

Attitudes and Perceptions on Potential Development of Nature-Based Enterprises among Landowners in the Alabama Black Belt

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Abstract

The Alabama black belt region is one of the poorest areas in the country, characterized by predominantly African American population and dark rich soil. Creating nature-based ventures is an opportunity that can be realized to alleviate poverty and improve quality of life in the region. The objective of this study is to examine landowner attitudes and perceptions towards nature-based activities on their land and the potential development of nature-based enterprises. Descriptive statistics and logit analysis were utilized to analyze survey data. Results indicate that the top two available nature-based activities are hunting and fishing. Hunting and fishing are also perceived to be the most potentially-profitable nature-based businesses that could be developed on the respondents' land. Logit results show that a landowner is more likely to use the land for nature-based activities if he has a relatively large land, large family, and if recreation is one of his primary reasons for using the land.

Keywords: nature-based tourism, landowners, Alabama, black belt region

1. Introduction

For many years, nature has been recognized as being central to the principles of sustainable development. This focus on nature and its uses has similarly become central to the forest-to-nature-based tourism transition in regional communities. There is full acceptance by the business sector that nature is a major sector of global and national economies. Several research organizations have published periodicals, case studies, and analyses of nature-based enterprises. What is missing is the analysis of the determinants affecting the potential of the land to be used for nature-based businesses based on the range of social research. In particular, attitudes and preferences of land managers need to be examined when analyzing the potential of the land for nature-based enterprises.

The recreation industry is a vital part of the economy in the black belt region of Alabama. The 10 million acre land provides recreational opportunities to visitors to the area contributing to the local economy and profitability of nature-based businesses. Hunters, anglers and recreation enthusiasts from the state and across the United States visit the black belt region. According to the Alabama Black Belt Adventures Association (2012), sportsmen spending in the black belt region credit an estimated 11,000 jobs in 2011. More than 50 percent of Alabama hunting and fishing dollars are generated in the black belt region. In fact, 59 out of 74 hunting and fishing lodges in the state are located in this region.

The Alabama black belt region is one of the poorest areas in the country, characterized by predominantly African American population and dark rich soil. Other features of the area include rural decline, substandard quality of life, and poor economies. While the overall state of Alabama's unemployment rate is improving, the state's black belt counties are not faring as well. The highest levels of unemployment in Alabama are in the black belt counties and range from 13 to 16 percent (Reeves, 2013). Creating ventures related to outdoor leisure and nature is an opportunity that can be realized to alleviate poverty and improve quality of life in the region. To increase

employment and supplemental income in the rural areas, non-farming operations need to be provided and encouraged. Therefore, the logic for policy measures and programs to promote enterprise growth in nature-based operations is evident. Business enterprises, particularly the need for diversification enterprises have been identified as one vehicle to stimulate rural regeneration (Warren-Smith & Jackson, 2003).

Enterprises based on natural resources available on private farms, forests, and other private land, such as fee-access leisure activities can provide opportunities for supplementing landowner income that can eventually help alleviate poverty in many communities such as in Alabama black belt. Natural resource enterprises may include outdoor activities, wildlife-related leisure, and associated amenities, such as hunting and fishing, agri-tourism, wildlife watching, backpacking, horseback riding, camping, hiking, biking, boating, and bed and breakfasts. Establishing these types of enterprises on family farms and other private land provides multiple benefits, including the diversification of family incomes, land ownership retention, conservation and stewardship of the land, improved watershed integrity, reduced regulatory measures for environmental protection, and sustainable rural development (Jones, Jacobs, Yarrow, & McPeake, 2008; Schroeder, 2004).

