established secondary industry development programs. The figure depicts mean responses of ranked attributes which were answered using the following 5-point scale indicating varying levels of importance: 1=Very Unimportant to 5=Very Important. All criteria rate greater than 3.0 (neutral), suggesting that all of the goals listed are important. The differences are in relative response magnitude. The top six categories (4.0 and above) support the notion that development programs in the forest products sector focus on rural economic development and growth. The tactics to accomplish this include attracting new industry and concurrently increasing employment as well as focusing marketing efforts on both domestic and export opportunities.

Figure 1.



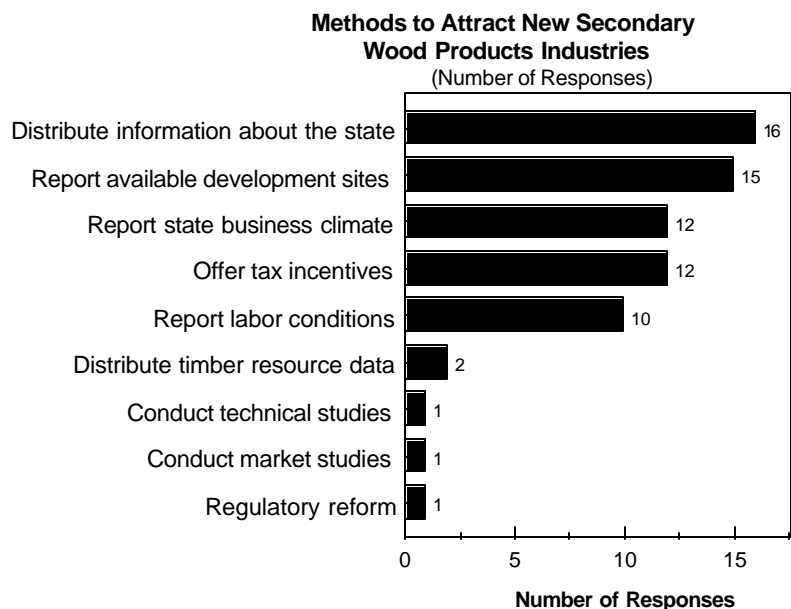
In the study, respondents indicated methods employed to develop existing wood product industries and to attract new industry to their states. Existing industry market development (Figure 2) centers on market promotion and research. Publication of industry directories ranks highest followed by market research to explore export market opportunities, attendance at trade shows and product information dissemination through other venues.

Figure 2.



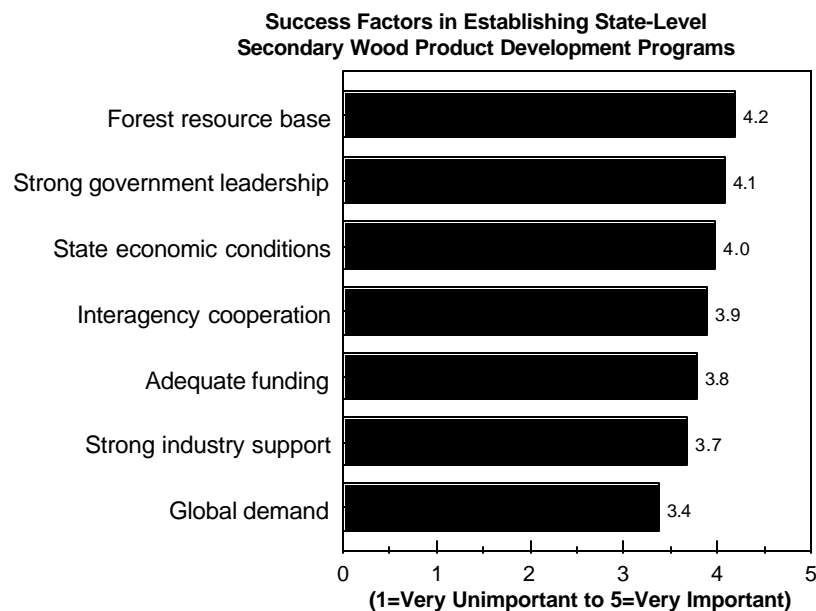
In contrast, efforts to attract new industrial growth and development centers on “selling the state” to potential participants (Figure 3). In addition to distributing promotional information about the state, specific data on potential development sites and general business climate information is disseminated. Offering tax incentives for investment was also cited as an important method to attract new industry.

Figure 3.



Respondents were asked to evaluate factors that lead to success in establishing development programs. Figure 4 shows mean responses for ranked attributes using a 5-point scale indicating varying levels of importance: 1=Very Unimportant to 5=Very Important. Respondents believe that the most important attribute is having an adequate forest resource base to sustain development efforts. This is closely followed by the need for strong government leadership, the need to have favorable state economic conditions and interagency cooperation. The remaining success factors, all receiving a rank greater than 3.0, include the need to have the program adequately funded, strong industry support and the need for demand for current or potential products that result from industry development.

Figure 4.



Summary

While nationally, some studies indicate that natural resource based economic development is risky and of limited potential, states are successfully targeting rural development of the wood products industry sector. States in regions with abundant forest resources are developing new approaches to stabilize rural economies and maximize economic contribution. By combining public sector infrastructure resources and private sector capabilities, value added forest resource based programs are emerging as stimuli for employment growth. However, defining and implementing effective wood products industry economic development programs at the state level are daunting tasks complicated by a myriad of factors. In this study, development agency respondents identify program goals and objectives as well as methods to actualize strategic program plans. Specific attributes that contribute to program success as well as those that have hindered development may serve as input in development efforts.

Overview of Louisiana Forest Resources²

Louisiana's forest products industry depends on the forest resource base of the state for its existence. This resource base has been through several cycles of harvest and regeneration since the original native forests were first cut over in the early part of this century. Recently, the state's forest inventories reached a peak, and pine inventories appear now to be declining. Hardwood inventories were still increasing at the time of the last state inventory, but hardwood removals also appear to be catching up with growth. The purpose of this section, excerpted from the Fourth Forest report (McDill 1997) is to review the current status of the forest resource base and present some projections of what may happen to the state's timber inventories in the next decade and a half.

The primary source for information on the inventories of any state in the U.S. is the U.S.D.A. Forest Service's Forest Inventory and Analysis (FIA) research unit. Projections to the year 2030 were also included in the Fourth Forest report. Those projections were drawn from a major South-wide analysis (USDA Forest Service 1988). Historic and projected area of timberland in Louisiana by forest type — 1984 to 2010. (Areas in 1984 and 1991 are from FIA inventories; other areas are projections. Projections up to 1995 use historical removals data from severance taxes.)

Finally, on a more conditional basis, new projections have been made up to the year 2010 to identify potential problems and to aid in determining what can or should be done to bring about the most desirable forest situation possible for Louisiana in the future.

Historical Trends in Forest Area and Timber Volume

Area by Forest Type

The state's timberland acreage declined by 645,000 acres (4.4%) between 1974 and 1984, but declined by only 90,000 acres (0.6%) between 1984 and 1991. There were several significant changes between 1974 and 1984: the areas in natural loblolly/shortleaf, oak-pine, and oak-gum-cypress declined by more than 10%, while the areas in planted loblolly/shortleaf and oak-hickory increased by 10% and 25%, respectively. The most significant changes between 1984 and 1991 were the increase in the area in the planted loblolly/shortleaf pine type and the decreases in the area of both natural longleaf/slash pine and natural loblolly/shortleaf pine.

² From McDill, Marc. 1997. Chapter 2, Louisiana Fourth Forest. Louisiana Department of Agriculture and Forestry Report. In Press.; Chance, N. Paul and Richard P. Vlosky. 1995. "Louisiana's Forests and Forest Products Industries." Working Paper #11. Louisiana Forest Products Laboratory. Louisiana State University Agricultural Center. Baton Rouge, LA. October.

Over the 17 years between 1974 and 1991, the timberland base declined by 735,000 acres, or 5.1%. The area of planted loblolly/ shortleaf pine nearly doubled, from 837,000 acres to 1,593,000 acres. However, during this period the area in the natural longleaf/slash pine forest type declined by 148,000 acres, or 34%, and the area of natural loblolly/shortleaf pine declined by 713,000 acres, or 22%. Overall, the area in pine types decreased by 99,000 acres between 1974 and 1991.

Volume by Major Species Group

The total inventory volume of pine, cypress, and hardwood timber in Louisiana increased by 2.6 billion cubic feet, or 15.4%, between 1974 and 1984. It then declined by 0.41 billion cubic feet (-2.1%) between 1984 and 1991. Pine inventories, which had increased by almost 20 percent between 1974 and 1984, declined by 10.6 percent between 1984 and 1991. Hardwood and cypress inventories continued to build up between 1984 and 1991, but the increases in those species groups were not enough to offset the decline in the pine inventories. For all species groups, however, inventories were higher in 1991 than they were in 1974.

Projections

Forest Type Acreage.

Trends from the calibration period (1984-1991) tend to continue into the projection to the year 2010. The area of planted loblolly/shortleaf pine is projected to continue to increase, while the areas in the natural loblolly/shortleaf pine and natural longleaf/slash pine forest types are projected to continue to decrease. The areas in the other forest types are projected to remain relatively stable.

Pine Inventory, Growth and Removals

Pine growth rates increased from about 5.0% in 1984 to 8.3% in 1991. The most striking trend is the projected decline in the inventory of pine. The inventory is projected to decrease from 9.4 billion cubic feet in 1984 to 5.5 billion cubic feet in 2010—a decline of over 40 percent. This happens in spite of a projected decline in the pine removals rate, as the model shifts removals away from the increasingly scarce pine resource to the relatively more abundant hardwood resource. The decline in the pine inventory also occurs in spite of the increasing pine growth rates mentioned earlier. This increase in the pine growth rate is due to the increasing proportion of the pine area that is in planted types.

Hardwood Inventory, Growth and Removals

In spite of historical increases in the hardwood inventory volume, the hardwood inventory is projected to peak around 1995 at a level of about 9.02 billion cubic feet and then

begin a gradual decline. By 2010, the hardwood inventory is projected to decline to 8.5 billion cubic feet—a decline of 5.7 percent from the projected peak in 1995. Unlike pine, the projected growth rate for hardwoods is fairly stable.

Cypress Inventory, Growth and Removals

-
Cypress inventories are projected to level off at a little over 1.5 billion cubic feet. Cypress removals are projected to increase gradually, while growth is projected to remain fairly stable.

Summary

Pine inventories went up consistently between the 1954 and the 1984 surveys. A modest decline showed up in the 1991 survey, but compared with historical pine inventories, the situation still did not look too bad. However, if our projections are accurate, much of the inventory build-up that has occurred with pine could be lost in the next 20 years. This is in spite of the modeled addition of over a million new acres of planted pine (in addition to the replacement of existing plantations when they are harvested), and, one might argue, fairly conservative removals estimates. These projections do little to assuage the concerns that already exist about the future of Louisiana's pine resource.

The hardwood inventory declined substantially between 1935 and 1964, but it has been building up slowly since 1964. Hardwood inventories are now slightly higher than pine inventories, and—in contrast to pine inventories—hardwood inventories are projected to remain fairly stable over the projection period. It is not likely that hardwood inventories in the state will again reach the level observed in 1935, however. In addition, a quality analysis would undoubtedly indicate that the more recent hardwood inventory is in smaller diameter classes and of poorer quality than in the earlier years. Cypress is still a relatively small proportion of total timber inventories, but has shown a slow, steady increase which is not likely to be reversed in the near future.

