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ABSTRACT

Wine tourism is a relatively fledging industry with a range of important economic development issues. One issue is the identification of key drivers of repeat business, in this case, intention to pay a return visit to a winery or wine region. The purpose of this study is to identify specific factors that may influence wine tourists' intentions to revisit a winery or wine region in North Carolina. Exhaustive CHAID decision tree analysis was used to identify statistically significant visitor characteristics influencing respondents' intentions to revisit a winery or wine region in North Carolina. Customer service and the importance it has to the visitors was found to be the best predictor of their intention to revisit.

Keywords: *Wine Tourism, Customer Service, Decision Tree Analysis*

INTRODUCTION

"Wine tourism can be defined as visitation to vineyards, wineries, wine festivals and wine shows for which grape wine tasting and/or experiencing the attributes of a grape wine region are the prime motivating factors for visitors" (Hall & Macionis 1998 p197). As growing segment of the tourism industry, wine tourism is seen as an alternative agricultural crop in rural communities that encourages economic growth while preserving their rural landscapes (Hall et al. 2000; O'Neill & Palmer 2004). Following this strategy, North Carolina ranks as one of the top five state destinations for wine and culinary tourism in the U.S. (TIA 2008). The NC wine and grape industry has generated substantial economic growth, creating 7,600 jobs and $1.2 billion in total annual economic impact across the state. NC's wine tourism revenue grew 27% between 2005 and 2009, with 2009 data indicating 1.26 million wine tourist visits and $156 million in wine tourism revenue (Frank, Rimerman, and Co. 2011).

Wine tourism is a relatively fledging industry with a range of important economic development issues. One issue is the identification of key drivers of repeat business, in this case, intention to pay a return visit to a winery or wine region (O'Neill & Palmer 2004). The purpose of this study is to identify specific factors that may influence wine tourists' intentions to revisit a winery or wine region in North Carolina.

METHODOLOGY

This study was conducted from May to July of 2012 at 23 wineries in North Carolina. Data were collected from winery visitors using a structured questionnaire and employing a visitor intercept methodology. The questionnaire was developed based on previous wine tourism research (Getz & Brown 2006; Marzo-Navarro & Pedraja-Iglesias 2010; O'Neill & Plamer 2004; Yan, Morrison, Cai & Linton 2008). A convenience sample of 832 visitors was achieved, resulting in a 81% response rate of 1,028 persons approached at the wineries

Decision tree analysis with the Exhaustive Chi-square Automatic Interaction Detection (CHAID) algorithm was used to isolate statistically significant visitor characteristics influencing respondents' intentions to revisit a winery or wine region in North Carolina. A decision tree is a model that can be used to distill from a broad set of variables those that best predict the dependent variables of interest (Kass 1980). Decision tree analysis techniques' main difference from a basic chi-square analysis is that the sample can be further segmented into smaller groups (Dinan & Sargeant, 2000). The Exhaustive CHAID presents output as tree branches of independent variables leading from a particular dependent variable (Kass, 1980). The tree formation uses p value to distinguish most influential to less influential independent variables. If a tie occurs between two or more predictors, the variable with the highest F value is used to order the predictors. For nominal and ordinal variables, chi-square analyses are used, and for interval and ratio variables an analysis of variance is used (Huba 2003).

