

CONNECTING WEST VIRGINIA FEE-FISHING BUSINESSES WITH THE LARGER TOURISM MARKET THROUGH THE DEVELOPMENT OF TOURISM PACKAGE

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Abstract.—Thirty-five or more fee-fishing businesses in West Virginia are often characterized as small businesses, and they could benefit from connecting with larger travel packages that are more likely to attract out-of-state anglers. The objectives of this study are to: (1) identify mini-market segments based on fee-fishing experiences; (2) examine how fee-fishing mini-markets can better connect with the larger outdoor recreation markets; and (3) use this information to identify gaps in recreational offerings and develop tourism packages in a West Virginia test market. Six fee-fishing mini-markets were identified. Regression analysis results indicate that it is possible to develop fishing packages. A gap analysis suggests that most of the recreation activities associated with family fishing experience are available to customers in the West Virginia test market. The development of additional tourism offerings and public/private partnerships can help address the gaps identified in the weaker markets.

1.0 INTRODUCTION

1.1 Background

Fee fishing, a recreational activity that represents a small component of the economically important travel and tourism industry in West Virginia, is a popular kind of fishing in the United States. Fee fishing involves paying a fee for the privilege of fishing a private pond where fish populations are enhanced by stocking fish (Cichara 1982). More than 35 fee-fishing businesses exist in West Virginia (WV), and they contribute to the tremendous economic benefits associated with fishing activities.

When compared to fishing in public waters, fee fishing at ponds brings more convenience to a wide range of anglers such as out-of-state travelers, families, handicapped anglers, inexperienced anglers, and people who want higher catch rates. In addition, this style of fishing brings more revenue to pond owners than farming fish for sale. However, many of the fishing-related tourism providers are small and may lack the critical mass to attract out-of-state anglers to their sites as primary destinations. Usually pay pond owners do not have the professional knowledge or experience to operate the ponds as professional recreational destinations. How, then, can pond owners better satisfy the needs of anglers and develop their fee fishing business opportunities in such a way to have the greatest benefit to the rural economy in West Virginia?

The development of fishing packages through public-private partnerships can help attract visitors from a larger region if such packages afford higher quality and more eventful experience opportunities. Better customer service and larger fish sizes can contribute to improved quality. However, for each of those production factors, several constraints (e.g., heavy fishing pressure on public water, unequal fishing effort at highly accessible stocking locations, declining average fish sizes and catch rates, and lack of marketing) exist in the market creating difficult challenges for individual tourism providers (Finn & Lommis 2001, Radomski et al. 2001).

Furthermore, West Virginia Division of Tourism and Natural Resources developed a five-year strategic plan (2003-2007) that emphasized the importance of hunting and fishing. There appears to be substantial demand for fishing packages in West Virginia. Logar, et al. (2003) conducted a survey of potential WV tourists. They found that only 9 percent ($n = 496$) of visitors participated in a travel package to West Virginia. However, just 26 percent of them would not like to visit West Virginia and take part in a recreational package. Most visitors prefer to participate in a travel package, but they have had little experience in West Virginia. In addition, according to the survey, 49 percent of

respondents desire fishing or fishing lessons as part of a package. Most travel as a family (72%) and desire overnight accommodations as part of the package (85%). Family fishing packages could serve a significant market segment in West Virginia.

Fee fishing involves several mini-markets. The development of fishing packages that include other outdoor tourism activities through partnerships with WV State Parks can help private landowners better connect with major markets and attract visitors from a larger region. The purpose of this study is to identify those fee-fishing mini-markets and better understand how to package the fee-fishing experience so as to help the mini-markets prosper in West Virginia.

1.2 Study Objectives

- To identify mini-market segments based on fee-fishing experiences;
- to examine how fee-fishing mini-markets can better connect with larger tourism markets; and
- to use this information to identify gaps in recreational offerings and develop tourism packages in a West Virginia test market.

