

# Economic Efficiency of Social Housing in France

Radmila Datsenko

2015 Housing Economics Workshop, Oslo

February 5-6, 2015

# Outline

- 1 Introduction
- 2 Literature Overview
- 3 Theoretical Framework
- 4 Empirical Strategy
- 5 Preliminary Empirical Results

# Context & Motivation

Some observations :

- Global trend since 2007 : austerity & budget cuts  
⇒ Questioning on the efficiency of public expenditures
- Europe : Social housing is a leverage for overcoming the economic, social and environmental crisis
- France and Finland are the only OECD countries with increasing share of social rented housing since 1990s

# French housing market

Two types of housing policy : housing allowances (based on income, household size and housing consumption) and social rental sector (allocated on income criteria)

Housing allowances cover on average 60% of the rent for the poorest households

Social rental sector = 4.5 million units = 17% of the housing stock

Solidarity and Urban Renewal Law (2000) : at least 20% of the housing stock in all urban municipalities with over 3500 inhabitants should be social

About 65% of French households are eligible for social housing

# Our aims

- Develop a theoretical framework based on household behaviour
- Take into account two existing types of housing policy : social rental sector & housing allowances
- Evaluate tenant benefit in the social rental sector

# Mainstream approach

- Using Hicksian welfare variation measures

Tenant Benefit = Income - Theoretic Expenditure in Market Conditions

*Murray 1975, Kraft & Kraft 1979, Quigley 1982, Barton & Olsen 1983, Clemmer 1984, DeBorger 1985, Tiwari & Hasegawa 2001*

- Computing 'market value' of the public sector dwellings

Characteristics approach → Hedonic valuation method

## Some results

Aggregate results : Tenant Benefit = from 4 to 27% of the Household Income

FRENCH Case :

*Durif & Berniard, 1971 :*

Social rents = 40% of their 'market value'

*LeBlanc & Laferrère, 2001 :*

- Social rents 62% below free market rents below market value
- +10% housing consumption
- +11% consumption of other goods

*Jacquot, 2007 :*

Difference between social rents and their 'market value' estimated at 50%

# Household behaviour

Household utility function :

$$U_i(h, x) = (h - \bar{h}_i)^{\alpha_i} (x - \bar{x}_i)^{1-\alpha_i}$$

Free market budget constraint :

$$ph + x \leq y_i$$

Inverse demand function for housing service :

$$p = \frac{\alpha_i(y_i - \bar{x}_i)}{h - (1 - \alpha_i)\bar{h}_i}$$



# 1st type public policy

**Housing Allowance**  $t_i$  : a cash grant paid to households depending on :

size of the household  $m_i$

income  $y_i$ ,  $\forall y_i > y_s, t_i = 0$

minimum rent  $ph_0$

maximum rent  $ph_s$

If  $y_i \leq y_s$  :

$$t_i = \gamma \ln m_i \times ph_s$$

If  $y_r < y \leq y_s$

$$t_i = \beta y_i + (\gamma \ln m_i)(ph_s - ph_0)$$

## 2nd type public policy

**Social Rental Housing** : a housing market segment built and managed by a public organisation

Hypothesis 1 : Unitary price of housing in the Social Rental sector  $p^s$  is lower than the unitary price of housing in free market conditions :  $p^s < p$

Hypothesis 2 : *Ceteris paribus*, households prefer Social Rental sector

## Policy impact on household choice

- If  $y_i < y_r$

Budget constraint :

$$p^s h + x \leq y_i + \gamma \ln m_i \times p^s h_s$$

Optimal housing consumption :

$$p^s h = p^s \bar{h}_i + \alpha_i (y_i - \bar{x}_i - p^s \bar{h}_i + \gamma \ln m_i \times p^s h_s)$$

- If  $y_r < y \leq y_s$

Budget constraint :

$$p^s h + x \leq y_i + \beta y_i + (\gamma \ln m_i)(p^s h_s - p^s h_0)$$

Optimal housing consumption :

$$p^s h = p^s \bar{h}_i + \alpha_i \left[ y_i - \bar{x}_i - p^s \bar{h}_i + \beta y_i + (\gamma \ln m_i)(p^s h_s - p^s h_0) \right]$$

# Empirical strategy

**Step 1** : Estimating Housing Allowances parameters :  $\beta, \gamma, ph_0$

**Step 2** : Estimating Utility function parameters :  $\alpha_i, \bar{h}_i, \bar{x}_i$

**Step 3** : Estimating theoretic housing consumption of Social Tenants in free market conditions

**Step 4** : Comparing actual Tenant consumption with their theoretic consumption

# Housing Allowances parameters

Income	Estimated coefficients		
	Zone I	Zone II	Zone III
$y \leq y_r$	$\gamma = 1.1804$	$\gamma = 1.1686$	$\gamma = 1.1819$
	$\beta = -0.0153$	$\beta = -0.0166$	$\beta = -0.0159$
$y_r < y \leq y_s$	$\gamma = 0.0821$	$\gamma = -0.3506$	$\gamma = -0.3677$
	$ph_0 = 547.85$	$ph_0 = 775.40$	$ph_0 = 743.87$

Thank you for your attention !