Nature-based tourism development often necessitates a fundamental reformation of a community's economic and social structure. Therefore, the appropriateness of tourism development through the views of individual landowners must be considered in terms of understanding the potential transition from decades of extracting the industry to being part of the service economy. Gursoy, Chi, and Dyers (2009) note that resident perception of tourism is determined by a number of factors including their "level of concern for the continued growth of the community, their emotional attachment to their community, the degree to which they are environmentally sensitive, and the extent to which they use their resources for tourism." This study then seeks to identify the attitudes and perceptions of landowners in the black belt region concerning the opportunities to develop nature-based enterprises. This article utilizes a survey to elicit the voices of local stakeholders and their views regarding rural tourism development. Such information is important if nature-based tourism follows the three core components of sustainable tourism: full community participation, long-term planning, and environmental responsibility (Choi and Murray, 2010). Survey results provide direction in planning for programs and policies that encourage the development of nature-based businesses. The primary goal is to discuss the survey results and provide a guide for policy-makers and to inform communities and government units about the potential of these enterprises. As noted by Paquette and Domon (2005) "the word rural no longer has a single meaning and as a result, landscape can be defined as an imprint continuously reshaped by changing social representations of the space." This means that governments and industry planners must constantly strive to incorporate individual community perspectives into rural development decisions. Continuously exploring landowner attitudes and opinions can help develop a map for designing specific policies that can improve the development and management of nature-based ventures. The idea is that residents/ landowners should be given the opportunity to participate in the planning of the land's future development.

1.1 Theoretical Framework: Using Psychological Methods to Examine Individual Resident Values

Psychological variables affects an individual's unique personal experiences and responses to a development and the conditions in which the development occurs (Lounsbury, Liere, & Meissen, 1983). A discussion about the sense of "place" makes it possible for managers to "construct a working relationship with society that reflects the complex web of lifestyles and social relations endemic to a 'place' or a resource" (Williams and Stewart, 1998). This is particularly important in rural areas where rural identity is often connected to an ability to develop a local character (Bushell, Staiff, & Conner, 2002). "Place" theories have become an increasingly central idea in environmental management. In factoring a sense of "place" into a decision-making process, land use managers have been encouraged to "adopt a more ecologically holistic conceptualization of 'place' over an economically-driven environmental impact assessment (Semken, 2005).

More recent applications of psychological theories in social impact assessment studies include work undertaken in the Netherlands considering the issue of citizen value assessments. Citizen values refer to the value judgments an individual makes regarding the quality of an environment (Stolp et al., 2002). It is thus a means to link the environmental setting of development with the human population in the affected area. For many rural populations in the U.S., tourism development is a reality. As previously noted, rural tourism industries have the potential to cause changes to the social, economic and environmental environment in which they develop. This study has employed a survey method to interpret the social context of nature-based tourism valuations in the Alabama Blackbelt region.

2. Methods

2.1 Survey

A pre-test of the questionnaire was conducted to ensure its effectiveness in gathering the needed information for the study. Scientists involved in the project have reviewed the details and design of the questions to ensure that they are relatively easy to understand.

Personal surveys were conducted in the summer and fall of 2011. A landowner survey instrument is used to interview a representative sample of private agricultural/ forest landowners in the Alabama black belt and collect information regarding landowner socio-demographic and economic characteristics, land attributes and their attitudes and perceptions about the potential of developing nature-based businesses. While there are additional questions in the survey, this article focuses on the responses regarding outdoor activities and the potential for nature-based businesses.

A list of landowners in the Alabama black belt was acquired from the offices of the selected counties in the black belt region. The list of counties comprising the Alabama black belt is dependent on the context but this research conducted a random survey in Barbour, Bullock, Choctaw, Crenshaw, Dallas, Greene, Hale, Lowndes, Macon, Marengo, Montgomery, Perry, Pickens, Pike, Russell, Sumter, and Wilcox which are traditionally considered as black belt counties in the state. A random sample of landowners was interviewed face-to-face using the survey instrument with multiple-choice and open-ended questions. This approach has increased participation among landowners. A total of 130 personal surveys from eighteen counties were completed for the study. Descriptive statistics, such as frequencies and percentages were used to summarize the survey data.

2.2 Logit Analysis

A logit model is used to examine the factors affecting landowner's decision and to predict the likelihood of using the land for nature-based activities. Respondents were asked to express whether they have used their land for nature-based outdoor activities and their responses were utilized to explain the probability of a "yes" response. Following Wooldridge (2006), the probability of observing $y_i = 1$ can be expressed as:

$$P(y_i = 1 \mid X) = P(y_i^* > 0 \mid X) = P(e > -X\beta \mid X) = G(X\beta) \quad (1)$$

where, $G()$ was assumed to be a standard normal cumulative distribution function. P is the probability that Y equals 1 for a given value of X , where X represents the explanatory variables. β represents the coefficients to be estimated and e is the base of the natural logarithm; approximately 2.718. The dependent variable (Nature-based) is coded as binary with 1 indicating that the landowner has used the land for nature-based activities and 0 indicating that the landowner did not utilize the land for these activities. The probability of using the land for nature-based activities was expected to be related with landowner demographics, land attributes, ownership, management plan used, primary reasons for land utilization, and whether or not they have contacts with universities and other outreaches. A descriptive statistics for the variables used in the logit model is summarized in Table 1. The empirical tests include several socio-economic variables affecting the probability of using the land for nature-based activities. Based on previous studies, this study adopts the use of a probability model using socio-demographic variables as independent variables. In addition to variables used in previous studies, the authors have added several other variables in the survey questionnaire.

