

# Modelling Visitor Expenditures at Fulufjället National Park, Sweden

Peter Fredman

Mid-Sweden University, Sweden

peter.fredman@etour.se

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## Introduction

Protected areas should not be regarded as geographically isolated entities and it is essential to adopt a perspective that extends beyond park boundaries. A national park is in itself a sight often worth seeing which attracts visitors, but in many cases it is associated with a larger complex including transportation, lodging, food service, outdoor recreation opportunities and other attractions. This presentation reports analyses of expenditure data at different geographical levels from visitor surveys at Fulufjället National Park in Sweden. The region directly surrounding the park is referred to as a 'gateway' area, and many of the tourism businesses providing services for visitors to Fulufjället are located there.

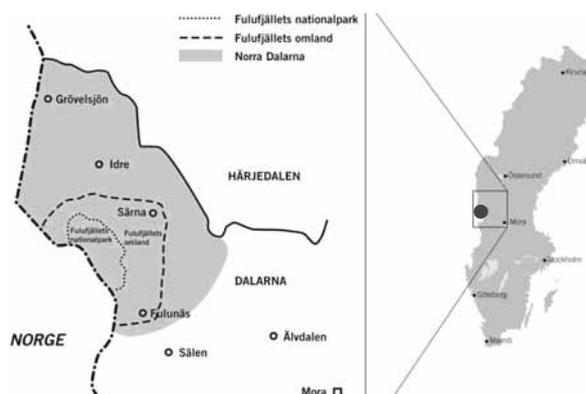


Figure 1: Fulufjället National Park with surroundings.

The volume and type of non-resident visitor expenditures is the primary economic force behind regional tourism impacts and represents an influx of new money to the economy. Studies of expenditure patterns help to describe the size of each travel market in economic terms and destinations

can better benefit from marketing efforts. It also leads to the identification of attributes influencing travel expenditure characteristics among market segments. Numerous studies of household travel and expenditures are available on a macro level, but less is known about socioeconomic factors that affect this pattern and the effects of underlying demographic characteristics on visitors' expenditures (Cannon & Ford 2002; Fish & Waggle 1996).

Fulufjället National Park represents an important trend in current Swedish environmental policy as this is the first national park where the planning strategy explicitly builds on visitor data in order to develop recreational opportunities and tourism (Wallsten, 2003). In the year before and the year after designation, extensive visitor surveys were conducted to guide the park management plan and further development, as well as to monitor changes in visitor characteristics, activities and impacts (Fredman et al. 2005). According to visitor surveys, park visitation increased by 40% following its designation (Fredman et al. 2006).

## Methods

Visitor surveys were undertaken at Fulufjället National Park in the summers of 2001 and 2003 by means of automatic trail counters and self-registration boxes (Fredman et al. 2005). A sample of 980 Swedish and 520 German visitors that registered at the self-registration boxes received a mailed questionnaire sent to their home address some weeks after the visit (response rate >80%). Besides several attitude questions about outdoor recreation and park management, the survey in-

Table 1: Proportion of visitors who reported an expenditure and average expenditures in each geographical region (95% c.i. in brackets).

	Fulufjället National Park (NP)	Fulufjället Gateway area (outside the NP)	Fulufjället region (outside gateway area)
Swedish visitors	46.1% 178.6 SEK (155.2 – 202.1)	30.7% 777.5 SEK (615.4 – 939.5)	55.5% 1702.6 SEK (1552.6 – 1852.6)
German visitors	42.4% 349.2 SEK (119.2 – 579.2)	39.7% 1859.2 SEK (1054.7 – 2663.8)	48.3% 3402.2 SEK (2577.6 – 4226.8)

cluded items concerning travel patterns, demographic background and visitor expenditures. In the 2003 survey respondents reported their expenditures on lodging, food, shopping, activities, transportation etc. in Fulufjället National Park, the gateway area and the region outside the gateway area.

## Results

Data analyses show several significant differences in expenditure patterns between the geographical regions and the two nationalities studied (table 1). Among Swedish visitors, 46% reported at least one expenditure item in the National Park, 31% reported expenditures in the gateway area and 55% in the region. The equivalent figures for the German visitors are somewhat lower in the National Park and Fulufjället region, while almost 40% reported expenditures in the gateway area. Looking at the average expenditures among those who reported at least one expenditure item in each geographical area respectively, there are considerable higher numbers among German visitors compared to Swedish. Given the efforts to develop tourism in the Fulufjället Gateway area, it is surprising to find that only about one third of the visitors report expenditures in this area.

Combining the data of the two nationalities, a logistic regression was used to analyze determinants of expenditure frequencies (i.e. whether or not a visitor reported any expenditure), and determinants of expenditure average levels were analyzed using a log-linear regression model. Preliminary results show that the quality of the recreational experience, previous visits, nationality, gender, income, wilderness purism, and length of stay are associated with expenditure frequencies, while income, and length of stay are associated with expenditures levels.

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