

Title:

Discount Rate Dynamics, Patterns of Sustainability, and the Environmental Kuznets Curve

An analytical model for explaining forest management outcomes
in developing countries

Abstract

This paper explores the interrelationship between discount rate regimes and different patterns of sustainable forest management outcomes. In contrast to the static analyses of discount rates that have been carried out so far, this paper establishes a theoretical framework that analyzes dynamic changes of discount rates and its implications for achieving sustainable forest management in developing countries. Due to the significant impacts of discounting regimes on forest management, the advantage of this framework is that it allows the analysis to differentiate between different pathways of sustainability recognizing the economic decision-making environment of rural households in developing countries. Therefore, the results of this study contribute important knowledge about the patterns of forest management – weak or strong sustainability – that can be expected when dynamics of discount rate regimes are taken into consideration. The results suggest the existence of an Environmental Kuznets Curve (EKC) with regard to forest resource sustainability. The general dynamics of forest management that can be concluded from the existence of an EKC also demonstrate that – depending on the prevailing discounting framework – varying combinations of livelihood and environmental outcomes have to be presumed. Therefore, the results of this study allow to conclude and propose important implications for the design of appropriate policy measures to optimize forest management in developing countries. These policy measures are separately discussed with regard to pathways of sustainability and combinations of livelihood and environmental outcomes.

Keywords: Discounting, Weak and Strong Sustainability, Forest Resource Management, Environmental Kuznets Curve