The Timber Harvesting Behavior of Family Forest Owners in the Southeastern United States

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Abstract

Theoretical and empirical models were developed to increase our understanding of the timber harvesting behavior of family forest owners of the southeastern United States. Family forest owners were modeled as utility-maximizers who made harvesting decisions by balancing amenity and profit values. To test the theoretical model, data from forest inventories and landowner surveys conducted by the USDA Forest Service were used to estimate biophysical and socioeconomic variables. Separate logistic regression models were generated for all family forest owners and profit, multiple-objective, and amenity oriented groups. Stand structure variables, such as basal area and volume, were the most significant predictors of timber harvesting among the variables tested. Other significant variables were stumpage values, the importance of timber production as an ownership objective, and whether owners lived within one mile of their forestland. Softwood sawtimber stumpage value, whether owners lived within one mile of their forestland, their incomes, whether they had management plans, and whether their forestland was managed by a professional forester were significant variables in the harvesting model for the profit group. Basal area, softwood sawtimber stumpage value, the importance of timber production as an ownership objective, whether owners lived within one mile of their forestland, and slope were significant for the multiple-objective group model. For the amenity group model, softwood pulpwood stumpage value and owners’ incomes were significant variables. The results of the models were aggregated and implications for the region’s timber supply were assessed for different scenarios.

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