Wisconsin Wood Supply Assessment – Landowner Study

Melinda Vokoun[1], Joseph Conrad[2], Steve Prisley[3], Chad Bolding[4], and Charlie Wade[5]

Associate[1]and Assistant[2] Professor, University of Wisconsin Stevens Point, Professor[3], Associate Professor[4], Virginia Tech, Forest Inventory Analyst SilviaTerra[5]

Objectives:

1. Collect spatial data attached to landowner contact data from at least one county per forested DNR region, excluding the Southeast region, to form basis for landowner survey sample,
2. Develop a survey instrument to assess landowner willingness to harvest timber as well as other management activities, and
3. Conduct and analyze a landowner survey, using a minimum of 2,000 surveys sent, in representative counties in Wisconsin

Findings:

1. **Mail survey of landowners with at least 10 acres forestland conducted spring 2015**. 2000 surveys sent, 500 per Department of Natural Resource region where wood production most likely to occur. Counties included by region were Northern (Polk, Taylor, and Washburn), Northeast (Marinette, Manitowoc, and Outagamie), West Central (Chippewa, Pierce, and Wood), and South Central (Columbia and Richland). Forty-three percent response rate.

2. **Respondents land characteristics:** Average forested parcel size was 66 acres, and majority of respondents (78.1%) indicated that their forested parcel contained less than one mile of dirt or paved roads, excluding public roads. Slightly over half (52.9%) indicated presence of permanent structures (e.g., house, cabin, trailer, barn) on their parcel. Very few respondents (17.1%) indicated that they had salable trees harvested from their parcel within the last three years.

3. **Characteristics of respondents:** Average ownership tenure, measured as number of years since parcel acquisition, was 23.5 years. While the average age of respondents was 61 years. Respondents had 2.4 children on average and combined family incomes of just over $85,000.

4. **Importance of reasons for owning land:** Respondents were asked to rate the relative importance (1= not important to 5 = important) of 10 reasons for owning their forestland. Providing or improving wildlife habitat, and hunting and/or fishing recreation both had mean importance values over four (4.255 and 4.085, respectively). Sorting these reasons by their mean importance value resulted in environmental reasons (protection of nature, of water quality, against soil erosion) placing near the middle, with a value of 3.657. While income from timber production, such as logs or pulpwood, had the lowest mean importance value of 2.43.

5. **Parameters that factor in responding landowners harvesting decision.** Probability of accepting the offered price for harvesting one acre of mature hardwood timber was modeled to provide an understanding of role that price, land and owner characteristics, and landowner preferences have on the decision to participate in timber market. Variables that have a significant positive influence on the probability of harvest were: the offered price, the presence of permanent structures, and the existence of a written management or stewardship plan. While increases in either the number of children or the importance of environmental reasons for owning forested land had a significant negative influence on the probability of harvest amongst responding Wisconsin forest landowners.

Table 1: Logistic regression coefficient estimates for harvesting probability model of Wisconsin woodland landowners (dependent variable is bid acceptance probability), bolded significance when p-level <=0.05.

Variable	Coefficient	Std. error	Significance	Marginal effects
Constant	**-1.2908**	0.6065	**0.0333**	
Price offered	**1.98E-4**	5.9E-5	**<0.0001**	**4.45E-5**
Flat terrain	-0.1010	0.1896	0.5943	0.0230
Permanent structures present	**0.3826**	0.1891	**0.0430**	**0.0869**
Forested acres	2.32E-3	1.57E-3	0.1390	5.26E-3
Number of children	**-0.1544**	0.0621	**0.0129**	**0.0350**
Years property owned	0.0121	7.79E-3	0.1198	0.0027
Risk perceived with tree loss	-4.82E-3	0.0928	0.9586	-0.001
Risk perceived with growing trees for investment	0.0282	0.0928	0.7614	0.0632
Importance of environmental reasons for ownership	**-0.2462**	0.0851	**0.0038**	**-0.0558**
Importance of land investment/real estate for ownership	4.13E-3	7.39E-2	0.9554	8.57E-4
Salable timber harvested within last 3 years	-0.1335	0.2542	0.5996	-0.0321
Acquired land through purchase	0.2384	0.2322	0.3045	0.0553
Written management or stewardship plan	**0.5595**	0.2053	**0.0064**	**0.1264**
Income	1.97E-6	1.70E-6	0.2468	4.45E-7
Absentee (Residence > 50 miles from parcel)	0.2545	0.2092	0.2237	0.0560
Retired	-0.2851	0.2087	0.1719	-0.0627