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Angler and non-angler preferences for non-consumptive value-added products and services associated with charter boat trips

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ABSTRACT

This study used choice modeling to assess demand by saltwater anglers and non-anglers, visiting the South Carolina coast, for value-added experiences and services associated with charter boat trips. Diverse non-fishing trip attributes including onboard amenities, onshore activities, quality of captain and crew, onboard nature-based tourism, onboard culture-based tourism and interpretation and education services were tested. Sampling of saltwater, recreational fishing, license owners and coastal tourists in 2013 produced 544 surveys (anglers = 277, non-anglers = 267). Study results showed that both groups placed importance on Quality of Captain and Crew, Onboard Amenities and Boat Fee. Only non-anglers placed importance on Onboard Nature-based Tourism. The marginal willingness to pay of Quality of Captain and Crew (high level) was $115 for anglers and $69 for non-anglers and of Onboard Amenities (high level) was $41 for anglers and $63 for non-anglers.

1. Introduction

Charter fishing businesses provide opportunities for coastal tourists and recreationists, many of whom do not own a boat, to access marine waters and resources on the United States (U.S.) coast. Charter boat services can attract fishing and non-fishing tourists as well as new hotels and restaurants as support businesses in coastal destinations (Amsden et al., 2010). In addition, marine resource management agencies have an interest in maintaining opportunities for public access to coastal waters for consumptive and non-consumptive users and could partner with charter boat operators to provide public outreach focused on education about the marine environment (Wondolleck and Yaffee, 2000).

The presence of the charter boat industry (i.e., recreational charter, head or party, and inshore guide boats; hereafter 'charter boat' for simplicity) is desirable in coastal communities that depend on tourism. However, the profitability and competitiveness of these businesses, which primarily focus on providing fishing services, has become more challenging. In general, participation in recreational fishing in industrialized nations has been on the decline as urbanization and post-modernization continues to develop (Arlinghaus et al., 2015). In addition, charter boat operators in the United States face numerous constraints to sustainable business survival, including unstable fuel costs, a declining customer base during economic recession, competition with other coastal venues, services and amenities catering to tourists, and the cumulative effects of fishing regulations (Murray et al., 2010; O'Keefe et al., 2015). The presence of the charter boat industry on the coast is also dependent on the extent of coastal gentrification and whether fishing is prioritized in waterfront development plans (Cicin-Sain et al., 1998; Colburn and Jepson, 2012). The charter boat industry needs viable, sustainable and entrepreneurial strategies to compete with other waterfront development priorities and coastal tourism services for the value received while adapting to the fluctuating economic conditions and regulatory environment.

Coastal destinations need to create value-added products and services to meet market demand changes and create a sustainable market position (Hassan, 2000). As such, this study examined the prospects for enhancing the long-term development, prosperity

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and sustainability of charter boat businesses. A consumer demand study was conducted, targeting anglers and other potential charter boat users (i.e., coastal recreationists and tourists) visiting the three major fishing and tourism hubs on the South Carolina (S.C.) coast (i.e., Myrtle Beach, Charleston, and Hilton Head/Beaufort). The primary management goal of this research was to provide information to charter boat operators towards improving capacity for new and/or value-added trip offerings. The focus was on potential for adding value with services that are possible from a regulatory standpoint, not dependent on increased catch, and in demand by anglers and non-angler tourists seeking access to nearshore and offshore marine environments. This study also contributes to understanding consumer (i.e., angler and non-angler) preferences for basic components of nature-based tourism in the context of marine charter services.

1.1. Setting for the charter boat industry on the South Carolina coast

Participation in saltwater fishing in the U.S. has remained relatively stable over the last 5 years (Recreational Boating and Fishing Foundation, 2015). However, in S.C., there was an increase in saltwater fishing participation during this time period. From 2010, when shore-based fishermen were licensed for the first time, to 2015, the number of saltwater licenses in S.C. increased by 7% for residents and 33% for non-resident anglers (S.C. Department of Natural Resources, unpublished data, August 13, 2015). However, in this region, over 90 percent of anglers fished primarily from a private boat or from shore, with only four to nine percent primarily using charter vessels (Responsive Management, 2006; Rubio et al., 2014).

