

## **Abstract:**

**“Estimation of collective models of household labour supply using semiparametric indirect inference ”**

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A difficulty that appears much more evidently in the collective model of household labour supply and consumption behaviour than in the unitary model concerns the interpretation of non-market time. It may be possible to argue that, given the reduced form nature of the unitary model, the distinction between utility derived by the household from the total non-market time of each household and utility derived, directly, from pure leisure, and indirectly, from household production time boils down to a mere aggregation problem. But for the collective model, wrongly assuming that non-market time is pure leisure leads to distortions in both the individual preference parameters and the parameters of the bargaining power of the individuals in the household. However, collective models with household production are difficult to identify in general settings, and we thus explore ways to calibrate such models in a statistically meaningful way, using the semiparametric indirect inference (SPII) approach of Dridi and Renault (2000), which is based on the simultaneous use of a misspecified structural model and a misspecified auxiliary model in order to identify and consistently estimate some parameters of interest in the structural model, via simulations of that model.

Here the parameters of interest are the individual preference parameters and the parameters of a bargaining power index, while the nuisance parameters are those of the household production technology and the other parameters necessary to simulate the structural model. The auxiliary model is a unitary model specified in such a way that the encompassing property guaranteeing consistency is satisfied. We discuss the issues at stake in estimation, in encompassing tests and in the sequential examination of pairs of auxiliary and structural models, and provide Monte Carlo evidence on the power and limitations of the proposed approach, using the data from the German SOcio-Economic Panel (GSOEP).

**KeyWords:** Collective model, household labour supply, intra-household allocations

**JEL Classification:** D11, D12, J22