Business and Employment Stability and Sustainability in the Logging and Forest Products Community of New England and New York

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Forest products businesses in the Northern Forest are adversely affected by population and land-use changes; the high costs of doing business in the region; and lack of reliable labor. Logging businesses, in particular, find it difficult to attract younger people to logging, in part because of the profession's lack of occupational prestige and prospects for better, safer work in other sectors.

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http://www.nsrcforest.org

Project Summary

The forest products industry is a major contributor to the economy of the New England-New York (NE NY) region. The state of Maine, for example, ranks first in the country in the percent of its economy that is forest-dependent. In addition, the states of Maine, New Hampshire, and Vermont are among the most forested in the nation, and many communities, families, and individuals in the region depend on the forest products sector for employment and economic vitality. However, the region has experienced significant changes, including recent declines in logging capacity, as well as increases in forest practices regulations and population and land use pressures. The effects of business and employment instability in the logging community can have devastating effects on mills that rely on loggers for wood, impacting local, statewide, and regional economies.

The objective of this research was to develop detailed information about the logging community and logging and mill businesses in NE-NY that would provide insight into trends in both logging business stability and logging employment, as well as the sustainability of the sector of the region's forest products industry that directly depends on the logging community. Perspectives from both the logging and milling industries were developed.

The study combined several social science methods – focus groups, mail surveys, and interviews – to gather richer information than that which would be provided by a single research methodology.

Results of this study suggest a concern among sawmill procurement managers and loggers in the region about population pressures and symptoms of land use change, such as land development, sprawl, and terminal harvesting. Operation costs were cited as primary barriers to maintaining or expanding forest products businesses. Additional concerns related to logging's occupational prestige and the recruitment of new loggers into the profession agree with previous research in this area.

Background and Justification

- In response to concern about the recruitment of workers in the logging industry, the health of logging businesses, and wood supply in the northern New England, a study of the logging workforce in the region was conducted in 1999 (Taggart and Egan 2002; Egan and Taggart 2004). The study used logger focus groups and mail and phone surveys to probe issues relating to logging labor and logging businesses. It found that most loggers in the region would not encourage their sons/daughters to be loggers and only half of the loggers surveyed expected to be employed in logging in five years. Some said that they logged because there were few alternatives nearby and most said that logging suffered from very low occupational prestige. Several barriers to maintaining and expanding logging businesses were identified, including mill prices that were felt to be too low, and logging equipment prices that were felt to be too high. However, a shortage of reliable logging labor and uncertainty about the health of the forest products industry in the region were also identified.

Background and Justification

- Egan and Taggart (2004) found significant differences in age, education, and logging experience between Maine resident and Quebec resident loggers who worked in Maine's border counties with Quebec. In addition, Maine resident loggers appeared to exhibit less resignation to woods work than their Quebec counterparts. However, Quebec resident loggers indicated that their profession was held in higher esteem among the public than did loggers from Maine. Over two-thirds of respondents from both populations would not encourage a son/daughter to be a logger, despite considerable familial attachment to logging. Results, suggested the authors, may have implications for logging labor supply, labor recruitment efforts, and logging mechanization in a region of the state that is heavily dependent on the forest products industry.

- Logging labor issues also prompted the PAC/Irland study (1999) of Canadian labor in northern Maine. The study concluded that bonded labor did not have a serious negative impact on the state's logging workforce, but that localized problems associated with bonded labor – for example, unfair competition for logging jobs with US citizens – may exist.

Background and Justification

- Although the study established baseline information on the logging community in northern New England, we lack (a) baseline information for southern New England and New York, and (b) information on trends in the health and stability of logging business in northern New England and the impacts of these trends on the broader forest products industry. Since the1999 northern New England study, logging appears to have experienced dramatic changes, and the region's logging community has received increased media attention related to a contracting logging workforce. While overcapacity in logging was considered an important issue in 1999, in 2004 the industry appears to be experiencing a severe undercapacity that is affecting wood supply and mill operations, resulting in destabilizing effects among individuals, families, businesses, and communities dependent on forest

  sector employment (Turkel 2004).

