

Customer service metrics as a basis for segmentation of forest recreationists

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Management of US National Forest lands for recreation is guided by a number of approaches, which mostly focus on the resource conditions (e.g., vegetation loss, miles of trails built to standard) and not on visitor experiences, per se. While resource conditions are clearly important, in order to respond to the changes in outdoor recreation we propose an approach that incorporates customer service metrics (e.g., Crompton et al. 1991, Absher 1998). Such metrics are widely used in other settings (especially tourism and commercial sectors). Various studies have adapted the customer service approach with an emphasis on visitor management (e.g., Absher et al. 2000, Baker et al. 2002, Burns et al. 2003, Burns & Greafe 2006) or on serving diverse use (Li et al, 2008, Li et al . 2010). Previous research with customer service concepts is incorporated into an agency-led national visitor use monitoring program (NVUM) (USDA Forest Service 2008). This survey is repeated every five years for each forest and includes respondents from a variety of settings across all seasons. With approximately 200 sampling blocks per forest survey the data is comprehensive and representative on a forest level. Data from two iterations for each forest has been completed for most forests.

Apropos to this study, about a quarter of the respondents were asked an extra set questions geared toward measuring customer satisfaction, and it is this targeted subset of the NVUM survey that contains the data we will use. These questions represent the most important aspects of a forest recreation experience. For this analysis we chose four forests, two urban-proximate and two more remotely situated, that are from northern, central and southern California. It is important to note that the 14 customer satisfaction items were in themselves specifically chosen to represent the most important experiential factors that are, to some degree, under managerial influence.

Of the 4,139 respondents to the larger, four-forest NVUM dataset we analysed data from the satisfaction surveys (n=1,158). First we derived four customer service domains from 16 items on the NVUM surveys. (Two items were dropped in the confirmatory factor analysis stage.) These domains are (1) management/safety, which included items asking about the importance of staff helpfulness, site cleanliness and safety; (2) nature composed of questions about scenery and natural environment; (3) signs/information representing displays, information quality and signage; and (4) facility/roads based on items that asked about roads, developed facilities and parking. Then we calculated domain scores for each respondent and used them to profile users across the four forests and the four primary user segments used in the NVUM sampling protocol, namely day use and overnight developed sites, designated wilderness visits and general forest (dispersed) use. Finally we compared these across the four forests to gauge geographic and rural/urban differences.

Results show both forest-to-forest differences and user segment differences. For example, developed site users placed more emphasis on signs/information than general forest or wilderness users. By contrast, no differences across these user groups were observed for the service domain of nature orientation. In a forest to forest comparison, the most rural forest was the only one with significantly lower scores for either of these experience domains suggesting a more self-reliant visitor is the norm in this area, i.e., a geographic difference without regard to user group status. Additional results are presented for the other service domains as a function of forest or use setting in a more comprehensive analysis.

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Overall, these results show that customer service metrics provide a useful way to evaluate visitor flows with a focus on recreation experience outcomes in a managerially useful way. In particular, urban proximity and experience preferences seem to be linked. The customer service approach takes management beyond measures of sociodemographics or physical resource attributes to incorporate social factors in recreation decision-making. It provides focused, substantive input to agency goals that seek to achieve recreational use outcomes based on actual experiences. For instance larger parks or forests will likely have sub-zones where visitors are substantially different based on customer service metrics and can manage to encourage or discourage use more accurately.

The results support the possibility to construct easily understood customer service based experiential monitoring and program evaluations using regional or forest-based domains. That notwithstanding, this analysis also shows that this approach is still a “work in progress.” The datasets are smaller than desired for some site-specific analysis and the domain measures are not yet completely satisfactory across diverse settings. This suggests that more work is required to address methodological issues. Also, the most useful way to present the results needs refinement in order to bring this approach to a forest or site specific level and facilitate managerial responsiveness.

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