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## A note on benefits and costs of adjusting forestry to meet recreational demands

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### Abstract

Economic studies concerning environmental functions of forests are often partial in the sense that they focus on either benefits or costs. In other words, benefit/cost analyses indicating whether it is economically motivated to change forestry to make it compatible with environmental demands are relatively rare. This benefit/cost analysis deals with the forest as recreation environment, where benefit estimates from a study conducted in the county of Västerbotten, Sweden, are compared with cost estimates from another study in the same county. It is shown that adjustments of forest management to meet recreational demands do largely affect both benefits and costs, and that the results are sensitive to how soon the effects on the recreation environment occur after the adjustments of forest management.

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## Introduction

One of the scientific pioneers in Sweden concerning the economics of timber production was [Holmertz \(1873\)](#), while [Lindgren \(1976\)](#) was one of the very first in the country to deal scientifically with the economics of forest environmental concern, primarily by analyzing costs to forestry of setting aside specific recreation areas. The traditional forest economic research in Sweden is thus about 100 years older than the economic research on environmental functions of the forest. This is an important reason why there is still a lot to be done on the scientific knowledge about the latter. Not surprisingly when considering the youth of forest environmental economics, it has to a large extent been characterized by partial analyses of either benefits or costs, each of which with no ambitions to really make a complete benefit/costs-analysis.

One interesting exception was the benefit/cost analysis carried out by [Bojö \(1985\)](#). The background to his analysis was the question of whether a forest area close to the mountains in the county of Jämtland in northern Sweden should be set aside as strict nature reserve or whether industrial forestry should be allowed in the area. Using the Travel Cost Method ([Clawson and Knetsch, 1966](#)) to estimate benefits and forest data from the area to estimate costs, the results showed that the first mentioned alternative was superior to the latter. This was primarily because of the area's relatively low value to forestry regarding volume of standing timber as well as potential timber production.

Like the study by Bojö, most (of the few) scientific and empirically based benefit/cost analyses conducted deal with the problem of choosing between forestry with no environmental concern, or no forestry at all, i.e. strict nature reserve or national park. Consequently, there is a lack of knowledge about the benefit/cost relationship for environmental concern in forestry on the main part of the Swedish forest area, where – according to the current Forestry Act – production of timber is to be combined with protection of environmental values on the same land. In other words, more knowledge is needed about the benefit/cost relationship when forestry is changed (but not prohibited) to meet different environmental demands.

The aim of this research note is to shed some light on the economic effects of making forestry more compatible with demands from forest recreation, when the two forms of land use occur on the same land. In doing this, we merge results from empirical studies on benefits and costs, respectively, concerning the county of Västerbotten in northern Sweden. The following section describes briefly the underlying studies. In the subsequent section we present a benefit/cost analysis and results. The research note ends with conclusions and final remarks.

## Underlying studies

In Sweden, the Right of Common Access makes forests for recreation a non-market priced environmental good. To estimate the recreation value in economic terms of the forests in the Västerbotten county, [Mattsson and Li \(1993, 1994a\)](#)

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