Background and Justification

- Literature Cited

  - Egan and Taggart 2004. Who will log? Occupational choice and prestige in northern New England. *Journal of Forestry*.102(1):20-25
  - Egan, A. and D. Taggart. 2004. Who will log in Maine's north woods? A cross-cultural study of occupational choice and prestige. *Northern Journal of Applied Forestry*.
  - PAC/Irland. 1999. Maine Logging industry and the bonded labor program: An economic analysis. Report submitted to the Maine Department of Labor, November 18, 1999. 250 p.
  - Taggart, D. and A. Egan. 2002. Occupational choice among loggers in Maine's Northern Forest and southern counties. *Adirondack Journal of Environmental Studies*. 9(2):31-36.
  - Turkel, T. 2004. Logjam. *Portland Press Herald*. February 1, 2004.

Methods

- Eight focus groups of loggers, two in each state in the four-state region, were conducted. Focused discussions were used to prepare for the development of the mail and phone surveys and to add depth to survey results. The focus of the discussions were on understanding some of the issues relevant to logging business sustainability and logging labor. Focus group questions raised questions, for example, about the logging workforce (occupational choice and prestige), occupational choice (reasons for becoming loggers, and whether and for how long participants plan to remain in logging), logging businesses (challenges to maintaining/expanding businesses). Focus groups were arranged through the cooperation of the logger association representatives listed as cooperators in this proposal.

- Key informant interviews were arranged with the region's state foresters and/or their representatives in and representatives of the mill industry to discuss both the logger and the mill survey and gather input on issues related to the forest products industry that may be addressed in the survey.

Methods

- Following protocols reported in Egan and Taggart (2004), a mail survey of all loggers in the region was conducted.

- Upon completion of the mail survey, a phone survey of a random sample of 200 logger mail survey non-respondents was conducted. The phone survey provided an additional opportunity to: (a) increase the response rate of the overall study; (b) provide a mechanism for measuring non-response bias; and (c) provide an opportunity to gather information by phone that would add depth to survey responses.

- The mail survey of all wood consuming mills in the region was conducted. Survey development was based, in part, on the inputs of mill representatives, state foresters, and other key informants in the forestry community.

- A phone survey to a random sample of 50 mill mail survey non-respondents will be conducted.

- Geographic Information Systems (GIS) analysis and US Census data will be used to both augment and provide a spatial dimension to the overall analysis.

Methods

- Both logger and mill mail surveys included multiple mailings consisting of the following sequence: Mailing of the cover letter and survey; mailing of a reminder postcard; second survey mailing. This will help to increase response rates for the two surveys. Phone surveys of mail survey non-respondents augmented the response rate and provide a mechanism for measuring non-response bias.

- Logger survey questions were based on (a) questions included in the previous (1999) study, (b) focus groups, and (c) discussions with state foresters and other key informants in the forest products industry, and addressed issues related to the stability and sustainability of logging businesses and employment. For example, survey questions solicited information on familial attachment to logging (e.g., *How many generations of loggers preceded you in logging? If you had a son/daughter interested in beginning a career, would you encourage a son/daughter to pursue a career in logging? Why/why not?*); occupational choice and prestige (e.g., *Why did you become a logger? What is the public's perception of loggers and the work they do?*); and logging business sustainability (e.g., *What are barriers to maintaining or expanding your logging business? Do you anticipate logging in the next five years? Why/why not?*).

Results/Project outcomes

- *Logger survey*

The logger survey was completed on December 31, 2006. Below is a summary of the response rate.

State	Total Received	Mailed	Response Rate
MA-CT-RI	252	1225	20.6
NY	175	547	31.9

- Response rates for the logger survey are comparable to those found in the 2000 study of loggers in northern New England, which ranged from 24 percent in ME to 33 percent for Quebecois loggers who worked in Maine.

- Most logger data are still being analyzed.

Results/Project outcomes

- *Mill survey*

  - The mill survey, to which 164 mill representatives in New England-NY responded, was completed on December 31, 2007. In addition to the 164 completed and returned surveys, there was also a number of obsolete addresses, and retired sawmill owners. Sawmill hobbyists (mills operating less than 900 hours per year), pulp mills and shingle mills were not included in the analysis, reducing the number of usable surveys to 133.