2.0 LITERATURE REVIEW

Market segmentation by demographic, psychological, or other variables is a trend in recreation and tourism research. Segmentation by motivation is one of the most popular identified in the literature. Two theories supporting the linkage between beneficial experiences and activities are presented to provide support for the linkage between fee-fishing mini-markets and larger tourism markets. The recreation opportunity production process is a theory somewhat related to Maslow's hierarchy of needs, and it is more applicable to outdoor recreation management. On the other hand, push-pull motivation framework is more widely used in tourism research. Both theories connect experiences and benefits (input or push factor) with the attracting factors of a recreation area such as activity and service opportunities (output or pull factor). The reason for introducing two similar theories is that this thesis applies the findings of fee-fishing recreational mini-markets (outdoor recreation markets) to larger markets (tourism markets). That is, it

examines both outdoor recreation and tourism behavior. Current research on connecting mini-markets with larger tourism markets is presented in this chapter. However, there are no studies that specifically connect fee-fishing mini-markets with the larger tourism market.

2.1 Market Segmentation

Market segmentation refers to the process by which people (visitors in this case) with similar needs, wants, and characteristics are grouped together so that an organization (or fee-fishing business or state park) can use greater precision in serving and communicating with its chosen customers (Mill & Morrison 1992). With increasingly competitive consumer markets and rapidly changing consumption pattern, scholars have conducted several studies to provide marketing information to those producing products such as opportunities to experience outdoor environments or tourism packages (Yaman & Shaw 1998). Parks are important destinations for the increasingly popular activities of nature-based leisure travel and ecotourism (Butler & Boyd 2000, Cole 1996, Font & Tribe 1999, Galloway 2002, Taylor 2000). Concerning tourism in parks, one challenge for park management identified in the literature involved the implementation of viable park marketing and planning programs (Galloway 2002, Groff 1998, Markwell 1997).

In *The Third Wave*, Toffler (1980, p. 248) warned that the "mass market has split into ever-multiplying, ever changing sets of mini-markets that demand a continually expanding range of options." Segmentation is a process to develop and refine products and services (such as experience packages) to meet every segment's demands and preferences. Segmentation variables are used to divide the mass market into more homogeneous mini-markets. A number of tourism researchers have indicated that the segmentation of markets in terms of both psychological, and socio-demographic variables potentially enables a better discrimination between market members than does analysis in terms of only the latter (Galloway 2002).

2.2 Connecting Experiences and Activities Recreation Opportunity Production Process

Brown's (1984) recreation opportunity production process helps researchers and managers better understand

their role in providing the essential outputs of recreation through the manipulation of activities and settings (Pierskalla et al. 2004). To understand the relationship among recreation opportunities, a common approach used by tourism providers involves management of tourism resources in terms of their potential to provide four types of recreation opportunities (activity, setting, experiences, and benefit opportunities). These four types of recreation opportunities define the visitor demand hierarchy. The two lowest levels (activities and settings) are the inputs that can lead to the production of certain recreation opportunities. The two highest levels (experiences and benefits) are the outputs of the production process.

Push-pull Motivation Framework

In tourism research, motivation concept can be classified into two forces, which indicate that people travel because they are pushed and pulled to do so by factors (Dann 1977, 1981). This push-pull framework provides a useful approach for examining the motivations underlying tourist and visitation behavior (Dann 1977, Klenosky 2002). Push factors refer to the tourists as a subject and deal with those factors predisposing him/her to travel (e.g., escape or nostalgia). Pull factors are those which attract the tourist to a destination (e.g., sunshine, sea, or other setting opportunities) and whose value is seen to reside in the object of travel. Push motivations are more related to internal or emotional aspects, such as the beneficial experiences desired. Pull factors are connected to external, situational, or cognitive aspects (Yoon & Uysal 2005). Push and pull factors have been characterized as relating to two separate decisions made at two separate points in time—one focusing on whether to go (push associated with travel motivations), the other on where to go (pull of setting attributes) (Klenosky 2002).

