Supply and demand for forest products—an econometric study

Author
W. L. M. McKillop

Author Affiliations
W. L. M. McKillop was Assistant Professor and Assistant Forest Economist, School of Forestry, University of California, Berkeley.

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Abstract
Forest products dealt with were “all” lumber, softwood lumber, paper, paperboard, building paper and board and softwood sawlog stumpage (referred to collectively as wood products), and softwood sawlogs, pulpwod, peeler logs and softwood sawlog stumpage (referred to collectively as primary products). The foundation of the study was a system of interrelated linear demand and supply relationships. Although only mill-level relationships were specified, attention was given to higher levels of demand and supply in their formulation. The study was limited to producers and consumers in the United States except for a brief consideration of Canadian suppliers of lumber and newsprint.

Coefficients of wood product supply and demand relationships were estimated by 2-stage least squares, using annual data for the years 1929 to 1960. Point estimates of elasticities for wood products were prepared for the year 1960 to show the influence of “own” price, prices of competing materials, prices of inputs in production, and other supply and demand shifters. Lack of data on quantities marketed made it impossible to carry out estimation for primary products.

Forecasts of wood product prices and consumption levels, and primary product prices, were made for a prediction period ending in 1975. Three types of forecasting equations were used: “solved structural,” “complete reduced form” and “exogenous reduced form.” Forecasting methods were compared, using 1961 and 1962 data which had been excluded from the sample period. Basic predictions were adjusted using actual and predicted values for 1961 and 1962. On empirical and theoretical grounds the adjusted solved structural method was judged to be generally the most satisfactory one. Forecasts of consumption levels of certain wood products prepared in this way were compared with predictions made in studies carried out by the U. S. Forest Service, U. S. Department of Commerce, the Stanford Research Institute, and Resources for the Future, Inc.

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This study is a primary econometric analysis to explore the factors explaining the changes in industrial roundwood demand in Turkey. The study also includes demand forecasts based on the econometric models proposed herein. We constructed two separate econometric models: one... technically and comprehensively into the supply and demand, aspects of primary forest products such as roundwood and, stumpage as well as of secondary forest products such as lumber, wood-based panels, veneer and paper. FIGURES 1.1 A forest’s economic value / 7 2.1 Relationship between output and inputs / 29 2.2 Iso-cost curve for capital and labour / 31 2.3 Expansion path of efficient input combinations / 32 3.1 Decision tree for a pest control project / 79 3.2 Correct and incorrect match of interest rate and timber price in forest. investment analysis / 82 3.3 Value of a pre-merchantable loblolly pine timber stand / 91 4.1 Market supply, demand, and net value of a forest product / 104 4.2 Relative elasticity and welfare change resulting from an increase in. Chapter 4 covers market goods in the forest sector, notably timber, and the supply of and demand for these goods. Forestry calls on a variety of skills and disciplines of study.
Our study incorporates short-run changes in prices and demand for palm oil and wood products, as well as the exchange rate, the real interest rate, land-use zoning, forest protection, the estimated opportunity cost of forested land, the quality of local governance, the poverty rate, population density, the availability of communications infrastructure, transport cost, and local rainfall and terrain slope. Our econometric results highlight the role of dynamic economic factors in forest clearing. We find significant roles for lagged changes in all the short-run economic variables—product prices,