REFERENCES

1. Louisiana Department of Agriculture and Forestry. 1955-1995. Unpublished Severance Tax Data. Office of Forestry, Baton Rouge, LA.
2. Louisiana Department of Agriculture and Forestry. 1990. Louisiana's Fourth Forest. Office of Forestry, Baton Rouge, LA.
3. McDill, Marc E., Denis B. Tucker, and Janis Braze. 1996. Forest Products Supply in the Western Gulf: Louisiana and Mississippi. Proceedings of the 1996 LSU Forestry Symposium Growing Trees in a Greener World: Industrial Forestry in the 21st Century. 11 pages
4. Murphy, Paul A. 1975. Louisiana Forests: Status and Outlook. USDA Forest Service Southern Forest Experiment Station, Resource Bulletin SO-53. New Orleans, LA. 31 pages

5. Rosson, James F. Jr., William H. McWilliams, and Paul D. Frey. 1988. Forest Resources of Louisiana. USDA Forest Service Southern Forest Experiment Station, Resource Bulletin SO-168. New Orleans, LA. 81 pages
6. Sternitzke, Herbert S. 1965. Louisiana Forests. USDA Forest Service Southern Forest Experiment Station, Resource Bulletin SO-7. New Orleans, LA. 31 pages
7. Tucker, Denis B., Marc E. McDill. 1996. Current and Future Conditions of the Timber Resources of the Gulf South (Louisiana, Mississippi, Texas). Proceedings of the 26th Annual Southern Forest Economics Workshop. 10 pages
8. USDA Forest Service. 1988. The South's Fourth Forest: Alternatives for the Future.
9. USDA Forest Service, Forest Resources Report No. 24. Washington, DC. 512 pages
10. USDA Forest Service. 1955. Forests of Louisiana, 1953-1954. USDA Forest Service Southern Forest Experiment Station, Forest Survey Release-75. New Orleans, LA. 64 pages
11. Vissage, John S., Patrick E. Miller, and Andrew J. Hartsell. 1992. Forest Statistics for Louisiana Parishes—1991. USDA Forest Service Southern Forest Experiment Station, Resource Bulletin SO-7. New Orleans, LA. 66 pages
12. Winters, Robert K., George B. Ward, Jr., Inman F. Eldredge. 1943. Louisiana Forest Resources and Industries. USDA Forest Service, Misc. Pub. 519. Washington, DC. 44 pages

Overview of the Solid Wood Products Industry in Louisiana³

Primary Industry-Key Points

- The primary industry is defined as those industry sectors in which the principle raw material remains basically unprocessed and/or is used as the principle raw material input for other products or value adding processes.
- The primary solid wood products industry in Louisiana consists of about 80 companies.
- The majority of these companies (approximately 45%) produce softwood products. 30% produce hardwood products and just over 24% produce products from both hardwoods and softwoods.
- The importance of this forest industry sector to Louisiana's economy cannot be overstated. For example, nearly 50% of the primary forest products companies in Louisiana had sales of \$10 million or more in 1993.
- When extrapolated to the statewide industry, this segment will hire 1,940 new employees in Louisiana by 1999 if adequately trained employees can be found.

Secondary Industry-Key Points

- The secondary forest products industry is defined as that forest products sector which utilizes the output from the primary forest products industry as well as output from other industries to create further value added forest products.
- The Louisiana secondary forest products industry is comprised of approximately 650 companies.
- Over 75% of these companies have 10 or fewer employees.
- This segment of the industry will also add over 1,900 new employees by 1999 contingent upon adequately trained candidates. The potential for jobs creation in the existing primary and secondary forest products industries is significant.
- The secondary forest products industry is estimated to have just over \$648 million in annual sales.
- The secondary forest products sector in Louisiana has significant potential for industrial growth, particularly in supporting rural economic development. Future development of this industry sector may well be able to utilize the existing industry base as well as recruitment of companies to the state.

³ From: Vlosky, R.P. 1995. "An Overview of the Louisiana Primary Solid Wood Products Industry". Working Paper #2. Louisiana Forest Products Laboratory. Louisiana Agricultural Center. Louisiana State University. Baton Rouge, LA; Vlosky, R.P. Paul Chance and O. Victor Harding. 1994. "An Overview of the Louisiana Secondary Wood Products Industry". Working Paper #1. Louisiana Forest Products Laboratory. Louisiana Agricultural Center. Louisiana State University. Baton Rouge, LA; Vlosky, R.P., N. Paul Chance and JoAnn Doucet. 1996. "The Louisiana Solid Wood Products Industry." Report to US Forest Service, Southern Experiment Station, New Orleans, Louisiana.

Overview of Louisiana's Solid Wood Products Industry

Louisiana's forests represent an important resource for the state, both in terms of income to landowners and as inputs to the forest products industry. The harvest of timber, which is Louisiana's number one agricultural crop both in terms of gross income and value-added processing, supports a solid wood forest products industry that consists of almost 730 separate primary and secondary manufacturing establishments. The forest products industry in Louisiana is strongly interrelated with many other industries which sell raw materials to or purchase output from the forest products industry. Accordingly, changes in the forest products industry would have far-reaching effects throughout the state's economy.

Total 1995 sales by Louisiana's primary industry (lumber, plywood and other semi-processed products) is estimated to be \$1.85 billion while 1995 sales for the secondary forest products industry is about \$648 million. Combined, the solid wood industry in Louisiana is estimated to employ 13,200 people.

The potential for jobs creation and resource utilization in this industry sector is significant. However, to attain this potential, a wide variety of issues must be addressed. For example, existing consumer market trends, location decision criteria, raw materials availability and applicability, labor force skills and training requirements, target market identification, recruitment and retention strategies, comparative advantages and specific production segments should all be considered before undertaking a strategic development initiative.

This study reveals a number of issues that warrant further investigation including: 1) identify characteristics of wood products industries in other states that have similar resource profiles; 2) investigate reasons why out-of-state suppliers are used and what percentage of in-state supply originates elsewhere and ; 3) investigate plausibility of the development of buying or manufacturing cooperatives that could create purchasing and sales/marketing leverage through increased economies of scale for Louisiana producers or suppliers.

Methodology

Using a directories of Louisiana wood products industries compiled by the Louisiana Forest Products Laboratory (Vlosky and Doucet 1995), a census survey of all known companies was conducted in the Spring of 1996. Starting with a list of 713 secondary companies and 80 primary companies, phone calls were made to every company to verify company data base information. The end result was a revised list of 650 secondary and 80 primary firms. The surveys were conducted using structured mail questionnaires in accordance with the Total Design Method (Dillman 1978). This procedure consisted of a pre-notification postcard, an initial survey mailing, a post mailing reminder and a second survey mailing. The overall response rate for the study was 30% (153/525 for secondary producers and 25/75 for primary producers).

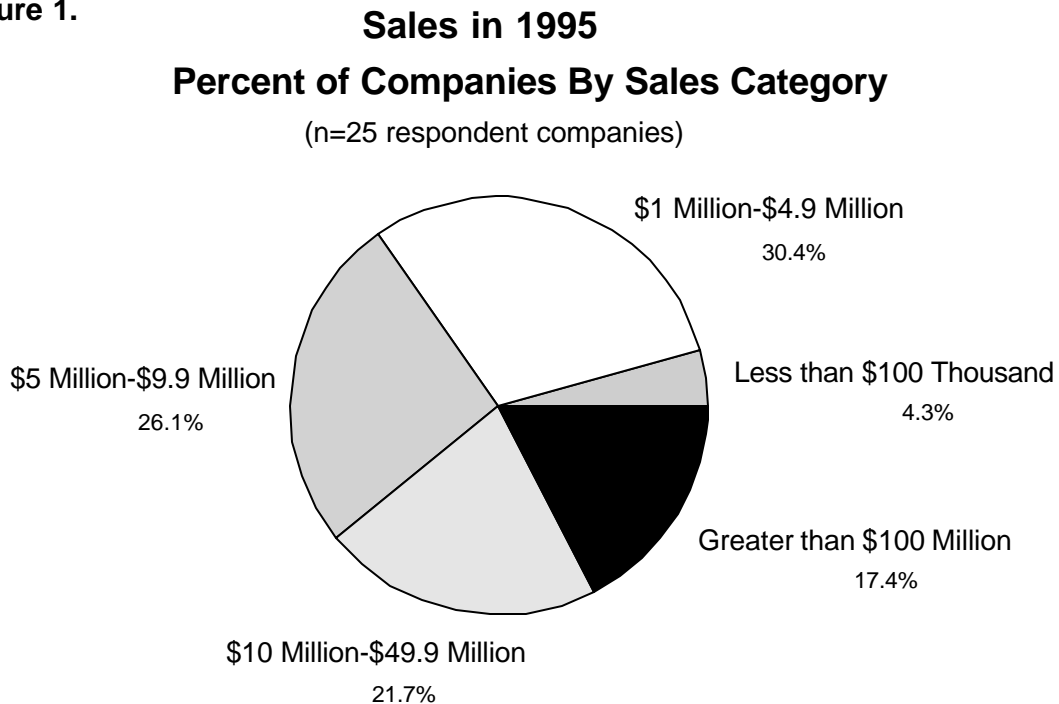
The Louisiana Primary Solid Wood Products Industry

Sales and Employment

The 25 study respondents in Louisiana's primary industry (lumber, plywood and other semi-processed products) represent a total of \$616 million in gross sales in 1995 and 1,698 employees. Extrapolating respondent data to the entire state primary industry results in estimates of 1995 gross sales of \$1.85 billion and 5,405 employees.

Relative to the secondary industry, primary companies tend to be large in terms of sales and employee levels. As shown in Figure 1, over a third of respondent companies had annual sales in 1995 of \$10 million or more with just over 17 percent having sales exceeding \$100 million. Average annual sales for respondents was \$24.6 million.

Figure 1.



Respondent geographic distribution by parish is shown in Table 1. Winn parish represents the greatest presence of primary wood products companies with \$130 million in total 1995 sales (21% of respondent sales) and 288 employees (17% of total respondent employees)

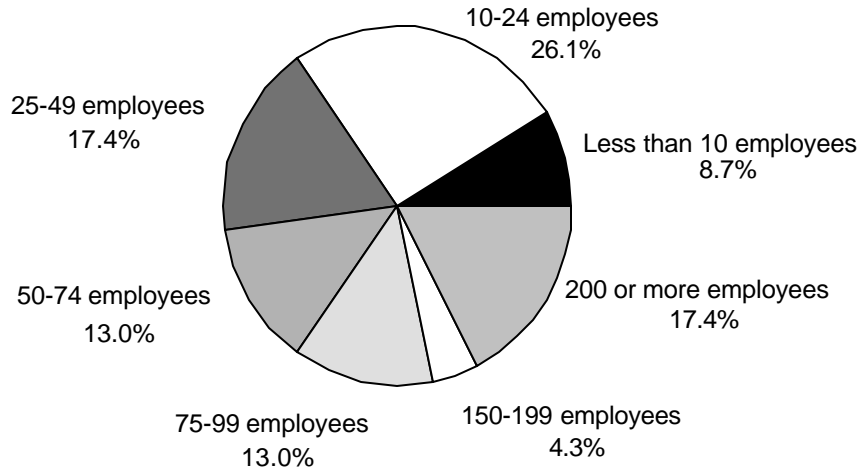
Table 1. Primary Industry Geographic Distribution By Parish

PARISH	SALES (1995) \$ MILLION	EMPLOYEES (1995) TOTAL
WINN	\$ 130.00	288
BIENVILLE	\$ 107.50	218
ALLEN	\$ 103.00	218
DESOTO	\$ 100.00	200
CALCASIEU	\$ 37.50	213
RAPIDES	\$ 37.50	81
RED RIVER	\$ 33.00	68
WASHINGTON	\$ 30.00	88
BEAUREGARD	\$ 10.50	101
BOSSIER	\$ 7.50	18
LASALLE	\$ 7.50	88
AVOUELLES	\$ 3.00	38
NATCHITOCHE	\$ 3.00	18
SABINE	\$ 3.00	18
ST. HELENA	\$ 3.00	38
TANGIPAHOA	\$ 0.05	5
TOTAL:	\$ 616.05	1,698

In terms of employment, a total of 1,698 employees are represented by respondents. Once again, in contrast to secondary companies, primary respondents tend to be larger with nearly 50 percent of respondent companies having 50 or more employees in 1995 (Figure 2). Four companies (17.4% of respondents) had 200 or more employees. Respondents indicated that they planned to add a total of 161 employees in 1996 and an additional 92 employees in the subsequent five-year period from 1997-2005.

Figure 2.

Employment in 1995
Percent of Companies By Employment Category
(n=23 respondent companies)

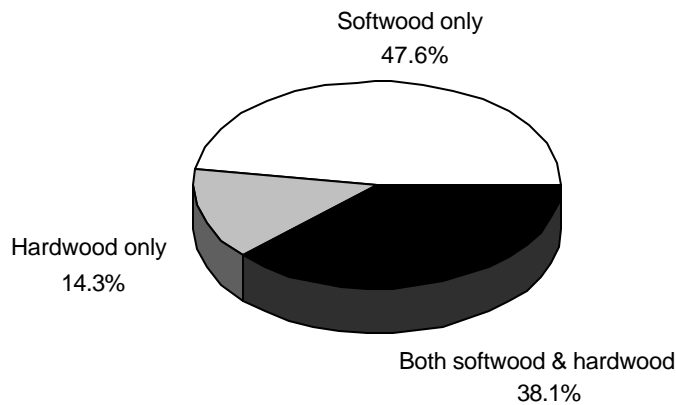


Raw Material Inputs and Products Produced

Nearly half of the respondents produce only softwood products, just over 14 percent produce only hardwood and over a third produce both softwood and hardwood products (Figure 3).