RESULTS

An overwhelming majority (84.6%) of winery visitors indicated that they were likely to revisit the winery where they were interviewed. The decision tree in figure 1 shows the critical predictors of revisit intentions. The best predictor of future visits to the winery is the importance of customer service to the respondent. Almost all (91.2%) of the visitors who indicated that good customer service was very important also indicated that they would likely revisit the winery. As the importance of customer service decreased, so too did respondent likelihood of visiting the winery again.
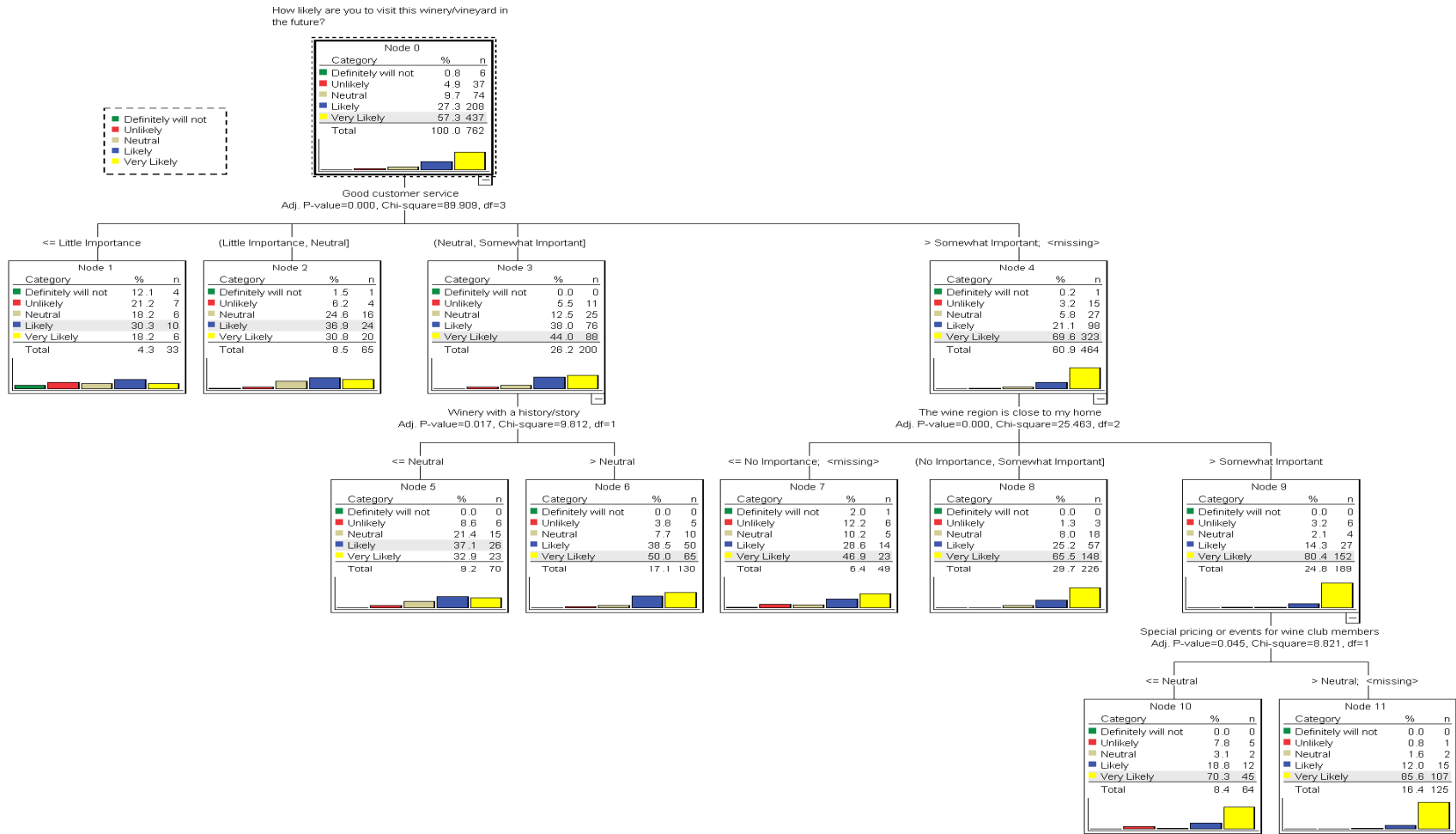
Decision tree analysis also permits exploration of secondary and tertiary drivers of the revisit intention. Looking specifically at those visitors who indicated good customer service was of primary importance to their decision to visit, one notes that, for most of them (94.7%), the secondary factor determining if they would visit the winery again was the importance of the proximity of the winery to their home. Furthermore, analysis shows that the importance placed on having special pricing or an event for wine club members is a third critical factor in the decision to revisit. Almost all (97.6%) of the visitors who rated customer service, proximity, and special pricing or an event for wine club members as important, planned to revisit the winery.

A second dependent variable was likelihood of visiting any NC winery in the future. Slightly over four-fifths (84.5%) of the visitors indicated they would be likely to visit a NC winery in the future. The best predictor of future visits to a NC winery was again the importance of customer service (see Figure 2). Almost all (92.2%) of the visitors who indicated customer service was very important in their decision to visit in the first place, indicated that they would likely visit a NC winery again. As the importance of customer service decreased, so too did respondent likelihood of visiting a NC winery again.