Despite the small percentage of anglers using charter vessels, charter boat fishing in S.C. has increased from both supply and demand sides. From 2010 to 2014, participation in saltwater charter fishing in S.C. state waters (i.e., shore to 3 nautical miles) increased by 33%, the number of active charter licenses increased by 7% (from N = 405 to 433), and the total number of charter trips taken increased by 30% (from N = 10,481 to 13,682) (S.C. Department of Natural Resources, unpublished data, August 17, 2015). However, this trend has been accompanied by a shift in focus by the charter industry from offshore trips to nearshore trips. Specifically, there was a decline from 24% to 17% in the proportion of trips that were offshore trips and an increase from 24% to 32% in the proportion of trips that were nearshore (S.C. Department of Natural Resources, unpublished data, August 17, 2015). The recent NOAA economic survey for the charter boat industry indicated that for federal charter licenses (i.e., beyond 3 nautical miles from shore), from 1998 to 2009, there was a 30% decline in the number (from N = 174 to 122) of charter boats and a 50% decline in the number of head boats (from N = 18 to 9) (Holland et al., 2012).

While the shift to nearshore waters was partly a response to fluctuating fuel costs, there were also increasing restrictions on popular recreational fish over this time period. For example, red drum (*Sciaenops ocellatus*) is one of the more popular recreational fish among S.C. saltwater anglers. In 1990, the South Atlantic Fishery Management Council placed a moratorium on red drum due to overfishing and prohibited harvest in federal waters (South Atlantic Fishery Management Council, 1990). Although harvest was still allowed in state waters, the Atlantic States Marine Fisheries Commission required all states to implement harvest controls necessary to increase escapement of sub-adults, and S.C. implemented a bag limit of two fish and slot limit of 15–24 inches in 2000 (H*3599 Act# 105 of 2001 S.C. Code Ann. § 50-5-15) (Atlantic States Marine Fisheries Commission, 2002). For red drum, the last regulatory change in S.C. was in 2007 when the bag limit was increased from two to three fish and the slot limit was changed to 15–23 inches (SC S*0489 Act# 85 of 2007 S.C. Code Ann. § 50-1-30). Since 2003, there was a dramatic increase in the number of fish caught, with the majority (about 60–80%) released alive, indicating a shift in behavior toward catch-and-release (South Carolina Department of Natural Resources, 2015).

In addition to shifting to nearshore trips, operators have been exploring a competitive strategy focused on broadening their customer base and adding value to charter boat trips by providing new and expanded trip experiences to anglers as well as non-anglers. The possible experiences include add-ons to traditional charter trips or new types of trips designed to attract non-anglers, especially those interested in less-consumptive activities. Value-added services can involve tangible (e.g., amenities) or non-tangible (e.g., knowledge) services. Charter boat businesses can potentially attract new customers by adding non-fishing services and focusing on quality (New South Research, 2010; Oh et al., 2012). For non-anglers, value-added possibilities might include interpretation of marine ecology or maritime history and culture, marine wildlife viewing, and island visits or sunset cruises. These approaches cater to those consumers who are interested in less consumptive experiences and create additional opportunities to access and learn about the marine environment, especially in the estuarine and nearshore areas. The charter industry might also attract more diverse anglers by adding value to current fishing experiences such as providing education on fish ecology, fisheries management, and marine natural history during travel to and from the fishing grounds.

There is evidence of angler and non-angler demand for less consumptive value-added services on charter boat trips. A study conducted in Florida indicated charter fishing customers were interested in opportunities for seeing marine wildlife and receiving conservation education as part of the trip and were willing to pay more (between $9 and $27) for a higher level of wildlife seen during the trip (Oh et al., 2012). Also, a study of charter fishing customers on the Alabama Gulf Coast indicated that a majority (87%) of respondents felt that the knowledge and courtesy of captain and crew was very important to their charter trip satisfaction (New South Research, 2010). In S.C., discussions with charter operators in Charleston indicated they have some customer requests for interpretation of ecology and history of the coastal region (Jodice et al., 2010).

The capacity of the industry to provide value-added services depends on the ability of operators to invest in an appropriate vessel, deliver quality services, and capitalize on or build consumer demand. Most charter boat operators have little information on consumer demand for these services other than their personal business experiences. Before charter businesses invest extensive time in developing value-added products and services, it is important to understand angler and non-angler tourist demand and preferences for a variety of experiences and costs as part of the offshore trip and potential economic benefits from investment. This study assessed consumer demand including consumer preferences for a variety of trip offerings with different levels of value added (not focused on catching fish) to recreational charter trips. The study objective was accomplished by applying choice modeling (CM), which has gained popularity as a research tool in fisheries management based on its advantage of assessing individuals' trade-off preferences (Wattage et al., 2005). The CM was used to examine the choices both angler and non-angler recreationists and tourists make between hypothetical for-hire boat fishing trips as defined with varied trip characteristics and trip costs. A traditional approach using Likert-scale items only makes researchers observe an individual preference disjointedly without allowing for appropriate interactions among trip attributes. As a result, the CM is a preferred method to assess an individual's preferences for trade-