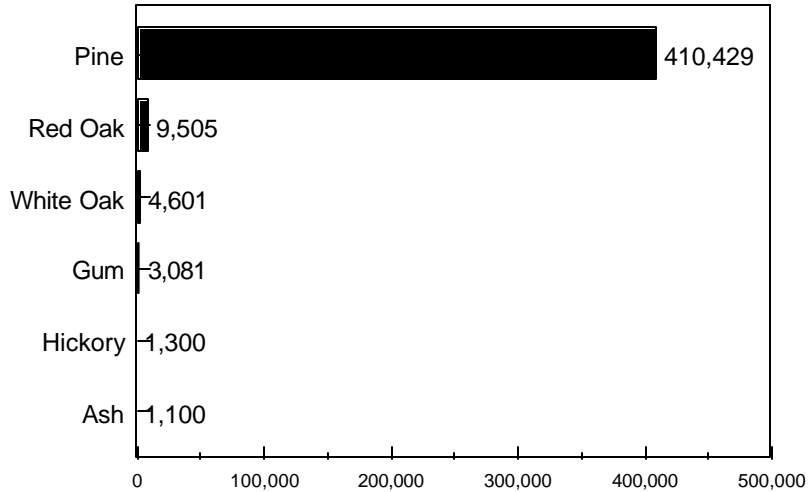
Figure 3.

Softwood or Hardwood Producer
(n=21 respondent companies)



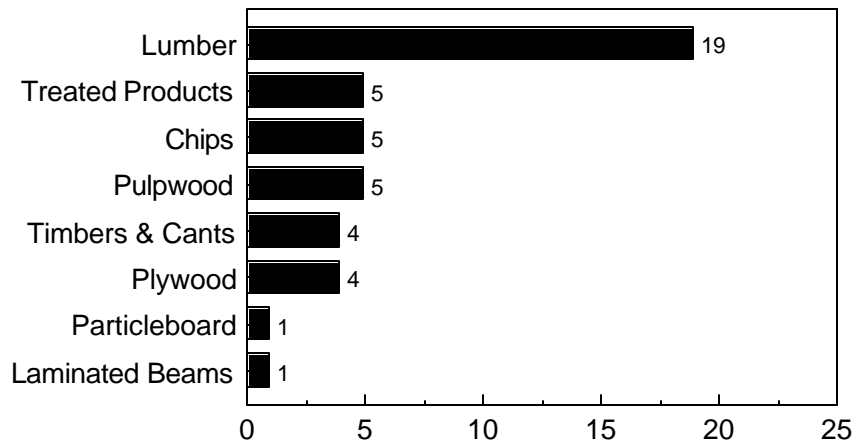
In terms of raw material inputs, a total of 771.7 million board feet (MMBF) of logs was used by respondents in 1995. Although just over 50 percent of respondents manufacture hardwood products to some degree, the volumes are very small compared to softwood species. Specifically, hardwood logs account for only 3.5% of respondent log usage in 1995. This point is highlighted in Figure 4 which shows that by species, pine accounts for the greatest share of raw material inputs by volume followed by hardwood species. Red oak is the major hardwood species followed by white oak, gum, hickory and ash.

Figure 4. Species Used as Raw Materials Inputs in 1995
Total Volume Reflected By Respondents
(Thousand Board Feet)



Lumber is the number one product manufactured by primary producers followed by lesser products such as treated products, chips and pulpwood. (Figure 5). The production of both softwood and hardwood lumber products is important to the growth and development of the secondary value-added wood products industry. Later in this report, the importance of the primary industry in this context is discussed further.

Figure 5. Major Products Produced by Louisiana Primary Wood Products Manufacturers
(Number of Responses)



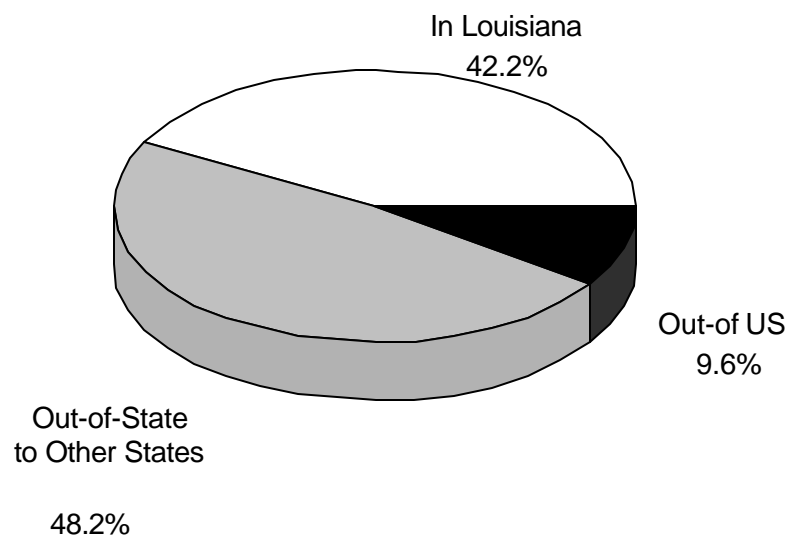
Marketing and Distribution

Seventeen percent of respondents (21 companies) indicated that they had a specific marketing budget allocation from their general budget and that they spent an average of 8.75 percent of operating revenue on marketing in 1995.

Although this study did not identify customer base characteristics, information regarding market scope and channels of distribution were collected. Previous studies indicate that value can be added to Louisiana's timber resource base by developing a secondary industry based on Louisiana primary solid wood product raw materials (Vlosky and Chance 1996). The discussion on the secondary sector later in this report shows that secondary producers purchase a significant percentage of raw materials from out-of-state suppliers. In addition, primary producer respondents indicated that they sold nearly half of their production to out-of-state customers (Figure 6).

Figure 6.

Markets for Louisiana Primary Wood Products Producers
Percent of 1995 Sales
(n=25)



It was important to find out why primary solid wood product companies sell their products to customers outside of Louisiana. Compared to neighboring Southern states with similar secondary forest product industry profiles, Louisiana has a low level of value-added per dollar of value of shipment by the sawmill industry (Table 2). Value-added, an important indicator of industry health and success is defined as “a measure of manufacturing activity derived by subtracting the costs of materials, supplies, containers, fuel, purchased electricity and contract work from the value of shipments for the products manufactured”. Thus, value-added equals value of shipments minus production inputs and represents the amount available for wages, salaries and profits in an industry.

Value-added is a better indicator of industry activity than value of shipments because value-added excludes the costs of inputs of other industries (Jacob et al. 1987). The low value-added ratio means that Louisiana is shipping most of its sawmill products away to other states, not adding much of any value to the lumber products that stay in the state, and buying secondary

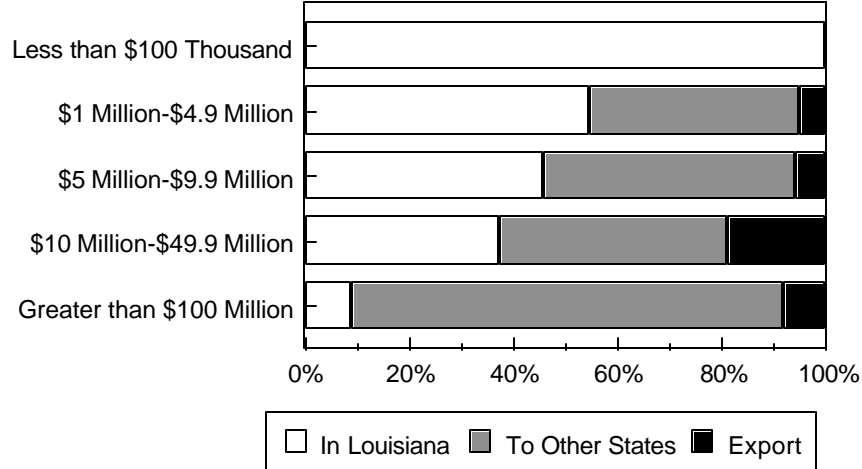
wood products from out-of-state producers. Even if the state would set a modest goal of achieving a ratio of the average of Louisiana's neighboring states, the state could have a secondary wood manufacturing industry that is significantly larger than that which exists today.

Table 2. Value-added by the Secondary Wood Manufacturing Industry Per Dollar of Value of Shipment by the Sawmill Industry

<u>State</u>	<u>Value-Added</u>
Arkansas	\$ 0.94
Louisiana	0.97
Mississippi	1.20
Alabama	1.24
Tennessee	2.05
Texas	3.53
Florida	3.84
Indiana	3.90
N. Carolina	4.27

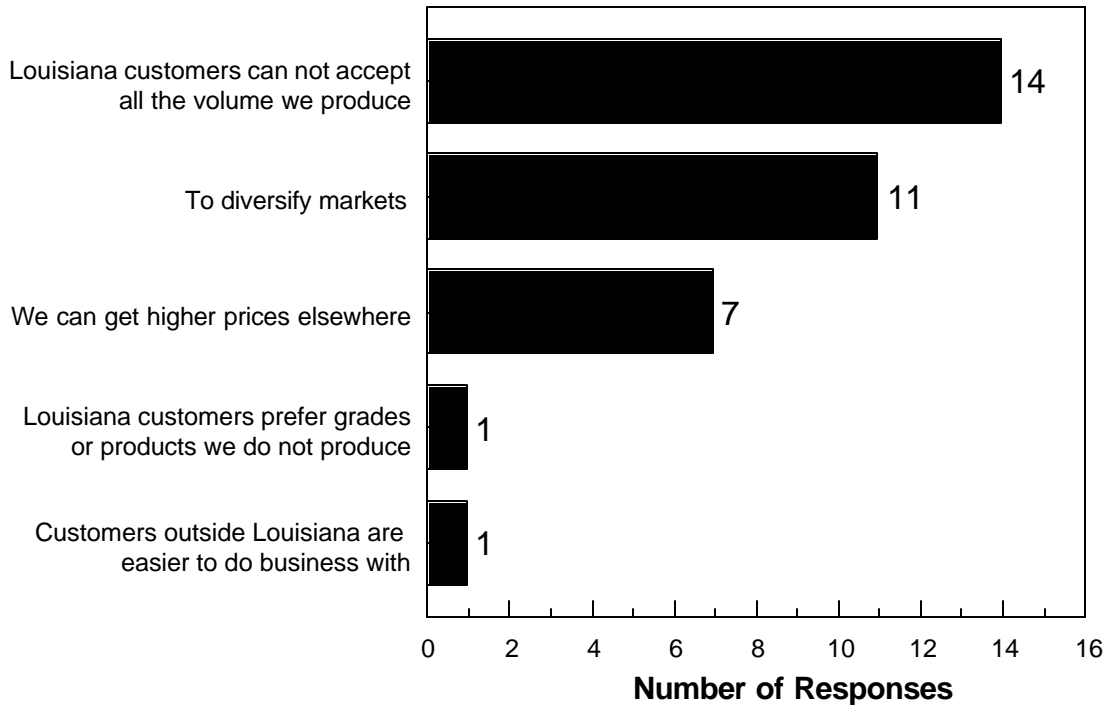
As shown in Figure 7, company size is directly related to the percent of production shipped outside the borders of Louisiana. As companies develop more extensive production capabilities, local demand becomes saturated which, in turn, requires market diversification. Small companies in this study (less than \$100,000 in gross sales in 1995) shipped all of their production to Louisiana customers.

Figure 7.
Markets for Louisiana Primary Wood Products Producers
Percent to Each Market by Sales Category in 1995
1995 Gross Annual Sales
 (n=22 respondent companies)



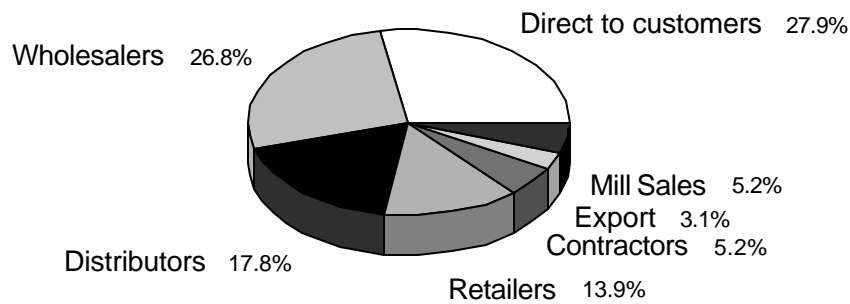
Regardless of company size, respondents indicate that local demand for their products is indeed saturated and that ability to get higher prices is an additional reason to market to out-of-state customers.