  - Responses to the mill survey that were considered full-time sawmill operations were: 36 from NY, 13 from CT-MA, and 0 from RI.

  - A manuscript exploring the mill data has been submitted to the *Forest Products Journal* for peer review.

Results/Project outcomes

- Although the response rate to the 2006 mill survey is difficult to discern because the number of "hobby" mills on the master list appeared to be significant, it was likely much lower than the 42 percent response rate for the mill survey of northern New England mills conducted in 2001 and reported in:

  Egan, A., D. Taggart, and I. Annis. 2004. Effects of population pressures on wood procurement and logging opportunities in northern New England. *Northern Journal of Applied Forestry*.

- It is unknown whether the relatively poor response was due to season of year of the survey (winter in 2001; fall in 2006), the prevailing business climate in the industry in 2001 vs. 2006, or some other reason(s). Survey methodologies were the same for each study and the survey mailed in 2006 was more brief than that mailed in 2001. However, no nonresponse bias was found statistically for the data set containing information for the 133 sawmills in the region, suggesting that the population of mills that responded to the survey is the same as the population that did not.

Results/Project outcomes

Barriers to maintaining or expanding sawmill businesses in New EnglandŃNew York related to day-to-day business-related constraints. Numbers are percents responding that the factor was an important or very important barrier to maintaining or expanding the sawmill business in the state or state pairing.

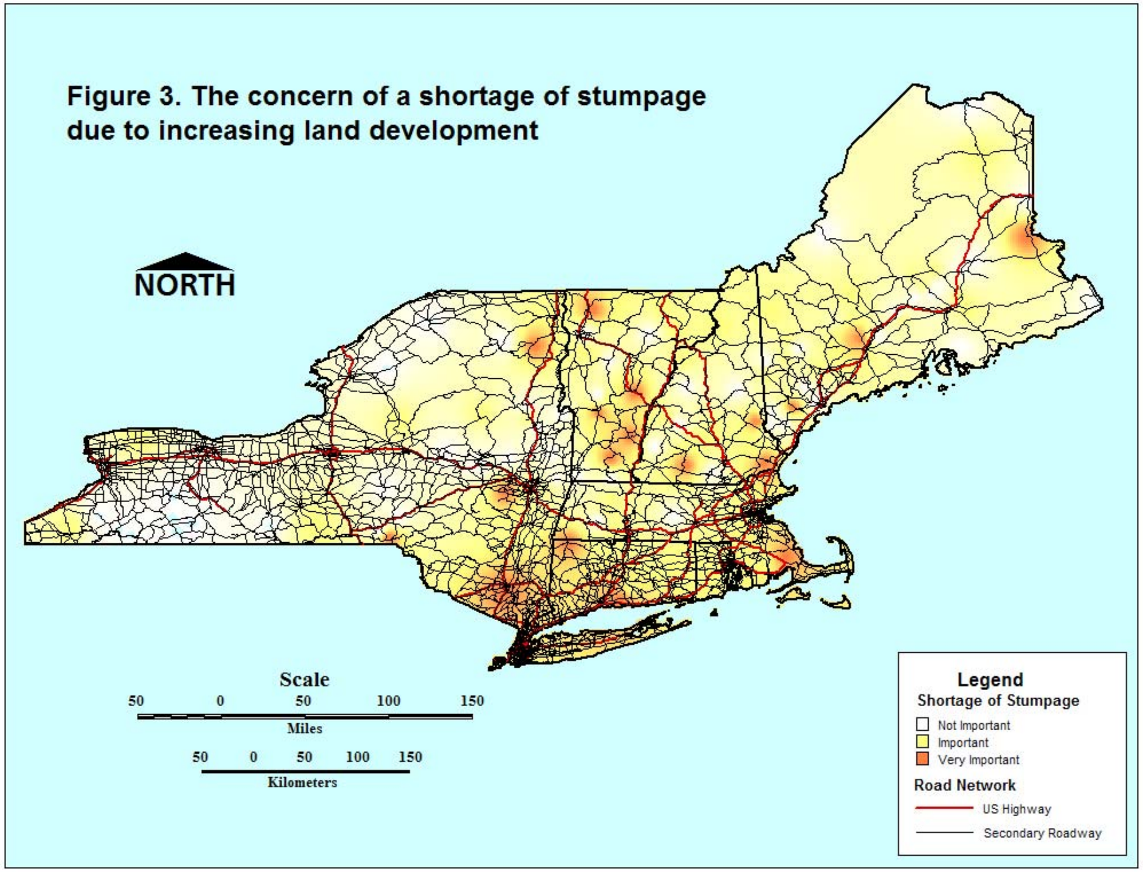
	CT-MA	ME	NH-VT	NY	All
Fuel/energy prices are too high (chi-square = 5.22; p = 0.52)	93	98	97	95	96
Costs of providing health benefits to mill employees (chi-square = 16.76; p = 0.01)	100	86	100	87	92
Not enough reliable mill labor (chi-square = 1.73; p = 0.94)	77	79	78	74	77