Multicollinearity is addressed by dropping highly correlated variables from the results of Pearson correlation tests to increase efficiency of estimation while maintaining variables for estimating relevant variables.

Positive impacts on the probability of using the land for nature-based activities include variables which are suspected to increase land utilization for such activities. Negative impacts are hypothesized from variables which may lower the odds of using the land for nature-based activities.

Table 1. Descriptive statistics of variables

Variable	Definition	Mean	Standard Deviation
<i>Dependent Variables</i>			
Nature-based	1= Used the land for nature-based activities; 0= Did not use the land for nature-based activities	0.3085	0.4644
<i>Independent Variables</i>			
Gender	1= Male; 0= Female	0.5900	0.4940
Race	1= Black/ African American; 0= Other race	0.7900	0.4110
Age	1= More than 40 years old; 0= 40 years old and below	0.8172	0.3886
Marital	1= Married; 0= Other marital status	0.5400	0.5010
Income	1 = \$15,000 or Less; 2 = \$15,001-\$30,000; 3 = \$30,001-\$45,000; 4 = \$45,001-\$60,000; 5 = \$60,001-\$125,000; 6 = \$125,001 or More	2.8500	1.3780
Education	1 = Some college and higher; 0 = High school graduate and less	0.7200	0.4510
Household Size	1 = More than 2 persons; 0= 1 to 2 persons	0.4457	0.4998
Dependents	1 = With dependents; 0 = No dependents	0.3913	0.4907
Employment	1 = Employed; 0 = Unemployed	0.5800	0.4960
Acres	1 = 5 acres or less; 2 = 6 to 55 acres; 3 = More than 55 acres	1.9149	0.7429
Own	1 = Own the land; 0 = Do not own the land	0.8600	0.3490
Ownership	1 = Sole ownership; 0 = Joint ownership	0.5000	0.5030
Rincome	1 = Income is a primary reason for using the land; 0 = Income is not a primary reason for land use	0.4787	0.5022
Rconserve	1 = Conservation is a primary reason for using the land; 0 = Conservation is not a primary reason for land use	0.1915	0.3956
Rrecreate	1 = Recreation is a primary reason for using the land; 0 = Recreation is not a primary reason for land use	0.1809	0.3870
Rintrinsic	1 = "Passing to heirs" is a primary reason for using the land; 0 = "Passing to heirs" is not a primary reason for land use	0.3404	0.4764
Noplan	1 = Did not have a management plan for land; 0 = Used a management plan	0.4043	0.4934
Contacts	1 = Had a contact with an agency/ outreach; 0 = Did not have any contact with an agency/ outreach	0.5300	0.5020

3. Results

The purpose of this paper is to present the results of a preliminary survey to shed light on the personal views and

attitudes of rural landowners as they consider the potential of developing nature-based enterprises. From the methodology, it has been proved that face-to-face surveys can help elicit information to illustrate the ways in which personal views amongst rural residents can affect the current perceptions of forest land uses.

3.1 Respondent Characteristics

Table 2 presents the summary of the respondents' demographic characteristics. The majority of respondents are African Americans (78.5%), male (53.8%), and 41 to 65 years old (53.8%). About 51 percent of the respondents are unmarried, with relatively small household size where 56 percent has 1 to 2 persons. Most respondents have no dependents (about 65%), employed (62.3 %), and obtained education above high school (about 65%). Fifty-two percent of the households have income above \$30,000 and about 41 percent earns below \$30,000 annually.