Figure 8.
Reasons for Selling Products to Out-Of-State Customers



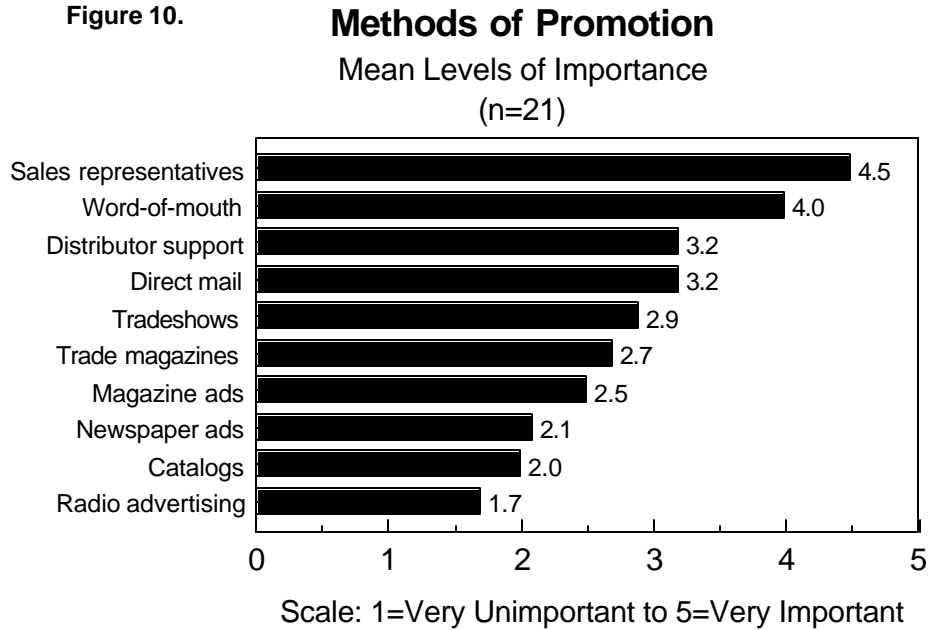
With regard to distribution channels used by primary industry respondents, almost equal percentages of production (by gross sales dollars) are shipped directly to non-retail customers (27.9%) and through wholesale distribution (26.8%) (Figure 9). Lesser percentages are shipped to stocking distributors (17.8%) and retailers (13.9%). Export accounts for 3.1 percent of gross sales volume in 1995.

**Figure 9. Distribution Channels
For Louisiana Primary Wood Products Producers**
Percent of 1995 Sales (n=25)



As opposed to the secondary industry which promotes products primarily through word-of-mouth, the most important method of promoting products for primary wood products respondents is through the use of company sales representatives (Figure 10). Word-of-mouth is second in importance with distribution intermediary support and direct mail the remaining techniques rated above 3.0 (neutral) in importance on a 5-point rating scale (1=very unimportant to 3=neither unimportant nor important to 5=very important).

Figure 10.



Company Success Factors and Impediments to Success

Using 5-point scaled questions indicating level of importance (1=very unimportant to 5=very important), study respondents were asked to rank factors that contribute to the success of their business as well as those factors that impede success in the marketplace. As seen in Figure 11, the four most important and equally ranked success criteria for respondent companies (4.5/5.0) are company reputation, product quality and customer service. After the next factor, product availability, the importance of long-term relationships to company success indicates that an understanding of the customer base and development of a long-term orientation can be a significant factor in building or maintaining market share.

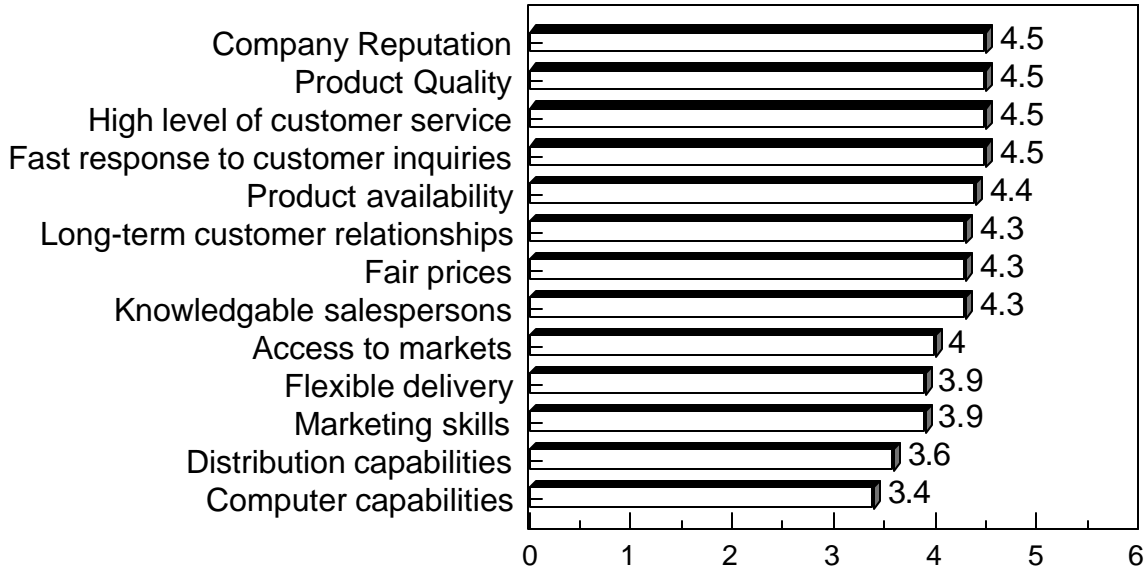
Computer based technology and information systems, which are becoming an increasingly important area of competitive advantage, ranked last. This indicates that the primary wood products industry may be lagging other industries in technology adoption.

Figure 11.

Company Success Factors

Levels of Importance

(n=22 companies)



(Scale: 1=very unimportant to 5=very important)

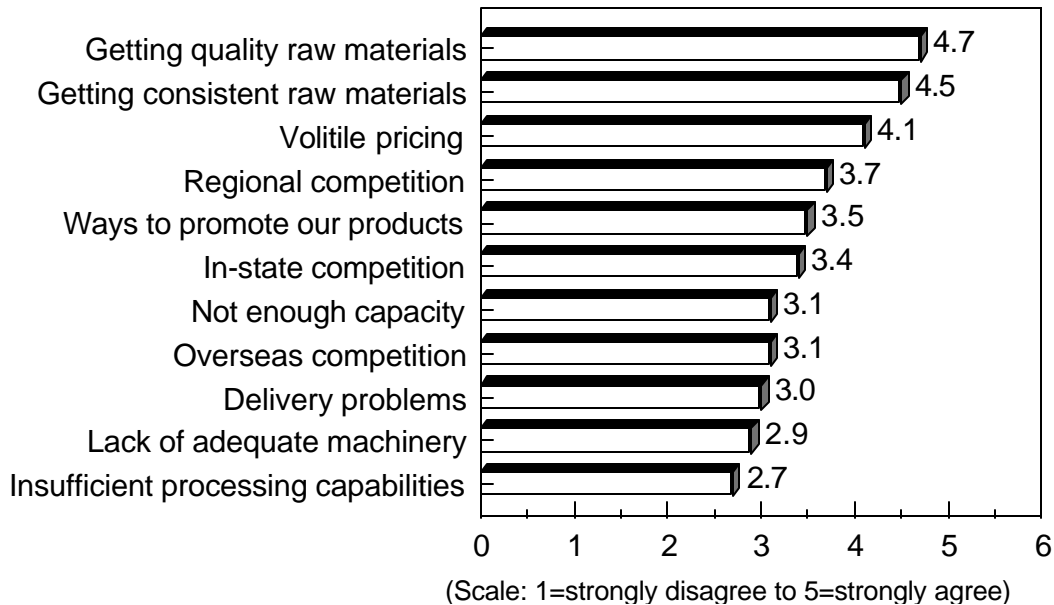
On the other side of the equation, respondents were asked to evaluate factors that are a hindrance to their success (Figure 12). The foremost impediment is acquisition of quality raw material followed closely by development of consistent raw material supply. These factors might be mitigated if primary producers focus on the factors that they themselves identified as contributors to success, particularly those that are relationship oriented. However, in this case, rather than these factors being applied to relationships with customers, the emphasis on relationships is with raw material suppliers.

The success and impediment responses can help existing companies improve their core capabilities and market position as well as identify important issues for individuals that are considering entering the primary wood products industry.

Figure 12.

Impediments to Company Success

Level of Agreement
(n=22 companies)



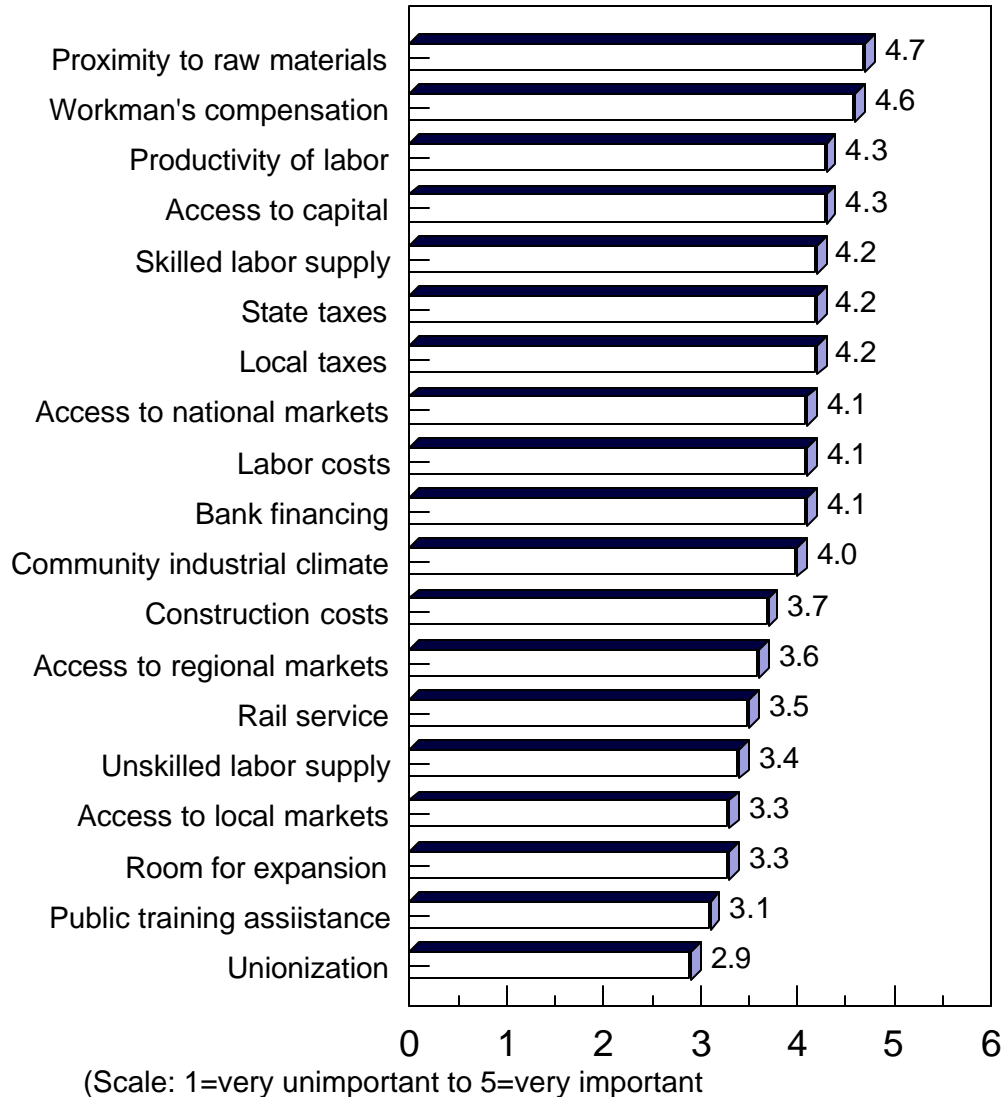
Industry Location Decision Factors

As part of the primary industry structure analysis, information about factors that encourage or deter industry location was sought. Nineteen factors that influence hardwood wood components industry expansion for existing companies or location decision criteria for companies considering immigration were analyzed. Five-point scaled questions indicating level of importance (1=very unimportant to 5=very important) were used. As seen in figure 13, proximity to an adequate and sustainable raw material supply is deemed most important by study respondents. Subsequent factors, in order of importance are labor issues (productivity and workmen's compensation costs) access to capital, the availability of a skilled labor pool and tax issues.

