United States
Department of
Argriculture

Forest Service

Southern Forest
Experiment Station

Research Note

SO-308
September, 1984

Socio-Economic Characteristics of Prospective Nonindustrial Private Timber Sellers in East Texas

Clifford A. Hickman

SUMMARY

Data provided by 317 nonindustrial private forest owners suggest that in the East Texas region, future timber sellers will tend to exhibit the following characteristics: (1) their forest holdings will be 100 or more acres in size; (2) they will have owned forest land for 10 or more years; (3) they will live in towns or cities, not on their forest properties; (4) they will be primarily interested in the income-producing potential as opposed to consumptive use of their woodlands; (5) they will be farmers and ranchers or business and professional people; (6) they will have completed at least some college; and (7) their incomes will exceed $30,000 per year.

Additional Keywords: small woodland owners, timber marketing.

INTRODUCTION

Not all merchantable timber held by nonindustrial private (NIP) forest owners is available to the market in the short-run. Some is controlled by people who are reluctant or unwilling to sell. This fact is of continuing concern to firms who must rely on open market stumpage to satisfy at least part of their wood requirements. This is particularly true in the South, where almost three-quarters of the commercial forest land is in NIP ownership (USDA Forest Service 1982).

The purpose of this note is to provide, for the case of East Texas, up-to-date information as to the types of NIP forest owners who will be most likely to sell timber in the future. The results should be of interest to procurement foresters as well as others concerned with the marketing of timber from NIP ownerships.

METHODS

Data Collection

Two counties—Rusk in northeast Texas and Walker in southeast Texas—were selected for study. Each was chosen as representative of its respective subregion. Rusk County contains about 290,000 acres of commercial forest, some 90 percent of which is controlled by NIP forest owners (Earles 1976). Walker County has approximately 325,000 acres of commercial woodland, of which NIP forest owners hold roughly 75 percent (Earles 1976). Timber markets in these counties have traditionally been active. Before the economic recession of the early 1980's, some 12 million cubic feet of industrial wood products were harvested annually in each area (Braddock 1978).

Rural landowners in the two study counties were identified from ownership lists provided by the Agricultural Stabilization and Conservation Service. For each individual, the lists indicated name and address, total number of acres owned, and number of acres under cultivation. Building on this information, stratified random sampling with proportional allocation was used to select 1,000 potential respondents from each list. The following three strata, based on differences in total property size, were recognized: 500 or more acres, 100 to 499 acres, and 40 to 99 acres. Properties of less than 40 acres were not considered.

To obtain the required data, questionnaires were sent to the selected property owners in each county. The questionnaires asked the recipients to indicate if a timber sale was planned for the future. Three responses were allowed—yes, no, and uncertain. Information was also solicited about several socio-economic characteristics.

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The first and second columns of table 1 identify these characteristics and explain how each was defined.

The number of questionnaires returned after two mailings totaled 850. Many of these, however, were rejected for incompleteness or because the respondents indicated they were uncertain as to their future sales plans. The number of acceptable responses was 317—163 from Rusk County and 154 from Walker County. Though low, these response rates were judged to be adequate. Furthermore, there were no apparent reasons to suspect that the returns were biased. The respondents differed greatly in terms of the observed socio-economic characteristics, and, for both counties, were distributed among the various sampling strata in approximately the same proportions as the two landowner populations.

Data Analysis

Contingency tables were employed to determine which socio-economic characteristics were related to willingness to sell. The number of rows in the tables varied

Table 1.—*The socio-economic characteristics considered in the study, the manner in which they were defined, and the nature of their relationship to the prospective willingness of NIP forest owners in East Texas to sell timber*

Socio-economic characteristic	Manner defined	Nature of relationship to prospective willingness to sell timber ($\alpha = 0.05$)
Acres of forest land owned	Responses were aggregated into two classes: (1) < 100 acres, and (2) ≥ 100 acres.	Planned sales more prevalent among owners with ≥ 100 acres of forest land.
Years of tenure	Responses were aggregated into two classes: (1) < 10 years, and (2) ≥ 10 years.	Planned sales more prevalent among owners with ≥ 10 years tenure.
Distance of permanent residence to forest property	Responses were aggregated into two classes: (1) owner lives on the property, and (2) owner lives off the property.	Planned sales more prevalent among absentee owners.
Primary interest in forest land ownership	Responses were aggregated into two classes: (1) income oriented (e.g., timber production, grazing, investment or speculation, and leasing), and (2) consumption oriented (e.g., place of residence, personal recreation, and enjoyment of wildlife).	Planned sales more prevalent among owners interested in the income producing potential of forest land.
Sex	The two possible responses were: (1) male, and (2) female.	None—variables independent.
Occupation	Responses were aggregated into four classes: (1) farmers and ranchers, (2) business and professional people, (3) retired persons, and (4) others.	Planned sales more prevalent among farmers and ranchers or business and professional people.
Age	Responses were aggregated into three classes: (1) < 50 years, (2) 50 to 64 years, and (3) ≥ 65 years.	None—variables independent.
Size of community where raised	Responses were aggregated into three classes: (1) open country, (2) town (i.e., population < 15,000), and (3) city (i.e., population ≥ 15,000).	None—variables independent.
Size of community where presently residing	Responses were aggregated into three classes: (1) open country, (2) town (i.e., population < 15,000), and (3) city (i.e., population ≥ 15,000).	Planned sales more prevalent among owners living in towns or cities of ≥ 15,000 population.
Education	Responses were aggregated into four classes: (1) ≤ 8th grade, (2) 9th grade to 12th grade, (3) attended or completed college, and (4) graduate work.	Planned sales more prevalent among owners who have attended college.
Income	Responses were aggregated into three classes: (1) ≤ $15,000 per year, (2) $16,000 to $30,000 per year, and (3) > $30,000 per year.	Planned sales more prevalent among owners with incomes exceeding $30,000 per year.

