

# The Social Effects of Ethnic Diversity at the Local Level: A Natural Experiment with Exogenous Residential Allocation

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# Overview

- ▷ **Research Question:** Does ethnic diversity have any impact on the social relationships and public goods outcome?
- ▷ **Identification Strategy:** Natural Experiment: Public housing allocation in France (exogenous w.r.t ethnicity) to analyze the effects of ethnic diversity at neighborhood level
- ▷ **Results:** Higher diversity leads to:
  - more vandalism (social norms: less other regarding preferences)
  - poor quality of housing (collective action)
  - but has no effect on public safety (social anomie)

## Previous Literature & Contribution

- ▷ Has looked at the relation at country or county level
- ▷ Has relied mainly on IV  
major concern: exclusion restriction  
e.g. pre-colonial patterns of settlement has no direct impact on present-day ethnic relations (Miguel, 2004)

# Background

- ▷ *Habitations a Loyer Modere (HLM)* - State planned moderate cost rental apartments
- ▷ Allocated to natives and immigrants without concern for cultural and ethnic background
- ▷ Eligible population is three times as large as the vacant dwellings
- ▷ HLM inhabitants rarely move

# Fractionalization Index

- ▷ Standard Ethno-linguistic fractionalization (ELF) index
- ▷ The probability that two randomly drawn individuals from a given population belong to different groups

$$ELF_j = \sum_{i=1}^{i=N} s_{ij}(1 - s_{ij}) = 1 - \sum_{i=1}^{i=N} s_{ij}^2$$

where  $s_{ij}$  denotes share of group  $i$  in area  $j$

# Private vs Public fractionalization

|         | 1999 Census  |                 |                | 2002 Housing Survey |                |
|---------|--------------|-----------------|----------------|---------------------|----------------|
|         | Whole France | Private Housing | HLM Population | Whole France        | HLM Population |
| Mean    | 16.65        | 14.29           | 27.68          | 16.23               | 25.33          |
| Median  | 11.82        | 10.29           | 25.18          | 11.98               | 23.37          |
| Std Dev | 15.33        | 13.36           | 18.75          | 14.2                | 17.94          |
| Minimum | 0            | 0               | 0              | 0                   | 0              |
| Maximum | 91.83        | 91.83           | 91.3           | 84.94               | 80.26          |
| N       | 6,643,287    | 5,027,235       | 1,616,052      | 28,744              | 4,465          |

# Main Specification

$$Y_{jkl} = \alpha + \beta ELF_l + \gamma X_j + \delta Z_k + \mu W_l + \epsilon_{jkl}$$

$Y_{jkl}$  Housing Outcome of Interest

$X_j$  Household Characteristics

$Z_k$  Building Characteristics

$W_l$  Socio-Economic Characteristics of the Block

# Public Housing Outcomes

|  | Mean  | std dev | Values |
|--|-------|---------|--------|
| <b>1. Degradation of the common areas due to vandalism</b> |       |         |        |
| Damaging the premises                                      | 1.637 | 0.778   | 1 - 3  |
| Graffiti   | 0.257 | 0.437   | 0 - 1  |
| Garbage on the floor                                       | 0.188 | 0.391   | 0 - 1  |
| Broken windows   | 0.136 | 0.343   | 0 - 1  |
| Broken doors   | 0.127 | 0.333   | 0 - 1  |
| Broken light bulbs   | 0.094 | 0.291   | 0 - 1  |
| Broken mailboxes   | 0.154 | 0.361   | 0 - 1  |
| Vandalism on the elevator                                  | 0.085 | 0.279   | 0 - 1  |
| Noise in daytime   | 1.595 | 0.748   | 1 - 3  |
| Noise in night time  | 1.374 | 0.627   | 1 - 3  |
| <b>2. Poor quality of housing due to low maintenance</b>   |       |         |        |
| Care of the common areas                                   | 1.593 | 0.752   | 1 - 3  |
| Condition of the outside walls                             | 2.433 | 0.962   | 1 - 5  |
| Cold in the apartment                                      | 0.175 | 0.380   | 0 - 1  |
| Cold due to bad insulation                                 | 0.065 | 0.246   | 0 - 1  |
| Cold due to breakdown in heating equipment                 | 0.045 | 0.207   | 0 - 1  |
| Cold due to poor equipment                                 | 0.059 | 0.236   | 0 - 1  |
| Quality of soundproofing                                   | 1.981 | 0.823   | 1 - 3  |
| Breakdown of the elevator                                  | 0.155 | 0.362   | 0 - 1  |
| Toilet malfunction   | 0.153 | 0.360   | 0 - 1  |
| <b>3. Public Safety</b>                                    |       |         |        |
| Robberies  | 0.095 | 0.293   | 0 - 1  |
| Aggressions  | 0.081 | 0.273   | 0 - 1  |
| Burglary (or attempt)                                      | 0.041 | 0.198   | 0 - 1  |