Figure 13.

Factors Influencing Expansion or Building New Facilities

Level of Importance
(n=21 companies)



Information Needs of the Primary Industry

The final question posed to respondents dealt with their need for information and training for different facets of their business operations (Table 3). This information can be used to tailor training programs, workshops and development of technical publications to the specific needs of the industry. The foremost information need is in the area of wood moisture relationship, a critical factor in wood product quality particularly in lumber manufacturing (39% of respondents). One-third of respondents desire information in wood drying, domestic market

opportunities and ways to reduce cost through improvements in business operation efficiency and how to navigate government regulations.

Least important were areas typically associated with the secondary value-added industry such as wood identification, gluing, finishing and general wood properties.

Table 3. Information Desired by Primary Wood Product Manufacturer Respondents

	Number of Respondents	Percent of Total Respondents
WOOD MOISTURE RELATIONSHIPS	7	39%
WOOD DRYING	6	33%
DOMESTIC MARKETS	6	33%
COST REDUCTION	6	33%
GOVERNMENT REGULATIONS	6	33%
LUMBER GRADING	5	28%
LOG GRADING	5	28%
QUALITY CONTROL	5	28%
MARKETING	5	28%
EXPORTING/IMPORTING	5	28%
PRODUCT IMPROVEMENT	4	22%
INTERNATIONAL MARKETING	3	17%
COMPUTER EDUCATION	3	17%
STRATEGIC PLANNING	3	17%
WOOD MACHINING	3	17%
SECURING FINANCING	3	17%
PLANT LAYOUT	2	11%
WOOD IDENTIFICATION	1	6%
WOOD GLUING	1	6%
WOOD FINISHING	1	6%
WOOD PROPERTIES	1	6%
EQUIPMENT USAGE	1	6%
WOOD PRESERVATION - HOME USE	1	6%
PUBLIC UTILITY LAWS	1	6%

Summary

The Louisiana primary solid wood products industry is comprised of approximately 80 companies that produce primarily grade lumber. The geographic scope of the industry markets is dispersed with accompanying long and complex distribution channels. Most companies are production oriented and do not rely on marketing techniques as part of their business strategy. Company respondents identified a number of factors that both contribute to, and are impediments to growth and development of the primary wood products industry in Louisiana.

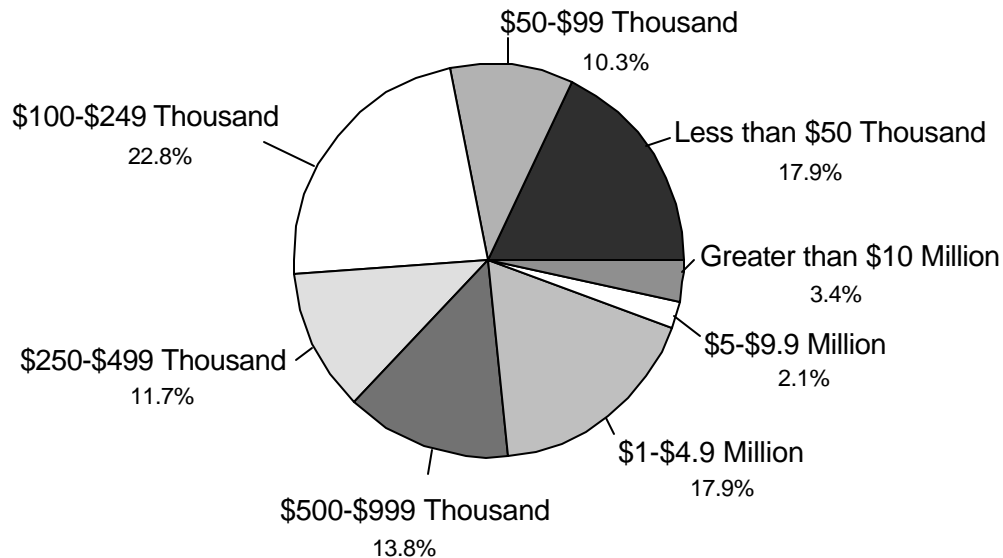
Further research might examine ways that in-state secondary wood products manufacturers might purchase more output from Louisiana primary producers, thereby increasing the value-added contribution to the resource. An example could be an investigation of the plausibility of developing secondary producer buying and manufacturing cooperatives that could create purchasing and sales/marketing leverage through economies of scale.

The Louisiana Secondary Solid Wood Products Industry

Sales and Employment

The 153 study respondents in Louisiana's secondary value-added industry (semi-processed and finished wood products) represent a total of \$189.5 million in gross sales in 1995 and 2,365 employees. Extrapolating respondent data to the entire state secondary industry (525 companies) results in estimates of 1995 gross sales of \$648 million and 8,115 employees. Relative to the primary industry, secondary companies tend to be small in terms of sales and employee levels. As shown in Figure 1, over fifty percent of respondent companies had annual sales in 1995 of less than \$250,000 with just over 5 percent having sales of \$5 million or more. Average annual sales for respondents was \$1.2 million.

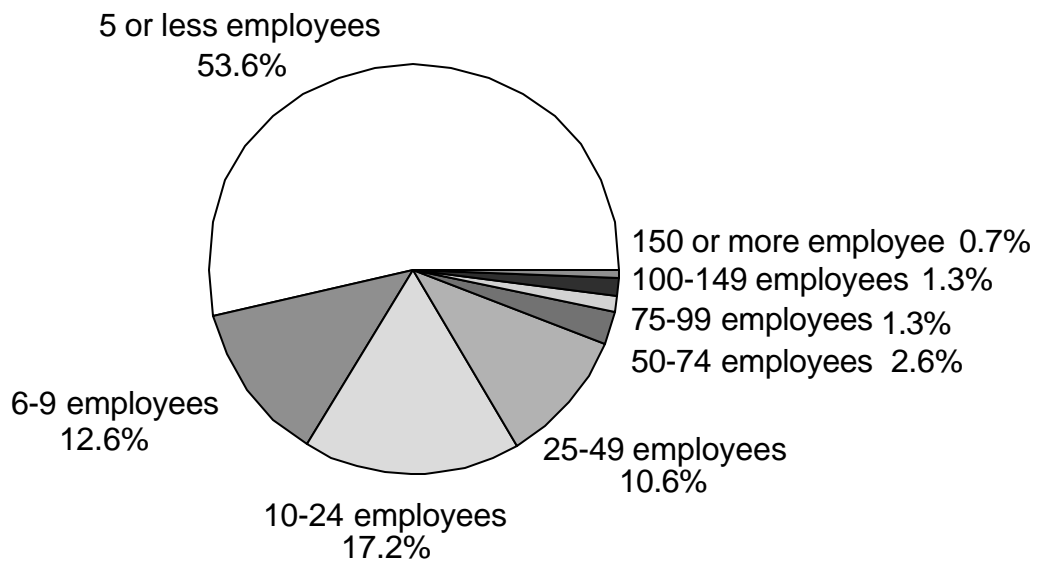
Figure 1.
Sales in 1995
Percent of Companies By Sales Category
(n=145 respondent companies)



Respondent geographic, sales and employment data by parish are shown in Tables 1 (sorted by parish) and Table 1b (sorted by 1995 sales revenue). The greatest presence of secondary wood products companies is in parishes that have metropolitan centers. This is indicative of the industry in the United States whereby finished and semi-finished product manufacturing is typically located close to consumers as opposed to raw material or primary manufacturers which are generally located closer to the resource base. Accordingly, East Baton Rouge parish represents the greatest sales volume with \$25.7 million (13.6% of total respondent sales) followed by Ouachita, Lafayette, Jefferson, Iberia and Orleans parishes.

In terms of employment, a total of 2,365 employees are represented by respondents. Once again, in contrast to primary companies, respondents tend to be small with nearly two-thirds of respondent companies having less than 10 employees in 1995 (Figure 2). Only nine companies (6% of respondents) had 50 or more employees. Sixty-four respondents indicated that they planned to add a total of 226 employees in 1997 and 67 respondents said they would add an additional 361 employees by the year 2000. Extrapolating for the entire Louisiana secondary industry, the total employment increases would be 786 new employees in 1997 and 1,255 additional new employees by the end of the decade.

Figure 2. Employment in 1995
Percent of Companies By Employment Category
 (n=151 respondent companies)



When planned employment additions are viewed in terms of company size, Figure 3 shows that additions are fairly evenly distributed across companies of all sizes with the exception of those companies larger than \$5 million in sales. When viewed in terms of company size by number of existing employees, Figure 4 shows that most employee additions are planned by companies that currently employ less than 50 employees with the greatest number of companies in the smallest employee group (5 or less employees).

Figure 3. Planned Employment Additions
 Number of Companies By Sales Category
 (n=145 respondent companies)

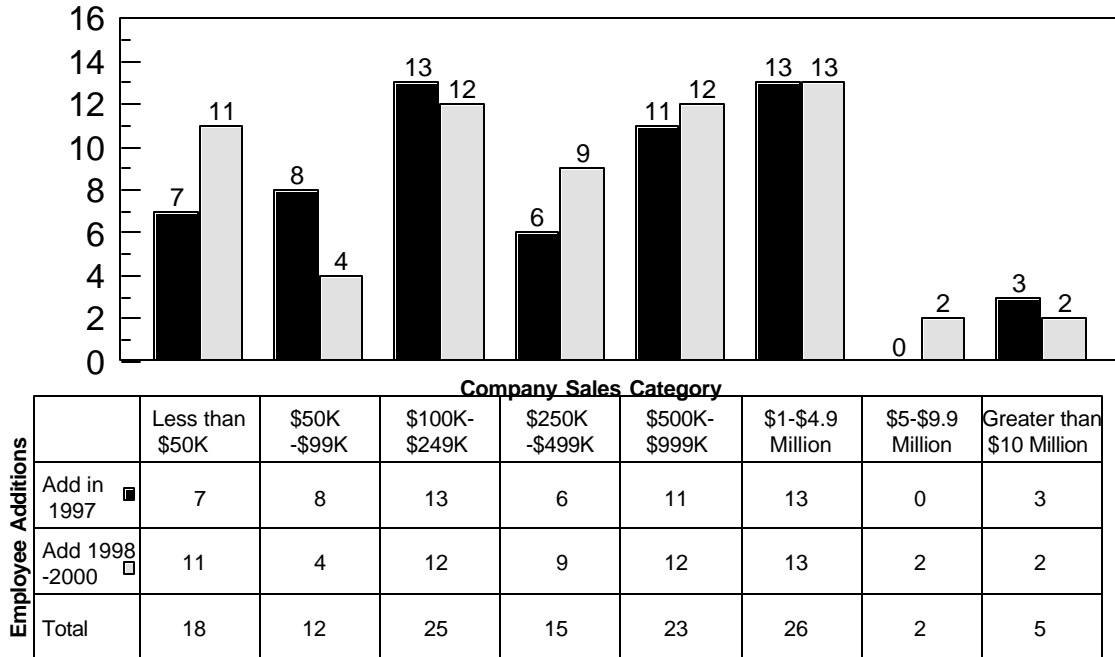
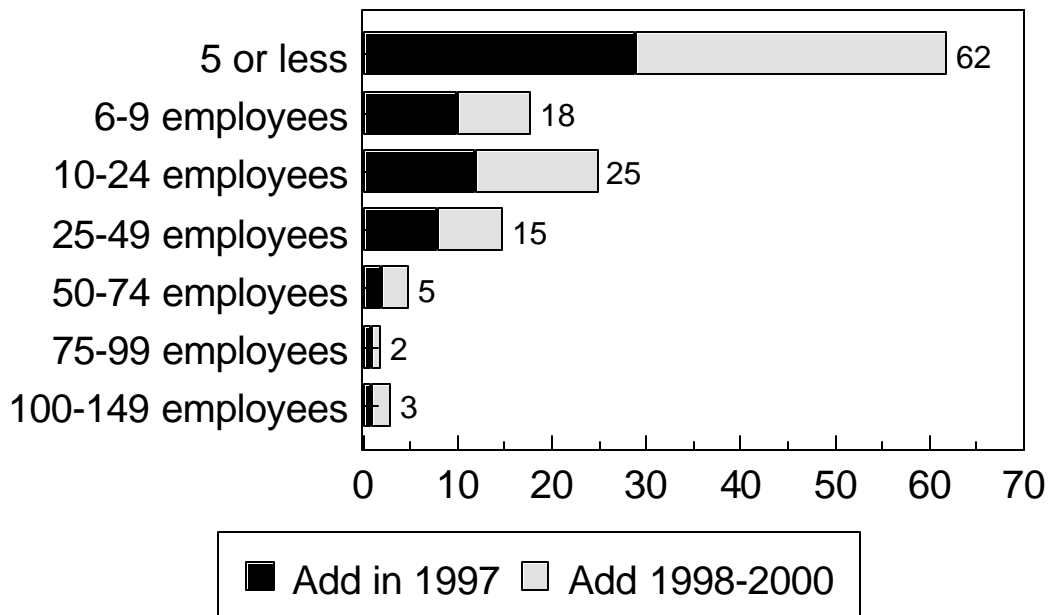


Figure 4. Planned Employment Additions
 Number of Companies By Employee Category
 (n=145 respondent companies)



Species Used and Products Produced

Louisiana secondary wood products manufacturers use a wide variety of species that originate from many states and countries. As seen in Table 2, from a total of 54.5 million board feet of raw materials used in 1995 by respondents, Southern pine and red oak account for nearly 70 percent of the species mix by volume (47.8% and 20.4% , respectively).