2.3 Linkage of Experience of a Single Event with Participation in Activities Throughout the Year

A recreation experience is defined as the desired psychological result or outcome that motivates a person to participate in a recreational engagement or activity (Driver & Tocher 1970). Managers can manipulate recreation settings (and the activity opportunities they afford), which can directly or indirectly influence

recreation behavior that results in visitor-produced recreation experiences and benefits (Brown 1984). Park managers can provide the social, physical, and managerial setting characteristics to help visitors achieve their desired experiences. Thus, managers can be considered as producing opportunities to experience.

Lehto et al. (2004) conducted a study to test the effect of prior experience on vacation behavior. One conclusion of their study is that prior experience is a strong predictor of activity participation patterns. The most frequent tourists to a site tended to have the most focused package of activity choices. As people's experience increased, they generally tended to narrow down their place and activity choices (i.e., become more place- and activity-specialized). Pomfret (2006) developed a conceptual framework to examine previous research on mountaineering, mountaineers, adventure, recreation, and tourism, and applied this framework to mountaineer adventure tourists. While these investigations focus on the motives of mountaineers, it is suggested that they are also important to mountaineer adventure tourists, given that tourism and recreation share similarities (Hall & Page 2002, McKercher 1996, Williams 2003). These findings could be useful when interpreting some of the results of this thesis since it reports a study that was conducted in West Virginia, a mountainous region.

3.0 METHODOLOGY

To address the three objectives of this study, two research methods were applied. Method 1 identifies the fee-fishing mini-markets that exist in West Virginia by examining the on-site fee-fishing experiences and off-site recreation activities that visitors desire. Part of this method was reported in a thesis (Moldovanyi 2004) and is summarized in this chapter. Method 2 involves a gap analysis of tourism activities that may complement the fee-fishing mini-markets identified in Method 1 and offered at five state parks within a West Virginia test market.

3.1 Method 1

Mail-back questionnaires and on-site interviews were administered to visitors at three WV fee-fishing businesses in the summer of 2002. This investigation was conducted by Pierskalla, Schuett and Moldovanyi

(Moldovanyi 2004). Respondents evaluated 26 recreation experience opportunity items listed in the questionnaire as reasons for their visit. They also reviewed a list of 25 outdoor activities and checked yes/no/as to whether they participated in them during the last 12 months. (Moldovanyi 2004).

The three sites were Family Fishing and Camping, located in Wendel, WV; Whispering Pines, located in Alum Creek, WV; and Mill Run Farm, located in Marlinton, WV. To test survey instruments for content validity, a pilot study was administered prior to the formal data collection period. The formal data collection process was conducted during eight weeks between June and August 2002. Adult anglers were randomly selected to participate using a random number table. Participants were told that their names would not be connected with the results of this study and their responses would be confidential and voluntary (Moldovanyi 2004).

When analyzing the data provided by 337 on-site interviews and 212 returned questionnaires, the Statistical Package for the Social Sciences (SPSS), Version 13.0, was used. The following is a summary of the statistical procedures used to address the first two objectives of this study. To describe the characteristics of pay pond anglers, frequency and descriptive statistic analyses were performed (Gender, Marital Status, Highest Education Level, Age, and Income Level). Principal component factor analysis, a data reduction technique, was performed to group 27 experience items into domains. Six factors or domains (considered as the fee-fishing mini-markets) were identified following the principal component factor analysis with Varimax rotation (Moldovanyi 2004).