Table 2. Demographic characteristics of respondents

	Percent	Count
<i>Gender</i>		
Male	53.8 %	70
Female	45.4 %	59
No response		
<i>Race</i>	0.8 %	1
Black/ African-American	78.5 %	102
White/ Caucasian	17.7 %	23
Hispanic/ Latino	3.1 %	4
Native American	0.8 %	1
<i>Age</i>		
19 years or less	1.5 %	2
20-25 years	7.7 %	10
26-40 years	17.7 %	23
41-65 years	53.8 %	70
66 years and above	12.3 %	16
No response		
<i>Marital status</i>	6.9 %	9
Married	46.2 %	60
Unmarried	50.8 %	66
No response		
<i>Household Size</i>	3.1 %	4
1-2 persons	56.2 %	73
3-4 persons	33.8 %	44
5-6 persons	6.2 %	8
No response	3.8 %	5
<i>Number of Dependents</i>		
No dependents	64.6 %	84
1-3 dependents	25.4 %	33
4-6 dependents	6.2 %	8
<i>Employment Status</i>		
Employed	62.3 %	81
Unemployed	34.6 %	45
No response	3.1 %	4

Household Income

\$15,000 or Less	20.0 %	26
\$15,001-\$30,000	20.8 %	27
\$30,001-\$45,000	21.5 %	28
\$45,001-\$60,000	20.0 %	26
\$60,001-\$125,000	10.8 %	14
\$125,001 or More	0.8 %	1
No response	6.2 %	8

Education

High school graduate and below	31.5 %	41
Above high school	64.6 %	84
No response	3.8 %	5

3.2 Landowner Responses on Nature-based Activities

Table 3 shows the available nature-based activities in the landowner's property. The top two available activities reported by the respondents are hunting and fishing. Eighty-eight percent indicated the availability of hunting and about 87 percent reported that fishing is available in their land. The majority (80 – 83%) of the respondents reported that backpacking, biking, horseback-riding, off-road driving, camping, bird-watching, wildlife/ nature viewing, hiking, boating, rafting/ canoeing, and swimming are all available as nature-based activities in their land.

Survey respondents were asked to indicate their investments in their most-participated activity. The results (Figure 1) indicate that 45.4 percent of the landowners invested not more than \$500 in their most-participated nature-based activity, 12.3 percent invested \$501 to \$1000, about 5 percent invested \$1001 to \$1500, 1.5 percent invested \$1501 to \$2000, and 3.1 percent invested more than \$2000. Thirty-three percent of the respondents did not report their investment on their favorite activity.

Table 3. Available nature-based activities

	Percent	Count
Hunting	87.7 %	114
Fishing	86.9 %	113
Wildlife viewing/ Viewing natural scenery	83.1 %	108
Hiking	82.3 %	107
Biking	82.3 %	107
Swimming	81.5 %	106
Horseback riding	80.8 %	105
Off-road driving	80.8 %	105
Rafting/ Canoeing	80.8 %	105
Bird-watching	80.8 %	105
Backpacking	80.0 %	104
Camping	79.2 %	103
Boating	79.2 %	103
Other	11.0 %	8.5

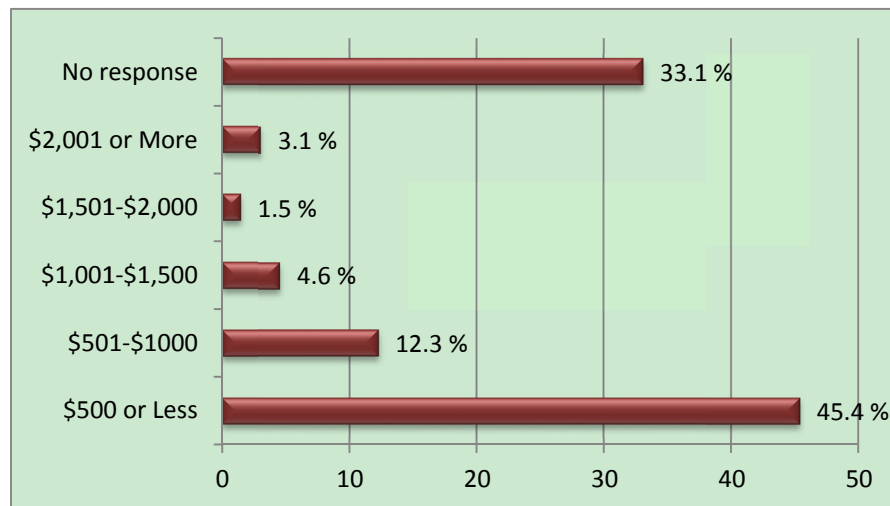


Figure 1. Level of investment in the most-participated nature-based activity

3.3 Survey Responses on Potential Development of a Nature-Based Business

Figure 2 provides the percentage of respondents who knows a person who owns, operates, or works at an outdoor nature-based business or a business associated with outdoor activities. The majority (75.4%) of the surveyed individuals do not know a business that provides outdoor nature-based services.

