Incorporating behavioral aspects into input-output model

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One of the main differences of Computable General Equilibrium (CGE) models as compared to input-output models is that CGE models incorporate behavioral principles such as cost minimization or utility maximization. In the Rectangular Choice of Technology (RCOT) model, such behavioral principles of producers are incorporated into an input-output model. However, RCOT model, as its original form, does not consider behavioral principles of consumers or households. In this presentation, we explore a way to incorporate behavioral aspects of consumers by introducing an Agent-Based Model (ABM) that determines the composition and scale of consumption, which is then fed into RCOT model that determines the price and technology mix of producers. We will present the structure of a toy model and its results to demonstrate that the combined RCOT-ABM approach successfully integrates behavior of both producers and consumers. We will discuss the implications of this combined model in the broader context of the discussion on the interface between CGE and input-output models.