To identify the dependence of market preference (desire for experience packages) on socio-demographic characteristics of anglers, ANOVA (analysis of variance) was conducted. Those visitor characteristics examined include age, travel group, marital status, highest education level, and income. For each mini-market identified in the factor analysis, two sample t-tests were used to examine differences among gender. Multiple linear regression analysis predicting the relationships between fee-fishing anglers' mean preference to attain

experience domains (dependent variable) and their participation in other outdoor recreation activities throughout the year (independent variables) was performed. Twenty-five activity variables (independent variables) were entered into each of the six models that were developed. Significant values for each model and for each independent variable are reported. Standardized beta values are also reported for each independent variable. The R-square values, indicating the percent of variance explained, are also reported for each regression model. These models indicate the relationship between mini-markets and larger outdoor recreation markets.

3.2 Method 2

Tourism information within 30 miles of Pipestem Resort State Park in West Virginia was collected by building a test-market tourism information database. The tourism information database was built and divided into six categories with more than 220 tourism providers represented. Within the database, there were four other state parks other than Pipestem Resort State Park. The other WV parks were Pinnacle Rock State Park, located in Bramwell; Bluestone State Park, located in Hinton; Little Beaver State Park, located in Beaver; and Twin Falls Resort State Park located in Mullens. All the information regarding services and activities offered by those five state parks were also included in the database.

Gap analysis was conducted by comparing the activities offered at five state parks within the test market with the activities demanded by fee-fishing visitors seeking various experience packages. Based on the multiple linear regression models developed in Method 1, fee-fishing anglers' participation in outdoor recreation activities corresponding with the six market segments were identified. Those activity demands were compared to the activities marketed by the five state parks, as indicated in the tourism information database. By comparing the activities anglers demand and the activities supplied in the test market, gaps are identified.

4.0 RESULTS

4.1 Survey participation, Response Rates, and Socio-Demographic Characteristics

Two hundred-twelve people returned a questionnaire with a response rate of 62.9 percent.

Regarding the socio-demographic characteristics of respondents, there were considerably more men anglers than women in this sample. Women accounted for only one of every five people in our sample: 260 (80.5%) males and 64 (19.2%) females. Study respondents traveled in a variety of groups, but primarily as family with children ($n = 103$, 29.7%), followed by two or more families ($n = 65$, 18.7%), a couple ($n = 55$, 15.9%), family and friends ($n = 48$, 13.8%), alone ($n = 38$, 11.0%) and two or more friends together ($n = 38$, 11.0%). Most respondents ($n = 202$; 59.9%) reported a marital status of married with children. A smaller proportion of anglers reported the following: single with no children ($n = 60$; 17.8%), single with children ($n = 30$; 8.9%), married with no children ($n = 27$; 8.0%), other situation ($n = 18$; 5.4%). Almost half ($n = 165$; 49.1%) of the respondents reported attaining a high school or equivalent status; followed by some high school ($n = 64$; 19.0%), some college ($n = 43$; 12.8%), and college graduate ($n = 28$; 8.3%). Respondents' ages ranged from 16 years (the age at which people were eligible to participate) to 74 years. Respondents were an average of 40 years old. Respondents' annual 2001 household incomes were highly varied, ranging from \$2,500 - \$243,000. The average income was \$36,629 and the median was \$27,500 (Moldovanyi, 2004).

4.2 Six Mini-markets

Principal component factor analysis (with Varimax rotation), a data reduction technique, was performed to group 27 experience items. Six factors or domains were identified following the analysis. Each of the domains identified represent a mini-market in this study. The six factors were labeled by the research based on identifiable patterns of experience items. Those factors were classified as: Experience nature and adventure (ENAA); Social relaxation (SR); Trophy fishing (TF); Escape (ESC); Family (FAM); and Fish for food and fun (FFFF). The six factor domains explain 68.59 percent of the variance for the observed variables. The large Cronbach's alpha scored indicated strong internal reliability among the items for the following domains: 0.917 (ENAA), 0.906 (SR), 0.872 (TF), 0.774 (ESC), and 0.706 (FAM). Factor six (FFFF) was the least reliable factor (Cronbach's alpha = 0.335). Eigenvalues and the percentages of

variance were acceptable and reported in Table 4. All the Eigenvalues were larger than 1.0.