Clifford A. Hickman is Principal Economist, USDA Forest Service, Southern Forest Experiment Station, New Orleans, Louisiana. This study was conducted while the author was Assistant Professor, Department of Forest Science, Texas A&M University. Financial support for the research was provided by the Texas Agricultural Experiment Station.

from two to four, depending on which characteristic was being considered, and there were two columns—"timber sale planned" and "no timber sale planned." All testing was performed at the $\alpha = 0.05$ significance level. Whenever the decision was to reject the null hypothesis of independence, the table in question was evaluated—by studying the observed and expected values of each cell —to see if the nature of the relationship could be inferred.

Initially, the returns were examined by county. However, since the findings were very similar, all of the responses were combined and analyzed jointly for purposes of this note.

RESULTS AND DISCUSSION

The results of the testing are shown in the last column of table 1. These data suggest that future timber sellers in East Texas will tend to exhibit the following socio-economic characteristics:

- their forest holdings will be 100 or more acres in size,
- they will have owned forest land for 10 or more years,
- they will live in towns or cities, not on their forest properties,
- they will be primarily interested in the income-producing potential as opposed to consumptive use of their woodlands,
- they will be farmers and ranchers or business and professional people,
- they will have completed at least some college and
- their incomes will exceed $30,000 per year.

To a considerable degree, the preceding findings are consistent with those obtained in earlier studies. Almost without exception, interest in timber harvesting is positively related to the amount of forest land owned (Babeu et al. 1965, Binkley 1981, Holmes and Diamond 1980, Kingsley 1976, Marlin 1978). Similarly, most investigators have concluded that forest owners are more likely to participate in local timber markets if they have held their property for several years and choose to emphasize income-producing uses over residential or recreational pursuits (Canham 1971, Holmes and Diamond 1980). In line with this latter premise, a number of inquiries have shown that farmers and ranchers tend to make more timber sales than property owners with different occupations (Binkley 1981, Holmes and Diamond 1980). Finally, as was true in this analysis, other researchers have failed to observe any strong relationship between willingness to sell and a landowner's sex or age (Canham 1971, Holmes and Diamond 1980).

Contrary to the results obtained in this study, some investigators have found that resident forest owners tend to make more timber sales than absentee owners (Holmes and Diamond 1980). Also, there is some evidence that people raised in rural settings are more inclined to sell timber than persons coming from urban backgrounds (Holmes and Diamond 1980, Kingsley 1976). Two final dissimilarities relate to the effects of education and income on a landowner's willingness to harvest. Several researchers have concluded that both variables are independent of the decision to sell (Canham 1971, Kingsley 1976, Holmes and Diamond 1980). In one instance where a significant relationship was observed, both attributes were determined to be inversely, not positively, related to the likelihood of market participation (Babeu et al. 1965).

For the most part, the discrepancies noted above are probably attributable to the fact that the local stumpage markets examined in this study, and thus the economic incentives for growing and harvesting timber, differed substantially from those evaluated in many other investigations. As market pressures vary, it seems reasonable to expect that NIP forest owners—even those having similar socio-economic characteristics—will not always act consistently in deciding whether or not they will sell timber. This highlights the need to exercise caution in attempting to extend the results of this, or other comparable analyses, outside of the areas within which they were conducted. Though certain interrelationships—e.g., the link between acreage of forest land owned and willingness to sell—seem to have fairly universal applicability, others may only be relevant to particular states or regions. In this regard, the profile of prospective timber sellers that emerges from this study seems generally compatible with the results of other inquiries performed in the South (Mullaney and Robinson 1980). These findings suggest that future timber sellers in this region will tend to be people who own sizable amounts of forest land and who are primarily interested in the income-producing potential of their properties. Some will be farmers and ranchers by trade, but others will be business and professional people who reside in a town or city. Most will have owned their forest tracts for several years. In addition, these future market participants will normally have completed some college and will be earning well above average incomes.

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