The suspicion that a significant percentage of raw materials for the secondary wood products industry is sourced from out-of-state suppliers was confirmed in 1994 in a study by Vlosky et al. (1994). They found that for all species used by Louisiana secondary companies in 1992, 26.7 percent overall (by value) was supplied by out-of-state vendors. However, this be a conservative estimate because, although a supplier is in Louisiana, it may play an distribution intermediary role for raw materials produced elsewhere.

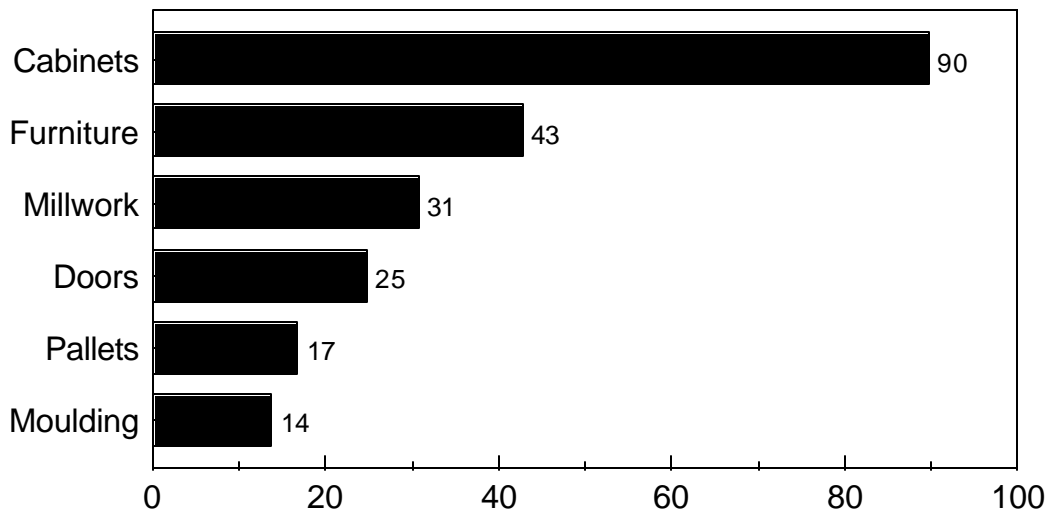
Table 2. Species Used in 1995

Species	Total Volume (MBF)	Percent of Total Volume	Average Volume by Company (MBF)
SOUTHERN PINE	26,027	47.788%	465
RED OAK	11,157	20.485%	149
WHITE OAK	2,424	4.450%	52
CYPRESS	1,788	3.284%	30
POPLAR	1,631	2.995%	25
SPRUCE	1,411	2.590%	353
CANADIAN BLACK SPRUCE	1,325	2.433%	1,325
COTTONWOOD	1,287	2.363%	644
HACKBERRY	1,075	1.974%	154
WHITE PINE	1,069	1.962%	71
GUM	1,002	1.840%	1,002
ASH	731	1.342%	17
MAPLE	532	0.976%	9
RECYCLED ANTIQUE HEART PINE	500	0.918%	500
MIXED HARDWOODS	474	0.870%	158
MAHOGANY	408	0.750%	8
DOUGLAS-FIR	321	0.589%	54
WESTERN RED CEDAR	281	0.516%	56
CHERRY	204	0.374%	7
BLACK GUM	185	0.340%	185
REDWOOD	173	0.318%	87
WALNUT	150	0.275%	5
RECYCLED ANTIQUE HEART CYPRESS	136	0.250%	136
RADIATA PINE	50	0.092%	50
HICKORY	32	0.059%	4
SPANISH RED CEDAR	27	0.049%	5
BUTTERNUT	21	0.039%	11
BASSWOOD	11	0.020%	6
SALVAGE PINE	10	0.018%	10
ALDER	5	0.009%	3
EASTERN RED CEDAR	5	0.009%	3
ELM	5	0.009%	5
PONDEROSA PINE	2	0.004%	2
BEECH	1	0.002%	1
CANARY WOOD	1	0.002%	1
LINDENWOOD	1	0.002%	1
PECAN	1	0.002%	1
PERUVIAN WALNUT	1	0.002%	1
TOTAL:	54,462		

Products Produced

Secondary industry respondents produced a diversity of products in 1995. Most companies do not have a narrow product line but rather manufacture 2-5 different products. Across the industry, the main products produced by respondents, in ranked order by number of responses, are cabinets, furniture, millwork, door, pallets and moulding (Figure 5).

Figure 5. Major Products Produced by Louisiana Secondary Wood Products Manufacturers (Number of Responses)



Distribution Channels and Markets Served

Although the study did not identify specific customer base characteristics, information regarding channels of distribution and market scope were collected.

As seen in Figure 6, almost two-thirds of 1995 secondary manufacturer sales were made directly to customers or end-users. Given the small size of most companies, and the fact that only 2% of respondents have a budget dedicated for marketing activities, it is no surprise that such a large percentage of sales are made directly to customers. This is consistent with a 1994 study by Vlosky et al. which found that nearly 65 percent of Louisiana secondary wood products producers market their products within a 250 mile radius, a very limited market. Beyond direct sales, the remaining distribution channels, in order of importance are distribution intermediaries, retailers and home building contractors. Further, as seen in Figure 7, the larger the respondent company, the less reliance there is on direct sales.

Figure 6.

Distribution Channels

Percent of 1995 Sales

(n=143)

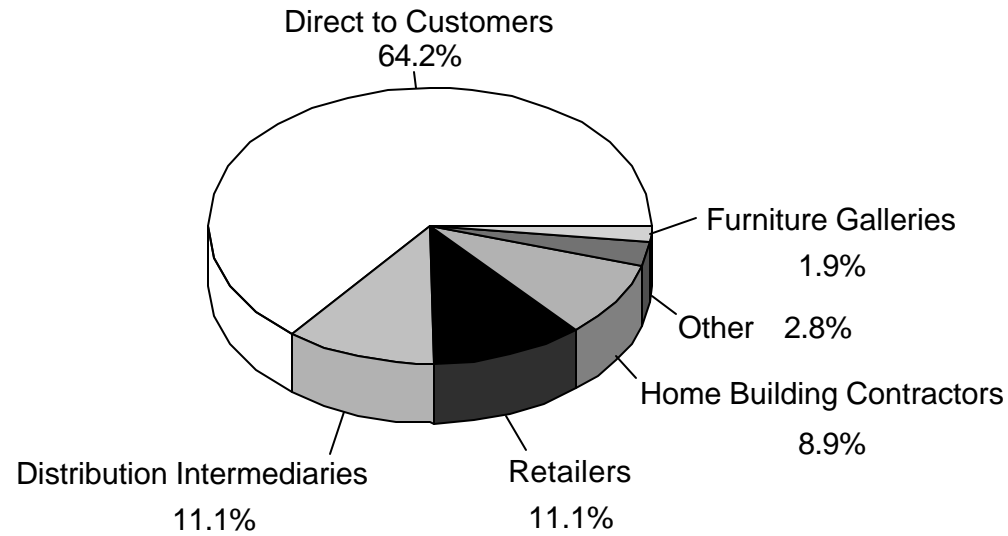
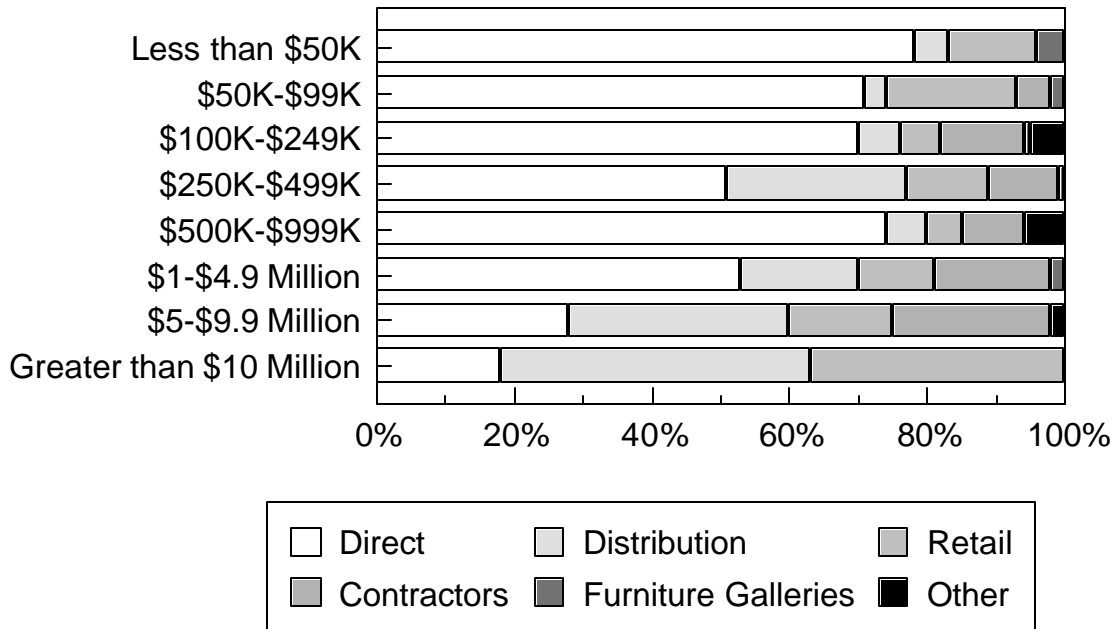


Figure 7.

Distribution Channels

Percent of 1995 Sales by Sales Category

(n=143)



Looking at market scope another way, a vast majority of companies market their products in Louisiana, with very few occurrences of respondent companies selling products in international markets (Figure 8). Figure 9 provides a further breakdown into markets by sales class. As is expected, larger companies tend to have a greater market reach into other U.S. states and into export markets.

Figure 8.