To gather information on the potential development of outdoor nature-based businesses, landowners were asked to identify the abundant natural resources in their respective counties. Table 4 shows that wildlife (90%) is the most-abundant natural resource in the landowners' counties, followed by forests (89%), lakes (84%), rivers (84%), and scenic landscapes (82%).

Respondents reported that fishing and hunting are the most potentially-profitable nature –based businesses that can be developed on their land (Table 5). Seventy-five percent of the landowners identified fishing as potentially-profitable while hunting was cited by 72.3 percent. Sixty percent reported off-road driving, 55.4 percent marked horseback-riding, 54.6 percent marked camping, and about 44 percent identified boating as potentially-profitable businesses. Biking, backpacking, bird-watching, hiking, rafting/ canoeing, swimming and nature viewing were reported to be potentially-profitable by 30 to 40 percent of the respondents.

Respondents were asked to identify their top five new outdoor nature-based businesses that they would be interested in developing in their county. Table 6 presents the list of the activities and the percentage of respondents who identified each activity. Fishing (58.5%) and hunting (52.3%) were again identified as the top nature-based activities that landowners are interested in if they would develop a nature-based enterprise.

Table 7 tabulates the sources of assistance that the respondents would contact when developing a nature-based business. The majority (63.1%) reported that they would ask assistance from the Small Business Administration; 53 percent would ask the National Wildlife Federation; about 51 percent would contact the Alabama Forestry Commission, and 48.5 percent of the respondents would request assistance from the U.S. Forest Service.

The data (Table 8) also reveals that according to the landowners, the two main limiting factors that prevent the development of an outdoor nature-based business in their county is the notion that there is a relatively low demand for such types of services and the lack of necessary support for small businesses at state and federal levels. Other top reasons include limited availability of required technical assistance and lack of required knowledge.

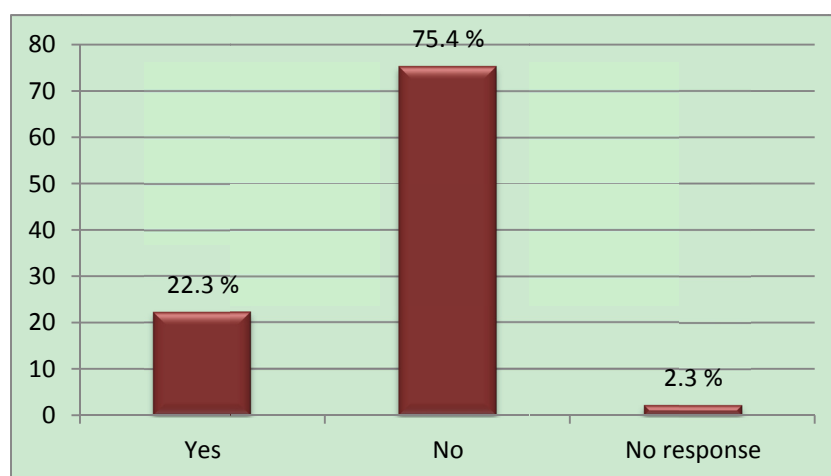


Figure 2. Knowledge about existing outdoor-nature-based businesses

Table 4. Abundance of natural resources in respondents' county

	Percent	Count
Wildlife	90.0 %	117
Forests	88.5 %	115
Lakes	83.8 %	109
Rivers	83.8 %	109
Scenic landscapes	82.3 %	107
Other resources	2.30 %	3

Table 5. Potentially-profitable nature-based businesses

	Percent	Count
Fishing	75.4 %	98
Hunting	72.3 %	94
Off-road driving	60.0 %	78
Horseback-riding	55.4 %	72
Camping	54.6 %	71
Boating	43.8 %	57
Biking	40.8 %	53
Swimming	40.0 %	52
Backpacking	39.2 %	51
Wildlife viewing/ Viewing natural scenery	36.2 %	47
Bird-watching	33.8 %	44
Hiking	33.8 %	44
Rafting/ Canoeing	33.8 %	44
Other	3.80 %	5