4.3 Connecting with Larger Tourism Markets

Multiple regression analysis was used to identify the strength and significance of relationships between on-site fee-fishing experience motivations (dependent variable) and other tourism activities in which visitors participate throughout the year (independent variables). Six models were developed, each representing a larger market segment and potential fishing package.

The first model examines predictors for "Experience nature and adventure" and approaches significance ($p = 0.12$). Of those activities included in the analysis, driving for pleasure was the only significant predictor ($Beta = 0.132$, $p = 0.09$). Other independent variables that are suggestive include target shooting, rock climbing, birding, motor-boating, and nature photography. Together, this group of activities could be incorporated in a tourism package with the theme, "experience nature and adventure." That is, a mix of both passive and active activities included in this model can complement the fee-fishing experience. In the "Social relaxation" model, four-wheel driving/ATV driving was the only significant independent variable ($Beta = 0.158$, $p = 0.07$). However, other complementary activities that could be considered as part of this tourism package include road biking, kayaking, target shooting, motor-boating, and walking. Trophy fishing was the only model developed that was significant ($R^2 = 0.20$, $p = 0.02$) and included three significant predictors and three others that were more suggestive. Driving for pleasure ($Beta = 0.168$, $p = 0.03$), four-wheel driving/ATV driving ($Beta = 0.162$, $p = 0.05$) and nature photography ($Beta = 0.156$, $p = 0.05$) were significant predictors for the desire to experience "Trophy fishing." Although target shooting ($Beta = 0.138$), road biking ($Beta = 0.112$), and motor-boating ($Beta = 0.087$) were not significantly related, they have relatively strong relationships with the trophy-fishing experience factor as indicated by the Beta values reported. Among all of the 25 predictors examined for each of the models, birding had the strongest relationship with the mini-market, "Escape" ($Beta = 0.214$, $p = 0.01$). Although this model has only one significant predictor,

the model does approach significance ($p = 0.17$). Other activities that are suggestive in this model include target shooting, nature photography, four-wheel driving/ATV driving, camping near vehicle, and driving for pleasure. For the “Family experience” factor, swimming was the only significant predictor ($Beta = 0.169$, $p = 0.04$). However, the independent variable, kayaking, does approach significance ($p = 0.10$) and is an affordable alternative to motor-boating and complements family fun. Backpack camping, watching wildlife, sightseeing and target shooting were more suggestive variables in this model. The final model examined predictors of “Fish for food and fun.” Birding was the only significant predictor ($Beta = 0.169$, $p = 0.04$). Rock climbing was the second-strongest predictor and approached significance ($Beta = 0.153$, $p = 0.10$). Other more suggestive independent variables include kayaking, hunting, day-use hiking, and walking.

4.4 Gaps in the Test Market

A gap analysis was performed by comparing those activities associated with each market segment with activities already marketed by state parks within 30 miles of Pipestem Resort State Park in West Virginia, the study area. Of those gaps examined, 77 (43%) are currently marketed by a state park in the test-market area. Most of the recreation activities associated with the family fishing experience are available to customers, whereas “Experience nature and adventure” is a potential fishing package lacking the most marketed activities.

The activities offered at the five state parks within our test market were compared with the activities demanded by fee-fishing visitors seeking various experience packages. Those activities marketed for each experience package are identified with a checkmark in Table 1. Gaps exist where checkmarks are absent. The six most strongly related tourism activities with each experience domain (or mini-market), as determined in the regression analysis, were included in Table 1. One hundred eighty possible activity gaps were examined and reported in Table 1 (six domains multiplied by six activities multiplied by five state parks). Of those gaps examined, 77 (43%) are currently marketed by a state park in the test market area. The gap analysis results indicate that most of the activities associated with the family fishing experience

were available to tourists in the test market. However, many gaps exist for the other mini-markets and provide tremendous opportunities for other tourism providers to work with state parks to better meet the needs of visitors.