Results/Project outcomes

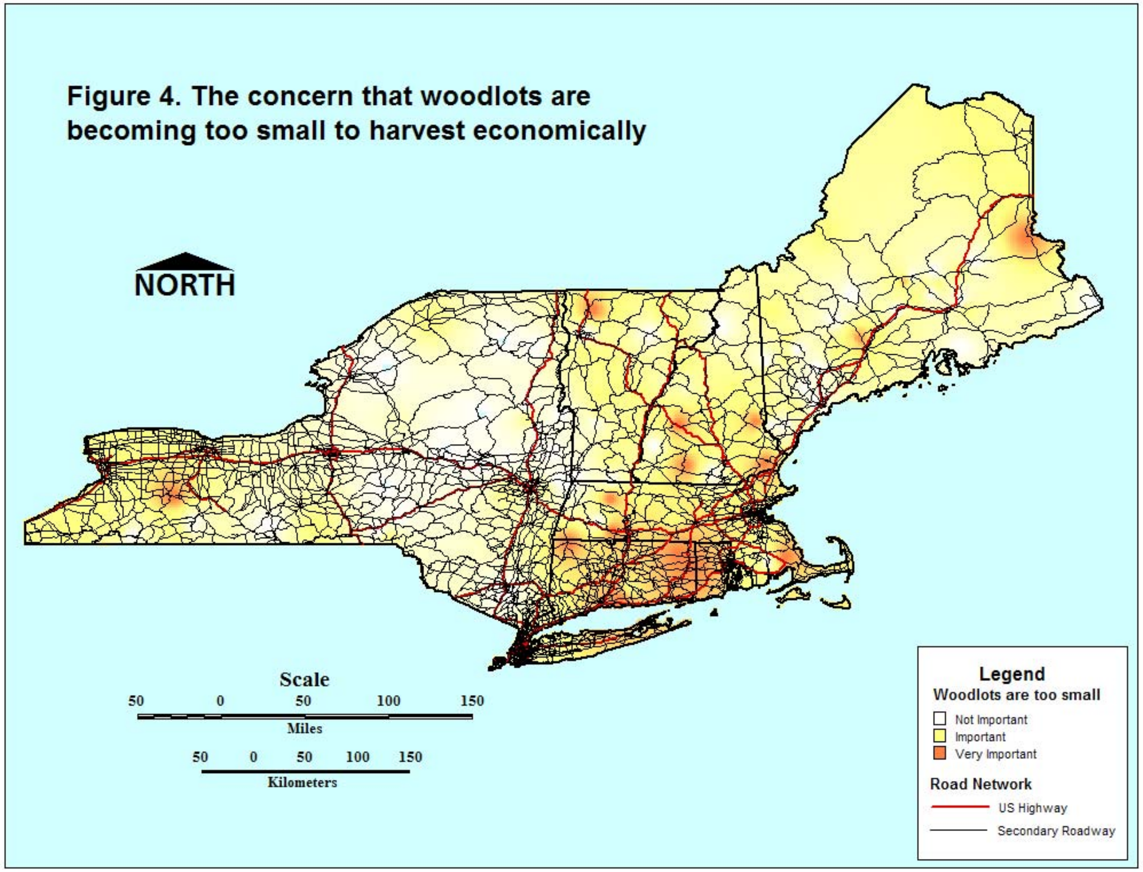
Barriers to maintaining or expanding sawmill businesses in New EnglandŃNew York related to markets. Numbers are percents responding that the factor was an important or very important barrier to maintaining or expanding the sawmill business by the type of mill responding.

