

About the Relevance of FAUSTMANN Calculations in Public Forests of Hesse, Germany

Armin Offer

Taking the framework conditions for the management of public forests of Hesse as a starting point, the difficulties that practitioners have in deriving benefits from optimisation calculations according to Faustmann are discussed in the following.

The calculated economic parameters for the State forest of Hesse show that forestry in Hesse allows only a low internal rate of return on capital (0.1% for Scots pine up to 1.3% for Douglas fir) and that the land expectation values are, apart from Douglas fir, negative (e.g. oak, rotation period 180 years, p : 1.5%, - € 12,800/ha). Profit-making goals could be better realised by the cultivation of more productive tree species, shorter rotation periods and the choice of alternative thinning regimes.

Why are forests still being purchased in Hesse and why don't forests owners decide in favour of a more profitable management of their forests? An attempt will be made to explain this apparently economically inconsistent behaviour.

The main reasons are seen in the precedence given to motives that are not timber production orientated, the complex system of management objectives in public forests, the extremely long production times eliminating the time preference problem and the strict sustainability principle that has proven its importance in particular with regards to an extremely uncertain prognosis for the future.

The methods that have been used for investment calculations so far only supply partial optima and do not take into account the feedback effects and emergence problems that result from the transition from stand to the forestry enterprise level.

The marketing of conservation services from the forest is increasingly achieved at prices that are considerably higher than the value of the timber produced. This means that other assessment and optimisation approaches are called for. More strongly profit-orientated forest enterprises, increasingly successful demands from conservationists for "reparation" to nature, more unmanaged forests, a reduction of the timber supply in Germany, and, in the long-term, a probable increase of timber imports make it clear that there is a problem of national economic optimisation to solve.

The analysis of woodland prices shows that neither the land expectation value nor the capitalised forest rents are important decision-making criteria for forest purchasers. The often dominating non-timber-orientated purchasing motives require a more comprehensive explanatory model and justify using methods for the estimation of the market value that are not completely consistent with the dynamic investment theory.

All in all, the impression remains that the Faustmann concept has an important didactic and heuristic value for forestry practitioners in Germany, as it teaches the "art of weighing and measuring". Under the given framework conditions, however, management decisions in public forests need to be further optimised by communicative methods as defined by Habermas.

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*State Forest Enterprise HESSEN-FORST,
Department of Forest Valuation
Europastrasse 12, 35394 Giessen, Germany
Phone: +641 4991351; e-mail: offera@forst.hessen.de*