CONCLUSIONS

The quality of customer service drives many consumer decisions, including revisit intentions and word-of-mouth recommendations. Based on the current results, there are indications that wine variety and quality should be considered an "order qualifier factor" (necessary to be a player in the industry) and good customer service should be considered an "order winner factor" (the main competitive advantage) for NC wineries. Wineries should consider customer satisfaction, with includes customer service, as one of the main components for their competitive advantage (Fuchs & Weiermair, 2004). If visitors have a good customer service experience at a specific winery, not only will they be more likely to revisit that location and provide positive word-of-mouth about the winery, but they will also be more likely to express intentions to visit another NC winery in the future. Chen and Tsai (2007) indicated that the attributes of a destination or attraction that push a tourist to revisit and/or recommend the destination/ attraction is a fundamental element in the success of the destination/ attraction. Therefore, good customer service is vital for the success of the wine tourism industry in North Carolina.

Figure 1:
Likelihood to Visit This Winery/Vineyard in the Future Decision Tree

How likely are you to visit this winery/vineyard in the future?

Legend:
- Definitely will not
- Unlikely
- Neutral
- Likely
- Very Likely

Node 0

Category	%	n
Definitely will not	0.8	6
Unlikely	4.9	37
Neutral	9.7	74
Likely	27.3	208
Very Likely	57.3	437
Total	100.0	762

Good customer service
Adj. P-value=0.000, Chi-square=89.909, df=3

<= Little Importance

Node 1

Category	%	n
Definitely will not	12.1	4
Unlikely	21.2	7
Neutral	18.2	6
Likely	30.3	10
Very Likely	18.2	6
Total	4.3	33

(Little Importance, Neutral]

Node 2

Category	%	n
Definitely will not	1.5	1
Unlikely	6.2	4
Neutral	24.6	16
Likely	36.9	24
Very Likely	30.8	20
Total	8.5	65

(Neutral, Somewhat Important]

Node 3

Category	%	n
Definitely will not	0.0	0
Unlikely	5.5	11
Neutral	12.5	25
Likely	38.0	76
Very Likely	44.0	88
Total	26.2	200

> Somewhat Important; <missing>

Node 4

Category	%	n
Definitely will not	0.2	1
Unlikely	3.2	15
Neutral	5.8	27
Likely	21.1	98
Very Likely	69.6	323
Total	60.9	464

Winery with a history/story
Adj. P-value=0.017, Chi-square=9.812, df=1

<= Neutral

Node 5

Category	%	n
Definitely will not	0.0	0
Unlikely	8.6	6
Neutral	21.4	15
Likely	37.1	26
Very Likely	32.9	23
Total	9.2	70

> Neutral

Node 6

Category	%	n
Definitely will not	0.0	0
Unlikely	3.8	5
Neutral	7.7	10
Likely	38.5	50
Very Likely	50.0	65
Total	17.1	130

The wine region is close to my home
Adj. P-value=0.000, Chi-square=25.463, df=2

<= No Importance; <missing>

Node 7

Category	%	n
Definitely will not	2.0	1
Unlikely	12.2	6
Neutral	10.2	5
Likely	28.6	14
Very Likely	46.9	23
Total	6.4	49

(No Importance, Somewhat Important]

Node 8

Category	%	n
Definitely will not	0.0	0
Unlikely	1.3	3
Neutral	8.0	18
Likely	25.2	57
Very Likely	65.5	148
Total	29.7	226

> Somewhat Important

Node 9

Category	%	n
Definitely will not	0.0	0
Unlikely	3.2	6
Neutral	2.1	4
Likely	14.3	27
Very Likely	80.4	152
Total	24.8	189

Special pricing or events for wine club members
Adj. P-value=0.045, Chi-square=8.821, df=1

<= Neutral

Node 10

Category	%	n
Definitely will not	0.0	0
Unlikely	7.8	5
Neutral	3.1	2
Likely	18.8	12
Very Likely	70.3	45
Total	8.4	64

> Neutral; <missing>

Node 11

Category	%	n
Definitely will not	0.0	0
Unlikely	0.8	1
Neutral	1.6	2
Likely	12.0	15
Very Likely	85.6	107
Total	16.4	125

Figure 2:
Likelihood to Visit Any Winery in NC in the Future Decision Tree

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