

## The market rigidity hypothesis in a multisectoral CGE approach

Topic: Computable General Equilibrium Modeling and Social Accounting Matrices I (Chair: Stefano Deriu, University of Macerata)

Author: Stefano Deriu

Co-Authors: Claudio SOCCI, Francesca SEVERINI, Rosita PRETAROLI

### Abstract

The use of Computable General Equilibrium Models (CGE) for the impact analysis of economic policies can be considered a best practice for policy makers to get useful indications in the decisional processes. In particular, CGE models calibrated on Social Accounting Matrix represent powerful tools for the quantification of economic implications deriving from the introduction of shocks on the supply side (Deriu, et al., 2021; Severini, et al., 2019), on the demand side (Socci, et al., 2021), and on income distribution (Ciaschini et al., 2013). They are based on solution algorithms that uses a system of linear and non-linear simultaneous equations, which allows determining the vectors of prices and quantities that optimize the utility function of the consumers and the profit of producers under their respective restrictions (budget constraints and production capacity). Therefore, the equilibrium solution allows the balance between the supply and the demand in the markets of commodities and primary factors, according to the assumption of perfect competitiveness of markets.

However, the condition of perfect competition in general equilibrium models does not reflect the reality of modern economies and might affect the consistence of the simulation results (Harris, 1984). This requires new modeling solutions that incorporate the imperfection of markets, the structural restrictions of the economic system, the sticky prices for selected primary factors and profit margins for activities. In this perspective, two major groups of CGE models have been developed the called macro-structuralist and Neo-Walrasian CGE models (Grassini, 2009). One of the main characteristics of these approaches, is that in selected markets some actors might show a high market power, thus making the prices sticky. This means that selected actors (e.g. producers or primary factors owners) are no more price takers and extra profit can be not null, causing technical implications in terms of production differentiation (De Santis, 2002) and the strategic behaviour of the involved agents (Devarajan & Rodrik, 1991).

In this perspective, this study aims to incorporate the imperfect competition assumptions for selected markets of commodities in a SAM based CGE model for Italy that already encompasses the imperfection in labor market. This would allow computing the impact of policy measures on involuntary unemployment, non-competitive market prices, profits, total output and, more in general, the whole process of income generation, distribution and use. Specifically, the study follows the assumption of the mark-up measure (Roson, 2006), which determines extra profits (rent) by activity, as the price exceeds the total costs. Very often the rent does not lead to investments, but is dispersed for the defence of market power itself (patents, copyrights, etc.) as a result of the reduced interest to innovate and invest when operating in markets characterized by a rigid demand. In this respect, different hypothesis of rent distribution among Institutional Sectors are tested and the simulation results will provide suggestions to the policy maker on the potential distorting effects and distances from expected policy outcomes created by the mark-up.

Keywords: CGE, SAM, Mark-up, Market Imperfection

Jel codes: C68, D58, E16, D41, D43

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