

## Abstract

Title of Dissertation: *The Price-Income Side of an Interindustry Macroeconometric Model: Development and Simulations.*

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Interindustry Macroeconometric (IM) models combine interindustry relationships and industry-level behavior in a macroeconomic framework. Their structure evolves from input-output relationships that define product output as the sum of intermediate and final demand, and product prices as the sum of input costs and income. This dissertation focuses on determining prices and income in an IM model of the U.S. economy.

The main focus of this work is determining industry profits. The equation specification is based on the role profits play in price determination. The specification allows the traditional pass-through of input costs to be relaxed, in that pass-through need not occur immediately, but rather may occur with a lag. Equations for thirty-seven industries comprising the U.S. economy are estimated. Equations for non-profit income also are estimated and included in the Long-term Interindustry Forecasting Tool (LIFT).

Because prior attempts at modeling the price-income side of

an IM model resulted in equations that were not robust, the dynamic response of the equations is tested. The equations are included in LIFT, which then is used to make a Base forecast and four alternate scenarios. The response of the model to a change in monetary policy, oil-prices, the exchange-rate, and labor productivity illustrates the properties of the model, including the industry income equations. In all simulations, industry income responds in the expected direction and contributes to the stable properties of the model.

The structure of an IM model has been compared to models based on the Social Accounting Matrix (SAM). Chapter 8 examines the effects of an increase in agriculture's value added in a SAM model and in LIFT. The LIFT results differ from the SAM results in two respects. First, the SAM analysis is based on fixed-price multipliers, while LIFT includes the effects of changes in relative prices. Second, the SAM gives comparative static results of the shock, while LIFT specifies the dynamic path of the economy's response.

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