Markets for Louisiana Secondary Wood Products Producers

Percent of 1995 Sales
(n=147)

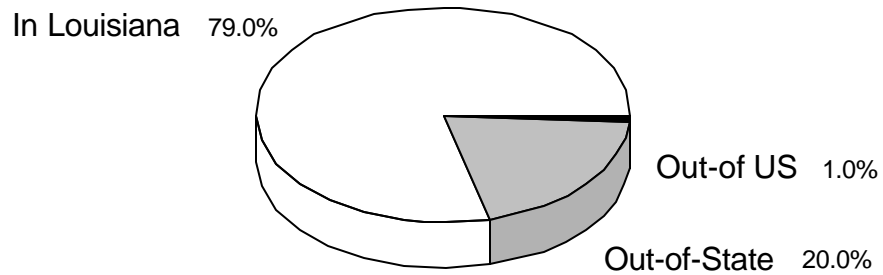
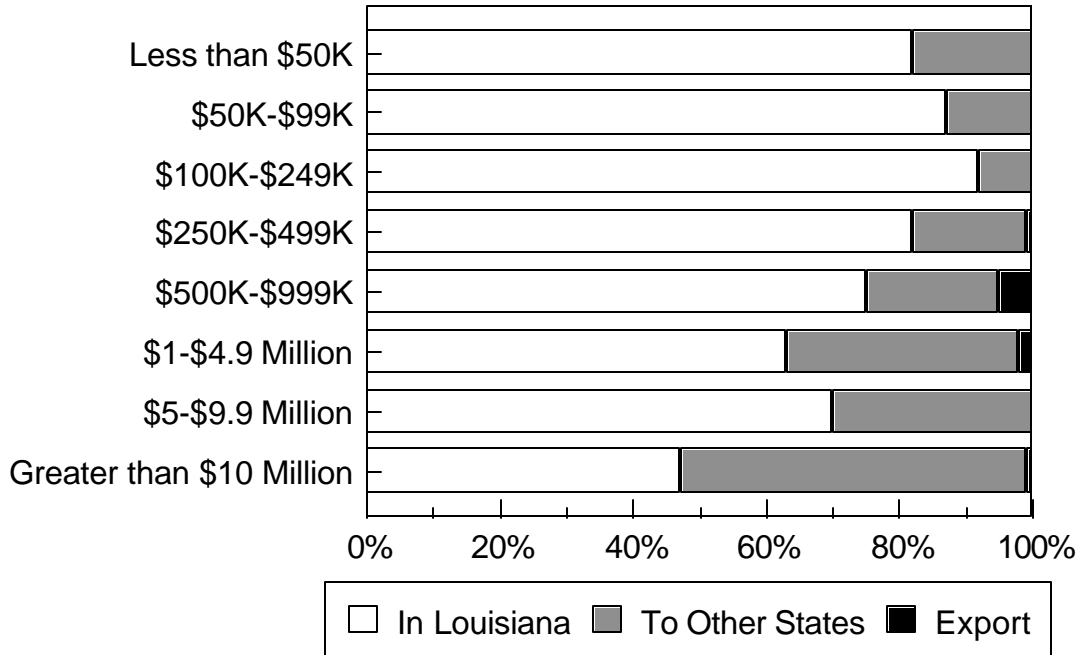


Figure 9.

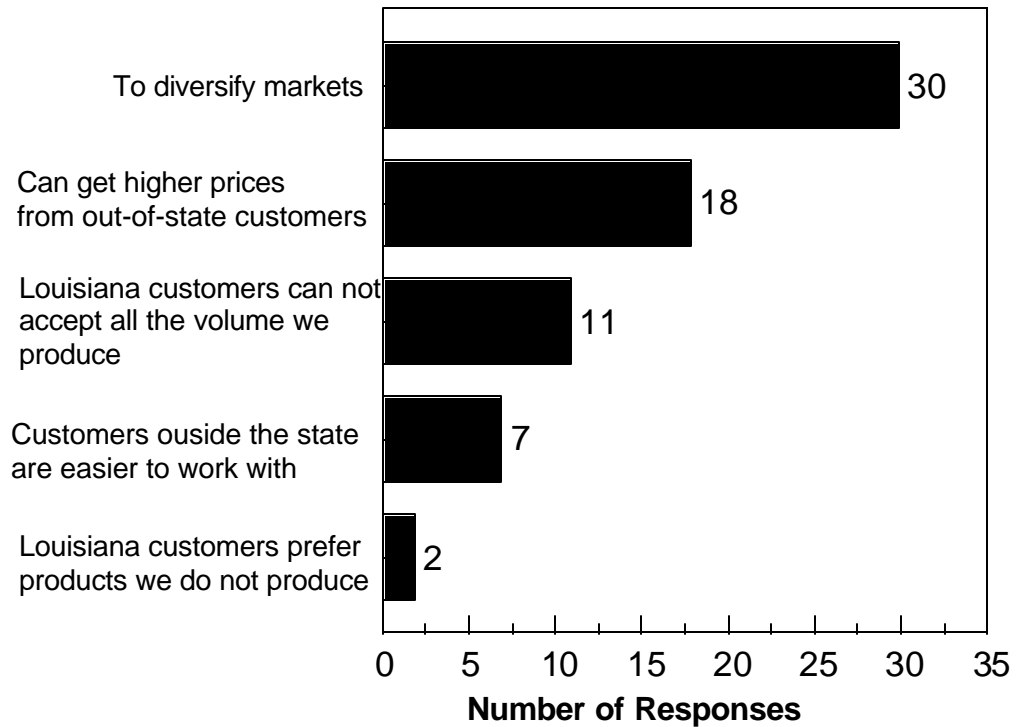
**Markets for Louisiana Secondary Wood Products Producers
Percent to Each Market by Sales Category in 1995**

(n=145 respondent companies)



In addition to company size factors, respondents were asked if there were any other factors that led them to sell their products to customers outside of Louisiana. Figure 10 shows that there are some conscious decisions being made in this area. The desire to spread risk and diversify markets geographically was the number one cited reason. Economics also play a role with the ability to receive higher prices from out-of-state customers for some respondents. To a lesser extent, insufficient in-state demand and ease of doing business, were cited.

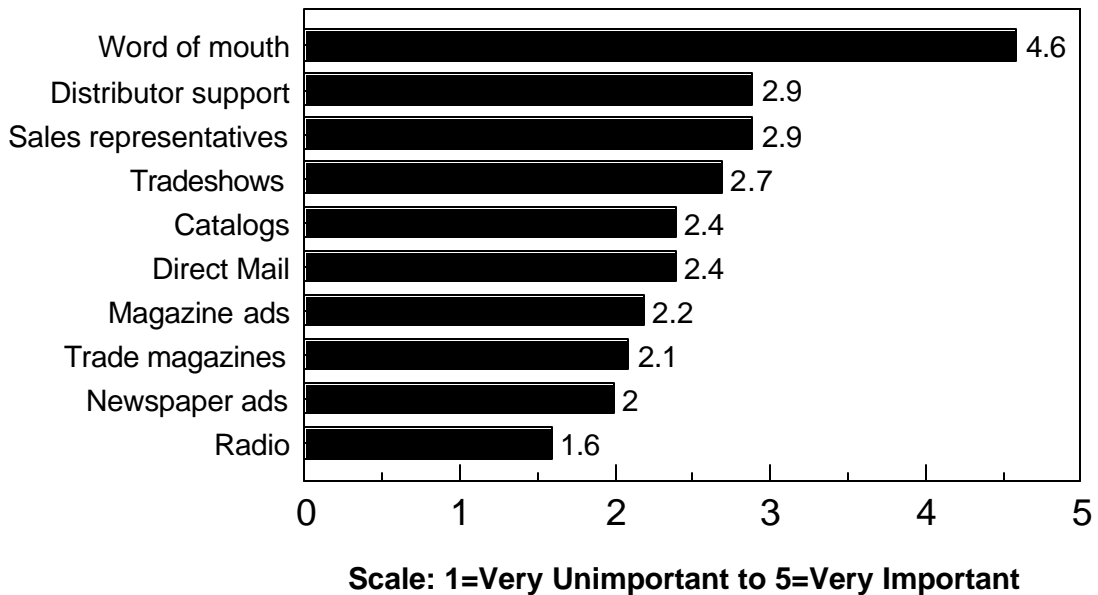
Figure 10. Reasons for Selling Products to Out-Of-State Customers



Promotion

Word-of-mouth was the only promotional method cited by study respondents with a ranking above 3.0 on a 5-point scale of importance (Figure 11). This is consistent with studies conducted on the secondary wood products industry in Louisiana and the hardwood dimension industry that found that word-of-mouth was the most cited promotional method (Vlosky et al. 1994; Vlosky 1996).

**Figure 11. Methods of Promotion
Mean Levels of Importance
(n=150)**

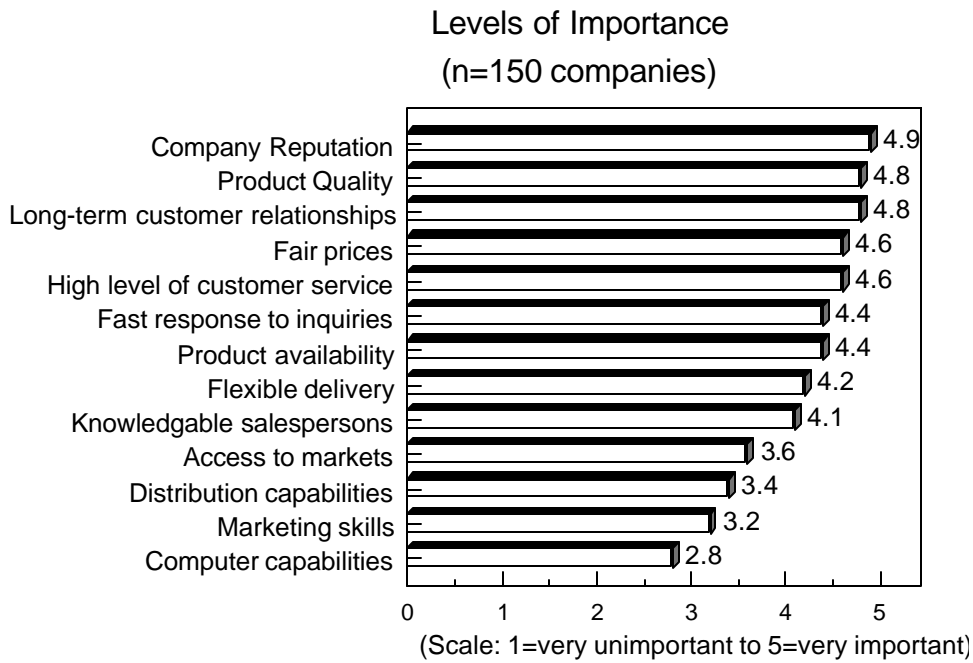


Company Success Factors and Impediments to Success

Using 5-point scaled questions indicating level of importance (1=very unimportant to 5=very important), study respondents were asked to rank factors that contribute to the success of their business as well as those factors that impede success in the marketplace. As seen in Figure 12, the most important success criterion for respondent companies (4.9/5.0) is company reputation. This is followed by product quality, developing long-term relationships with customers and having fair pricing.

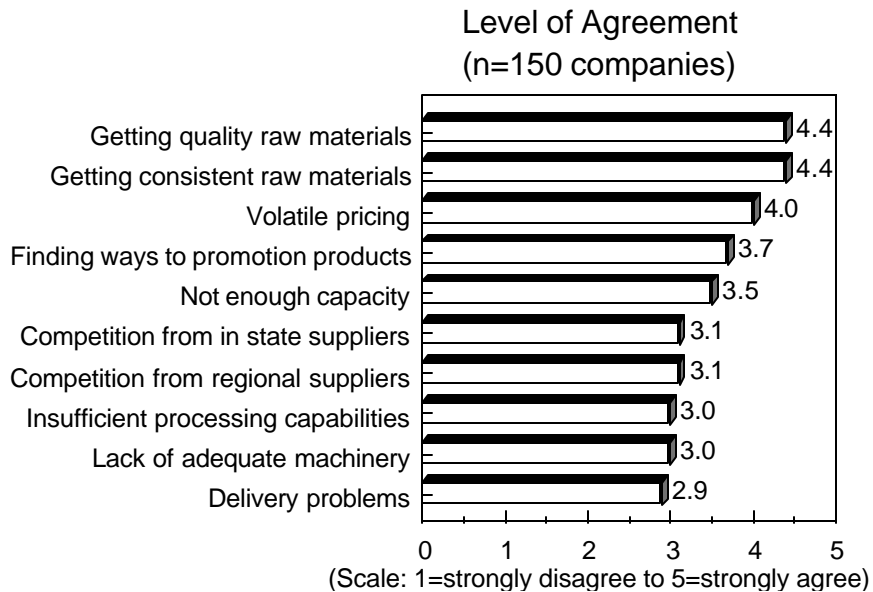
As is the case with primary producers, having computer based technology and information systems ranked last. In addition, close to the bottom of the list is marketing skills which confirms the lack of financial commitment to market expansion and product promotion beyond word-of-mouth.

Figure 12. Company Success Factors



Respondents were asked to evaluate factors that are a hindrance to their success (Figure 13). The foremost impediment is acquisition of quality raw material followed closely by development of consistent raw material supply. Volatile pricing from raw material suppliers is another concern as well as finding ways to promote products beyond the currently constrained reach.

Figure 13. Impediments to Company Success



The success and impediment responses can help existing companies improve their core capabilities and market position as well as identify important issues for individuals who are considering entering the secondary wood products industry.