Table 6. Respondents' interests as potential nature-based businesses

	Percent	Count
Fishing	58.5 %	76
Hunting	52.3 %	68
Off-road driving	46.2 %	60
Camping	43.8 %	57
Horseback-riding	43.8 %	57
Backpacking	40.0 %	52
Swimming	38.5 %	50
Wildlife viewing/ Viewing natural scenery	38.5 %	50
Biking	37.7 %	49
Boating	30.8 %	40
Bird-watching	30.0 %	39
Hiking	29.2 %	38
Rafting/ Canoeing	29.2 %	38
Other	1.50 %	2

Table 7. Sources of assistance for outdoor nature-based business/es

	Percent	Count
Small Business Administration	63.1 %	82
National Wildlife Federation	53.1 %	69
Alabama Forestry Commission	50.8 %	66
U.S. Forest Service	48.5 %	63
Bureau of Land Management	41.5 %	54
Recreationist	38.5 %	50
Local Community Organization	38.5 %	50
Natural Resource Conservation Service	31.5 %	41
Cooperative Extension	31.5 %	41
Farm Service Agency	29.2 %	38
Conservationist	25.4 %	33
Local College/ University Community	22.3 %	29
Other	3.10 %	4

Table 8. Factors limiting/ preventing the development of successful nature-based business/es

	Percent	Count
Low level projected demand for services to be provided	35.4 %	46
Lack of necessary support for small businesses at state and federal levels	35.4 %	46
Limited availability of required technical assistance/ expertise	30.0 %	39
Lack of required knowledge and information	28.5 %	37
Lack of community support and cooperation	26.9 %	35
Lack of access to funding required to start small business	24.6 %	32
Lack of required natural resources (forests, lakes, etc.)	24.6 %	32
Poor public services (health, police, fire, education, tourism, etc.)	24.6 %	32
Absence of successful examples of similar businesses	23.8 %	31
Lack of access to natural resources	23.1 %	30
Residents are not motivated to venture into small business	17.7 %	23
Poor conditions of public infrastructure (roads, bridges, etc.)	18.5 %	24
Negative perception of my county by persons from other regions	16.9 %	22
Other	5.40 %	7

3.4 Logit Results

The dependent variable (land use for nature-based activities) is used to estimate the effects of the right-hand side variables (socio-demographic, economic, and land characteristics) on the probability of a landowner using the land for nature-based activities. Probabilities are estimated using binary logistic regression. The value of the \ln (odds ratio) is presented as EXP (B) in the tables of results.

The specified equation is estimated to examine the effects of the independent variables on the odds of using the land for nature-based activities. The logit results in Table 9 show that household size, the size of the land, and if the landowner indicated recreation as a primary reason for using the land are statistically significant factors affecting the probability of using the land for nature-based activities. Table 9 shows that a larger household size (more than two persons) increases the odds of using the land for nature-based activities. The EXP (B) value indicates that the odds of using the land for nature-based activities are 22 times more likely for families with more than 2 members. This may be explained by the fact that family recreation is a focal part of family life. Participation in nature-based activities is considered to be a vital part of children's development which is related to quality of life and future life outcomes. Larger households have a greater motivation for recreational activities as family leisure is often considered as vital to the growth and socialization of children and overall family cohesion (Shaw & Dawson, 2001), adaptability, communication, and overall family functioning (Zabriskie & McCormick, 2001, 2003).

Acreage is also found to affect the dependent variable showing that an increase to a higher land size category increases the odds of using the land for nature-based activities 3 times more likely. This result proves the hypothesis that participation in nature-based activities increases with the amount of land owned. As acreage of land increases, so should the odds of the landowner participating in nature-based activities because it would provide benefits from owning the land. A larger lot size would provide greater opportunity for the landowner and his household to use the land for nature-based activities. Finally, the odds ratio for Rrecreate shows that the logit model predicts that the odds of using the land for outdoor recreation are over a thousand times higher when the landowner indicated recreation as a primary interest for using the land. These landowners may have acquired the land with the direct intention of using it for recreational purposes.