5.0 DISCUSSION

Family fishing packages appear to be the most promising type of tourism package for the Pipestem test market, and perhaps could attract those visitors with the greatest household incomes. Swimming, kayaking, backpack camping, watching wildlife, sightseeing, and target shooting are examples of secondary activities that can complement family fishing opportunities and are among the more heavily marketed activities near Pipestem. Tourists can find most of these activities in nearby state parks. These results also complement those findings presented by Logar et al. (2003). Their survey of potential WV tourists indicated that most visitors travel as a family unit (72%). Park managers should work together to develop marketing strategies that include those family activities as a package.

The gap analysis performed in this study helps address the question regarding what should be contracted out and what should be done within the state parks. Those activities that are not marketed by the state parks in this study should be given priority when developing public-private partnerships. For example, activities associated with “Experience nature and adventure” and “Escape” mini-markets were the least marketed activities by state parks in this study. Nonetheless, several private tourism providers within the test market offered activities such as rock climbing, birding, and motor-boating. The development of additional tourism offerings and public-private partnerships can help address the gaps identified in those weaker markets. Building partnerships when developing tourism packages is a relatively new topic for research and practice. Although the strength of a partnership (i.e., partnership, strategic alliance, or joint venture) is only one indicator of the level of integration between two or more organizations, other patterns of linkages should also be considered (Beekun & Ginn 1993).

Although this study was conducted in three West Virginia fee-fishing ponds and results applied in a gap analysis

Table 1.—Gap analysis of tourism offering at State Parks in the test market

Mini-market segments (Local fee fishing events)		Marketed Activities by WV State Parks within 30 Mile Radius of Pipestem State Park					
Experience Factor	Major Market (Recreational events throughout the year)	Activity Participation	Bluestone	Little Beaver	Pinnacle Rock	Pipestem	Twin Falls
Experience Nature & Adventure	Driving for pleasure						
	Target shooting		✓				
	Rock climbing						
	Birding						
	Motor-boating		✓	✓			
Social Relaxation	Nature photography		✓	✓	✓	✓	✓
	Four wheel driving/ATV driving						
	Road biking			✓	✓	✓	✓
	Kayaking		✓	✓		✓	
	Target shooting		✓				
Trophy Fishing	Motor-boating		✓	✓			
	Walking		✓	✓	✓	✓	✓
	Driving for pleasure						
	Four wheel driving/ATV driving						
	Nature photography		✓	✓	✓	✓	✓
Escape	Target shooting		✓				
	Road biking			✓	✓	✓	✓
	Motor-boating		✓	✓			
	Birding						
	Target shooting		✓				
Family	Nature photography		✓	✓	✓	✓	✓
	Four wheel driving/ATV driving						
	Camping near vehicle		✓			✓	✓
	Driving for pleasure						
	Swimming		✓	✓		✓	✓
Fish for Food & Fun	Kayaking		✓	✓		✓	
	Backpack camping						
	Watching wildlife		✓	✓	✓	✓	✓
	Sightseeing		✓	✓	✓	✓	✓
	Target shooting		✓				
Fish for Food & Fun	Target shooting		✓				
	Birding						
	Rock climbing						
	Kayaking		✓	✓		✓	
	Hunting		✓			✓	
Fish for Food & Fun	Hiking (day use)		✓	✓	✓	✓	✓
	Walking		✓	✓	✓	✓	✓

within a West Virginia test market, it has relevance to other locales, given that fee-fishing businesses and other recreation and tourism providers are confronted with similar environmental constraints and pressures to access resources and use them efficiently. Future gap analyses should be conducted in other test markets. This study

was also limited by the number of outdoor recreation activities examined. Future research should examine other leisure activities to more fully develop tourism packages relevant to fee-fishing. In addition, other styles of fishing on public waters should be examined to develop models applicable to streams, rivers, and lakes.

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