

NATSEM

Housing Projection, Statistical Reliability and Spatial Microsimulation

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Outline

- Concept
- Problems
- Data and Methodology
- Objectives

Concept

- **Microsimulation**
 - Microsimulation is a modelling technique that operates at the level of individual units such as persons, households, or firms.
- **Spatial Microsimulation Model**
 - Related with small geographic area
- **STINMOD and HouseMOD of NATSEM**
- **Possibility to develop new model**

Problems

- Choose optimal Benchmarks
- Create synthetic population for Small Area
- Building spatial microsimulation model
- Validate statistical reliability of small area estimations

Data and Methodology

- Data source
 - ABS Census and Survey Data
 - Income and Housing Surveys
 - Recent Census
- Types of data
 - CURFs data

Mostly Quantitative Analysis:

- Spatial Econometric Tools
- Benchmarks selection
- Reweighting techniques
 - GREGWT (Bell, 2000) and Combinatorial Optimisation (Williamson et al, 1998)
- Direct and Indirect methods of estimations
- Confidence Interval / Confidence region

Objectives

My motivation is to -

- Develop spatial microsimulation model for housing projections
- Develop new re-weighting methodology for spatial model
- Estimate different small area parameters of model
- Test the reliability of the estimators by different statistical methods