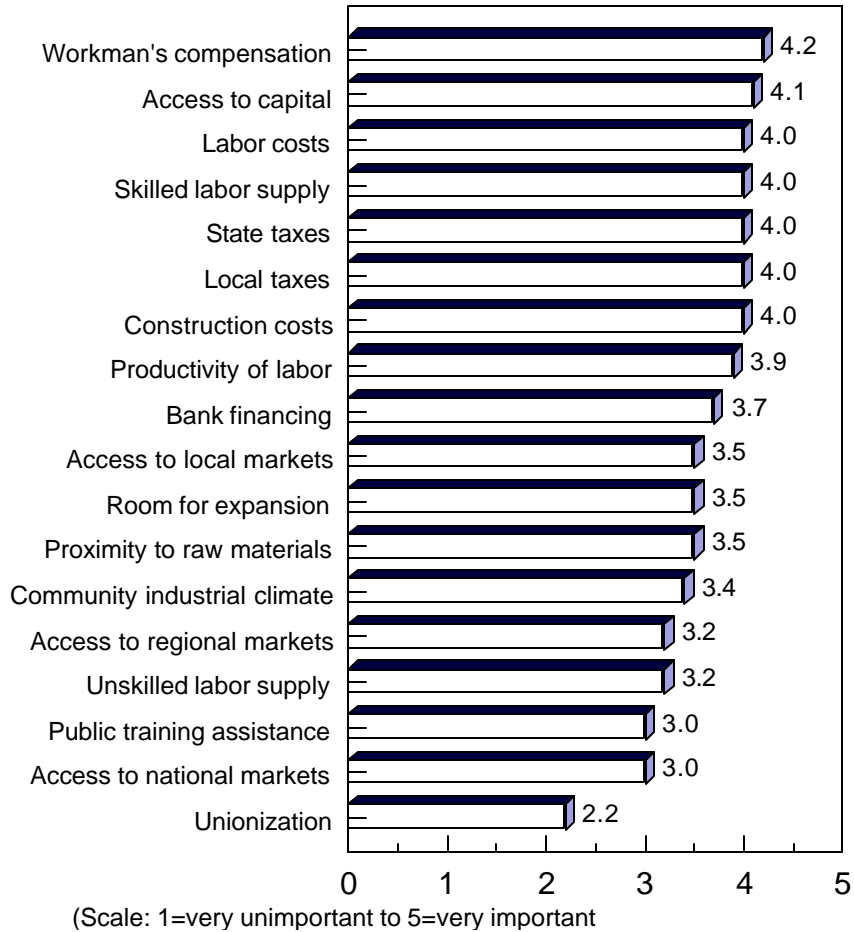
Industry Location Decision Factors

As part of the secondary industry structure analysis, information about factors that encourage or deter industry location was sought. Nineteen factors that influence hardwood wood components industry expansion by existing companies or location decision criteria for companies considering immigration were analyzed. Five-point scaled questions indicating level of importance (1=very unimportant to 5=very important) were used. As seen in figure 14, workmen's compensation costs are of greatest concern to secondary producers. Subsequent factors such as accessing capital, general labor costs, raw material supply needs and tax issues all received high scores.

Figure 14.

Factors Influencing Expansion or Building New Facilities

Level of Importance
(n=150 companies)



Equipment Use and Purchase Plans

An indicator of industry growth, in addition to increases in employment and sales, is the planned purchases of equipment. This is also an indicator of modernization which contributes to increased productivity, lowered costs and an increase in competitiveness. As seen in Figure 15, 73 secondary companies plan to purchase new equipment in 1997. In general, these planned purchases are evenly distributed across company size class as indicated by annual sales. The exception is with the largest respondent companies (greater than \$5 million in annual sales) where only five companies are purchasing equipment in 1997.

Figure 15.

Planned Equipment Purchases in 1997 Number of Companies By Sales

(n=145 respondent companies)

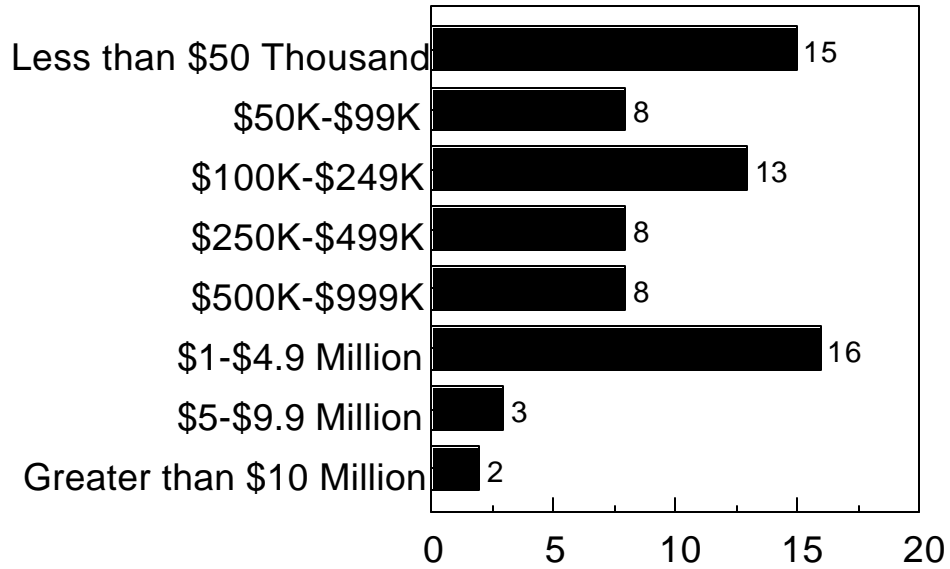


Table 3 shows the types of equipment respondents said they used in their facilities in 1995. The number of responses are indicated and are sorted by frequency.

Table 3. Equipment Usage in 1996
Number of responses by equipment type

TABLE SAW	132	CARVING TOOLS	1
BAND SAW	119	CASE CLAMPS	1
ROUTER	116	CHAIN	1
DRILL PRESS	113	CHIPPER	1
PLANER	113	CHOP SAW	1
CROSSCUT SAW	112	CIRCLE MOLDER	1
SHAPER	94	CIRCLE SAW	1
JOINTER	91	CLAMPING TABLES	1
LATHE	58	CUSTOM MADE	1
MOULDER	50	CUSTOM MOLDING MACHINE	1
STRAIGHT LINE RIP SAW	47	DOOR CLAMPS	1
SCROLL SAW	42	DOOR PREP MACHINE	1
PANEL SAW	41	DOWEL MACHINE	1
EDGE BANDER	31	DOWEL SANDER	1
GANG RIP SAW	28	EDGE FOILER	1
DUPLICATING LATHE	12	EDGER	1
DOUBLE END TRIM SAW	11	EMBOSSERS	1
RADIO FREQUENCY DRYER	11	FACE FRAME MACHINE	1
DRY KILN	10	FRAME NAILER	1
BELT SANDER	8	FRAME SAW	1
SANDERS	8	HOLLOW MORTISE CHISELER	1
CNC ROUTER	6	HORIZONTAL BAND SAW	1
MORTISING MACHINE	6	HYDRAULIC PRESS	1
GRINDERS	4	LAMINATING PRESS	1
NOTCHER	4	LINE BORER	1
RESAW	4	MULTISPINDLE DRILL	1
TENONER	4	NAILER	1
BORING MACHINE	3	OTHER GLUE DRYER	1
DRUM SANDER	3	PALLET NAILING MACHINE	1
MITRE SAWS	3	PLATE JOINTER	1
AIR COMPRESSOR	2	PLATER	1
CUT-OFF SAW	2	POINTING SAW	1
EDGE SANDER	2	SHARPENING MACHINE	1
NAIL GUNS	2	SPECIAL JIGS	1
PALLET DISMANTLER	2	SPINDLE SANDER	1
PRESSES	2	SPRAY BOOTHS	1
AIR GUN	1	SPRAY EQUIPMENT	1
ARCH SHAPER	1	VERTICAL LINE BORER	1
BLOWER SYSTEM	1	WELDING MACHINE	1
CARRIAGE	1		

Information Needs of the Secondary Industry

The final question posed to respondents dealt with their need for information and training for different facets of their business operations (Table 4). This information can be used to tailor training programs, workshops and development of technical publications to the specific needs of the industry. The foremost information need is in the area of wood moisture relationship, a critical factor in wood product quality particularly in lumber manufacturing (39% of respondents). One-third of respondents desire information in wood drying, domestic market opportunities and ways to reduce cost through improvements in business operation efficiency and how to navigate government regulations. Least important were areas typically associated with the secondary value-added industry such as wood identification, gluing, finishing and general wood properties.

Table 4. Information Desired by Respondents

	Number of Respondents	Percent of Total Respondents
WOOD FINISHING	56	37%
LUMBER GRADING	55	37%
WOOD GLUING	54	36%
COST REDUCTION	47	31%
WOOD/MOISTURE RELATIONSHIPS	43	29%
WOOD IDENTIFICATION	42	28%
EQUIPMENT USAGE	40	27%
GOVERNMENT REGULATIONS	40	27%
PRODUCT IMPROVEMENT	35	23%
PLANT LAYOUT	33	22%
COMPUTER EDUCATION	32	21%
SECURING FINANCIAL ASSISTANCE	32	21%
WOOD MACHINING	29	19%
MARKETING	28	19%
WOOD PROPERTIES	27	18%
DOMESTIC MARKETS	27	18%
INTERNATIONAL MARKETS	22	15%
STRATEGIC PLANNING	22	15%
QUALITY CONTROL	21	14%
WOOD DRYING	21	14%
EXPORTING/IMPORTING	20	13%
LOG GRADING	9	6%

References

1. Chance, N. Paul and Richard P. Vlosky. 1996. "Wood Products Company Site Visits and Profiles for the Macon Economic Development Council Region and Surrounding Parishes." A Sponsor Report to the Macon Ridge Economic Development Region, Inc. Louisiana State University Agricultural Center. Baton Rouge, LA. May.
 2. Chang, Sun Joseph, Stanley B. Carpenter and Hsien-chih Lu. 1992. Management and Technical Assistance to Secondary Wood Manufacturing Industry in Louisiana. Final Report to Louisiana Department of Economic Development. Louisiana Agricultural Center. Louisiana State University. June 30.
 3. Dillman, Don A. 1978. Mail and Telephone Surveys-The Total Design Method. John Wiley & Sons. New York, New York.
 4. Jacob, Richard E., James E. Hotvedt and Rodney L. Busby. 1990. The Role of Forests in the Louisiana Economy. Bulletin No. 822. Louisiana Agricultural Experiment Station. Louisiana Agricultural Center. Louisiana State University. July.
 5. Vlosky, R.P. 1996. "Characteristics of U.S. Hardwood Wood Component Manufacturers." Forest Products Journal. Vol. 46. No. 5. pp. 37-43.
 6. Vlosky, R.P. Paul Chance and O. Victor Harding. 1994. "An Overview of the Louisiana Secondary Wood Products Industry". Working Paper #1. Louisiana Forest Products Laboratory. Louisiana Agricultural Center. Louisiana State University. Baton Rouge, LA.
 7. Vlosky, R.P. and JoAnn Doucet. 1995. "Louisiana 1995 Solid Wood Products Industry Directory: Volume 1 Primary Producers." Louisiana Forest Products Laboratory. Louisiana State University Agricultural Center. June.
- Vlosky, R.P. and JoAnn Doucet. 1995. "Louisiana 1995 Solid Wood Products Industry Directory: Volume 2 Secondary Producers." Louisiana Forest Products Laboratory. Louisiana State University Agricultural Center. June.

Conclusions

There is significant potential to further develop the Louisiana secondary wood products industry. The product mix of the companies located in the State is quite varied, generally of excellent quality and readily accepted in markets outside Louisiana. The secondary industry produces a variety of products including architectural millwork, furniture, cabinets, doors, flooring products and pallets. While several primary manufacturers distribute nationally and internationally, secondary producers currently market their products in a much narrower geographic area.

The majority of the secondary forest products companies are characterized as very small (average annual sales of \$1.2 million), utilizing relatively unsophisticated and standardized manufacturing processes and equipment. However, most of these companies are viable businesses and are able to compete in the markets they serve. Many successful companies thrive by exploiting specialty niches.

There are opportunities for significant industry growth if a number of obstacles and issues are addressed. Examples are: 1) the need for industry management and employee training; 2) costs of workman's compensation insurance; 3) corporate tax and incentive issues; 4) a lack of comprehensive and coordinated market development and promotion and; 5) the need for further information and research support.

Regardless of obstacles, development opportunities for the State of Louisiana exist through industry development and value-added forest products manufacturing. The state is well positioned with an existing infrastructure of expertise to execute a value-added wood products industry initiative. The recommendations of the Task Force draw upon this expertise to craft a development program that has a significant probability of success.