Table 9. Logistic regression results predicting the use of land for nature-based activities

Variable	β	Wald	Sig.	Odds ratio Exp (B)
Gender	-0.9810	0.8070	0.3690	0.3750
Race	1.1380	0.5540	0.4570	3.1220
Age	0.6610	0.1980	0.6560	1.9360
Marital	-0.4670	0.1590	0.6900	0.6270
Income	-0.4530	0.9080	0.3410	0.6360
Education	0.4670	0.1620	0.6870	1.5950
House size	3.1050	4.2170	0.0400	22.3130**
Dependents	0.2380	0.0460	0.8310	1.2680
Employment	1.0400	1.0710	0.3010	2.8290
Acres	1.1080	2.7840	0.0950	3.0290*
Own	0.6280	0.1070	0.7440	1.8750
Ownership	-1.0380	0.8850	0.3470	0.3540
Pincome	-1.4950	0.7430	0.3890	0.2240
Rincome	1.7070	2.0050	0.1570	5.5110
Rconserve	0.7270	0.1540	0.6940	2.0680
Rrecreate	7.0580	11.2920	0.0010	1161.8420***
Rintrinsic	0.9820	0.5250	0.4690	2.6710
Noplan	1.0000	0.8340	0.3610	2.7190
Contacts	0.3340	0.0800	0.7780	1.3960
Constant	-6.7930	2.2910	0.1300	0.0010
Nagelkerke $R^2 = 0.674$				

Note: ***, **, * Significant at 1 %, 5 %, and 10%, respectively.

4. Discussion

Planning for the integration of nature-based enterprises into rural tourism is an important part of Alabama's rural landscape. This paper has used personal surveys conducted in the Alabama black belt region. Private landowners/ land managers were surveyed to elicit information regarding their attitudes and perceptions on the potential of developing nature-based enterprises on their land. The survey proved to be an effective tool that can be used by researchers to elicit information landowners regarding the potential of nature-based enterprises. The results presented are preliminary results which will lead to a more completed research project. Establishing the use of a survey instrument in a rural development context is a step to further develop a tool which can be used to effectively gauge the complex landowner attitudes towards nature-based tourism development.

Survey results on demographic characteristics show that a typical landowner in the Alabama black belt is African American, male, 41 to 65 years old, unmarried, and with small household size. Most respondents have no dependents, employed, at least a high school graduate, and with an annual income above \$30,000. Interests among landowners are high in hunting and fishing. They participated in these types of nature-based activities and they believe that these are the two most potentially-profitable nature –based businesses that could be developed on their land. Other potentially-profitable enterprises include off-road driving, horseback-riding, camping, and boating.

Fishing and hunting were also identified as top nature-based activities that landowners are interested in if they would develop a nature-based enterprise. However, it appears that landowners are reluctant to develop outdoor nature-based businesses for reasons such as difficulty in estimating the demand for outdoor leisure services, unavailability of technical assistance, the lack of know-how, and the lack of access to capital. Lack of technical assistance and financial considerations do not necessarily motivate landowners to open their properties for business. In order to increase the income-potential of landowners, policy makers need to design strategies to

encourage enterprise development in rural areas.

The purpose of the logit analysis is to examine the factors affecting the probability of using the land for nature-based activities. Landowner survey data in the Alabama black belt are utilized where responses on the use of land for nature-based activities are used as dependent binary variables in a logit model. The study concludes that a landowner is more likely to use the land for nature-based activities if he has a relatively large land, large family, and if recreation is one of his primary reasons for using the land.

Landowners in rural areas today are challenged with increasing income and quality of life while sustaining natural resources. This study shows that there are opportunities to combat these problems. Identifying the perceptions of landowners provide an important baseline for discussion among stakeholders concerning the utilization of natural resources for enterprise development.

Nature-based businesses can be an important force for developing disadvantaged rural areas such as the Alabama black belt. Local support is, however, usually a necessary component of a successful enterprise strategy (Bourke and Luloff, 1995; Brass, 1996; Burr, 1995; and Woods, 1992). Stakeholder collaborations among land-grant universities, federal and state agencies, conservation and agricultural organizations, and private sector groups could play a significant role in the design and implementation of comprehensive strategies to help landowners and land managers realize the opportunity of outdoor and nature-based businesses.

The results of this survey will be used to stimulate ideas for improving research in estimating the potential of using private land for nature-based enterprises. A larger sample size will be targeted in the future to provide opportunities for more developed statistical analyses which will improve the study results. Future analyses will also include factors such as labor population within the household, distance from markets and input sources, land value, adjacent land use types, and topographic characteristics.

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