# Ethnic Diversity and Dissatisfaction with Housing Conditions

| Dependent Variable:     | <b>Dissatisfaction with housing condition</b> |             |
|-------------------------|---|-------------|
|                         | Coefficient                                   | (Std error) |
| <b>Ethnic Diversity</b> | 0.368**                                       | (0.129)     |

A 1 standard deviation increase in ethnic diversity generates an increase of 0.067 standard deviations in the dissatisfaction with housing conditions

# Ethnic Diversity and Vandalism

| Outcomes:               | Damaging<br>the premises | Graffiti            | Garbage<br>on the floor | Broken<br>windows   | Broken<br>doors    |
|-------------------------|--------------------------|---------------------|-------------------------|---------------------|--------------------|
| <b>Ethnic Diversity</b> | 0.630***<br>(0.127)      | 0.313***<br>(0.063) | 0.298***<br>(0.060)     | 0.200***<br>(0.053) | 0.151**<br>(0.051) |

| Outcomes:               | Broken<br>light bulbs | Broken<br>mailboxes | Vandalism on<br>the elevator | Noise in<br>daytime | Noise in<br>Nighttime |
|-------------------------|-----------------------|---------------------|------------------------------|---------------------|-----------------------|
| <b>Ethnic Diversity</b> | 0.271***<br>(0.048)   | 0.330***<br>(0.058) | 0.168***<br>(0.047)          | 0.288**<br>(0.106)  | 0.313***<br>(0.091)   |

1 sd increase in diversity leads to 0.128 sd increase in probability of observing graffiti

The effect is comparable to the effect of local unemployment

# Ethnic Diversity and Poor Housing Quality

| Outcomes:               | Care of the common areas | Condition of the outside walls | Cold in the apartment | Cold due to bad insulation | Cold due to breakdown of heating equipment |
|-------------------------|--------------------------|--------------------------------|-----------------------|----------------------------|--|
| <b>Ethnic Diversity</b> | 0.384**<br>(0.121)       | 0.260*<br>(0.145)              | 0.136**<br>(0.059)    | 0.021<br>(0.040)           | 0.007<br>(0.037)                           |

| Outcomes:               | Cold due to poor heating equipment | Quality of soundproofing | Breakdown of the elevator | Toilet malfunction |
|-------------------------|------------------------------------|--------------------------|---------------------------|--------------------|
| <b>Ethnic Diversity</b> | 0.084**<br>(0.036)                 | 0.021<br>(0.110)         | 0.106**<br>(0.051)        | 0.133**<br>(0.051) |

1 sd increase in diversity leads to 0.0524 sd increase in probability of elevator outage in the last 3 months

# Ethnic Diversity and Public Safety

| Outcomes:               | Robberies        | Aggressions       | Burglary<br>(or attempt) |
|-------------------------|------------------|-------------------|--------------------------|
| <b>Ethnic Diversity</b> | 0.043<br>(0.039) | -0.024<br>(0.038) | -0.001<br>(0.027)        |

- ▷ Principal component of all the factors together
- ▷ Objective measures (various types of housing repairs) instead of subjective measures
- ▷ Results not driven by a particular nationality
- ▷ Effect of diversity on perception of quality of public goods at city, department or state level
- ▷ Fractionalization index based on French speaking

# Exogeneity Tests

- ▷ Correlation between the hourly wage of the movers and the level of diversity of the area into which they just moved
- ▷ Correlation between nationality of individuals moving into a new area and the share of the area's population of the same origin
- ▷ Correlation between other individual characteristics (such as education) of the movers and the level of diversity of the area into which they just moved

## Discussion & Conclusion

- ▷ More vandalism reflects lack of social norms such as other regarding preferences
- ▷ Poor quality of housing reflects lack of collective action
- ▷ No effect on public safety reflects in-group policing mechanisms (Fearon & Laitin, 1996) or social anomie

