

## Conceptual differences between macro-econometric and CGE models

Topic: Input-output and sectoral macro-econometric modelling: Part of the same family

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This paper discusses the main similarities and differences between macro-econometric and Computable General Equilibrium models. It shows that, while both types of models are based on a core input-output and national accounting framework, differences in the underlying behavioural assumptions mean that the direction of causation of many of the key flows in the model is reversed. The discussion of differences in approach starts with the key assumption about how uncertainty is treated in the models. We show that if the existence of fundamental uncertainty is accepted, it becomes impossible for agents to optimise decision making by maximising expected utility and hence an alternative approach to modelling behaviour is required. In the absence of optimisation, the properties of the modelling system change substantially, with the level of output determined by demand-side factors rather than the most efficient use of the available factors of production, given a production function and factor prices.

We then move to the critical discussion of how the financial sector is treated, which is increasingly noted as an important difference in approach. We note that, within each modelling approach, there is consistency between treatment of the real economy and financial sectors, with the CGE approach allocating a fixed supply of money optimally, and the macro-econometric model assessing the demand for money.

Throughout the discussion, the models' theoretical and structural assumptions will be compared against the relevant strands of macroeconomic theory.

We conclude with a summary of key characteristics and assumptions that is designed to help policy makers and the other users of model results to interpret the findings from models.

For organised session: Input-output and sectoral macro-econometric modelling: Part of the same family (Organiser Hector Pollitt)