	Hardwood	Softwood	White Pine	Species-diversified	All
Uncertain markets for what you produce (chi-square = 10.86; p = 0.09)	77	100	75	89	82
Prices of foreign imports (chi-square = 6.32; pp = 0.39)	84	88	84	77	83
NAFTA (chi-square = 3.70; p = 0.72)	67	82	65	69	69

Results/Project outcomes



Results/Project outcomes



Implications and applications in the Northern Forest region

Results of this study suggest a concern among sawmill procurement managers in the region about population pressures and symptoms of land use change, such as land development, sprawl, and terminal harvesting. Mill representatives from CT and MA, whose rural areas are perhaps most affected by exurbanization and rural land development, expressed the most concern.

If the maintenance of the forest products industry and the forested landscapes that support it is seen as a local, statewide or region-wide public value, a review and modification of tools of local and state governments, such as zoning regulations, taxation, and current use assessment, may encourage NIPF owners who dominate this region to maintain forest ownership.

Regulatory uncertainty and further regulation of NIPF and other forest ownerships, such as that enacted in ME to counter so-called liquidation harvesting, may serve to discourage good forest stewardship and private forest ownership, further threatening local forest products businesses.

Logger training and professionalism, perhaps through logger certification and so-called Master Logger programs, may help improve the image of logging and loggers thereby improving the recruitment of new loggers.

Implications and applications in the Northern Forest region

While factors related to population pressures are seen as important barriers to the sustainability of many sawmills in the study region, other concerns, such as high energy costs, labor availability, and market forces were generally viewed as more influential by mill procurement managers. That all respondents from CT-MA, for example, said that the costs of health care for employees was a barrier may signal an opportunity in those states to improve access to employee health care for small businesses. However, that a vast majority of respondents in the other states studied also cited this as a barrier likely suggests a broader, region-wide concern. In addition, although a majority of respondents cited uncertain markets for what they produced as a barrier to maintaining or expanding their businesses, representatives of softwood mills rated this as a barrier more often than did representatives of other types of mills. The degree to which this was related to a downturn in the US housing market at the time of the survey cannot be discerned from this study.

Future directions

- Future follow-up studies of the region’s forest products industry are planned and will help to develop information that may suggest short- and long-term trends in the sustainability of forest products businesses in the region.
- More in-depth studies are called for -- going beyond that which can be assessed using surveys and interviews. This could take the form of longitudinal studies; intensive case studies; focused studies of a smaller sample of mill/logging businesses.
- Need for improved understanding of cross -border influences with Quebec.
- Trend data are needed in order to detect changes over time.

List of products

- Presentations
  - Taggart and EGAN. 2007. Who will log? 13th International Symposium on Society and Resource Management. Park City, UT. June 17-21.
  - EGAN and Morin. 2007. Effects of land use change on the sustainability of forest products businesses in the northeast US. 13th International Symposium on Society and Resource Management. Park City, UT. June 17-21.
- Publications
  - EGAN and Morin. In review. Challenges to sawmill businesses in New England and New York State. *Forest Products Journal*.
  - Papers focusing on the logger data (still being analyzed) are being prepared and will likely be submitted for peer review some time in 2008-09.
  - A book on the logging community in New England is being written, using results of this research.

List of products

- Other
  - Additional funding from USDA was leveraged through the funding of this project, allowing the study to be extended throughout the New England-New York region.
  - A PhD dissertation focusing on some of the results of this study will also be completed, likely by the end of 2008.
  - The PI for this project is involved with research being conducted at Laval University (Quebec) that borrows from the work conducted in this research. That research is funded by a combination of public (Canadian) and private sources. The PI for this project (EGAN) is a co-investigator.