Social inequalities in access to cars and daily mobility: the French experience

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Presentation outline

- Stakes
- Background of urban transport in France
- Which inequalities in daily mobility?
- Car dependency, motorisation and access to car
- What are the financial consequences for low income households?
- Conclusion
Academic stakes

A lack in knowledge on mobility inequalities:
- The social dimension, ‘poor relation’ to sustainable mobility studies
- Various specific studies: social exclusion, deprived areas
- But few studies on inequalities relative to the whole population

Social stakes

To assure a better equity between citizens for the access to urban facilities:
- Job opportunities
- Services and shops of all nature
- Social relations & social inclusion

What measurement of social inequalities in urban daily mobility?
Global trends for urban daily mobility in France

- in the 50’s - 60’s: all for the car, decline of PT urban networks
- in the mid 70’s, the renewal of public transport:
  - payroll tax (‘versement transport’) - public subsidies
  - new investments, increase in PT use

- 1982: ‘right to transport’ (‘droit au transport’) written in the law
  Reassertion of the social role of the public transport

- Also, in the last decades, less positive change
  - Continuation of unplanned, diffuse urban sprawl
  - Growing multi-motorisation of households
  - Continuation of investment in road capacity
  - Rise in real estate prices
Background: Lyon’s urban area

✓ Lyon: a diffuse urban sprawl

1954: 930,000 inhabitants

1999: 1,650,000 inhabitants

Source: Agence d’Urbanisme de Lyon, 2005
An increasing spatial dissociation between home and work, especially for non central locations of residence / work.

*Background*

**Commuting distances in different urban areas, in 1999 census**

**% of growth of commuting distances by spatial link in the outskirts (1990-1999)**

Source: data from General Census, 1990 and 1999, taken from Mignot et al. 2004
Distances traveled decrease with density

Distances travelled per person during a weekday according to the residential density (Lyon)

Source: data from Lyon Household Travel Survey, 1995
Once access to car is assured, and to a given status (working population, housewives,...) few effects of income on mobility indexes,

e. g. among population in employment:
Intensive daily use of car as a driver, high level of motorised mobility, similar (long) average daily distances

→ no differences by income group

<table>
<thead>
<tr>
<th></th>
<th>1st income quintile (the poorest 20%)</th>
<th>5th quintile (the richest 20%)</th>
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<tbody>
<tr>
<td>% living in the centre</td>
<td>30%</td>
<td>49%</td>
</tr>
<tr>
<td>Home to work distance</td>
<td>6.4 km</td>
<td>6.6 km</td>
</tr>
<tr>
<td>Number of daily trips</td>
<td>4.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Daily distance covered</td>
<td>20 km</td>
<td>19 km</td>
</tr>
<tr>
<td>Travel time budget</td>
<td>70 mn</td>
<td>67 mn</td>
</tr>
</tbody>
</table>

Source: data from Lyon Household Travel Survey, 1995, in Paulo, 2006
Among the persons who do not access to car, to a given status: a strong ‘income effect’

e. g. among population in employment: Affluent households: non-motorisation seems to be chosen → a different situation when income is low

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<tbody>
<tr>
<td>% living in the centre</td>
<td>55%</td>
<td>84%</td>
</tr>
<tr>
<td>Home to work distance</td>
<td>4.9 km</td>
<td>3.4 km</td>
</tr>
<tr>
<td>Number of daily trips</td>
<td>2.7</td>
<td>3.8</td>
</tr>
<tr>
<td>Daily distance covered</td>
<td>10 km</td>
<td>9 km</td>
</tr>
<tr>
<td>Travel time budget</td>
<td>58 mn</td>
<td>67 mn</td>
</tr>
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Source: data from Lyon Household Travel Survey, 1995, in Paulo, 2006
Which inequalities in daily mobility?

The usual access to car (driving) has become a social norm

This growing car dependency means strong social constraints

1. For those who **do not access to car:**
   
   Less urban opportunities; more difficulties for moving in the city

2. For those who **cannot avoid motorisation:**
   
   A financial weight, a pressure on other expenses

Two problems more difficult to solve in the outskirts
Motorization keeps increasing, but still depends on household income.

Number of cars by household income (Lyon)

Source: data from Lyon Household Travel Survey, 1995, in Nicolas et al., 2001
Motorization and access to cars

Low income households own older vehicles

Age of household cars (Lyon)

Source: data from Lyon Household Travel Survey, 1995, in Paulo, 2006
The cost of mobility for the households

Higher running costs (in % of the total) for low income groups

Structure of urban mobility expenses according to the household income (Lyon)

Source: data from Lyon Household Travel Survey, 1995, in Nicolas et al., 2001
The cost of mobility for the households

✓ Owning a car, a priority investment for low income households

Focus on low income households: ‘Net income’ and travel expenditures by level of motorisation (Lyon)

Source: data from Lyon Household Travel Survey, 1995, in Nicolas et al., 2001
The cost of mobility for the households

Very different financial burden according to income

% of income allocated to the urban mobility, households ranked from the poorest to the richest (Lyon)

Source: data from Lyon Household Travel Survey, 1995, in Paulo, 2006
The cost of mobility for the households

Urban mobility when income is low and home far from city center...: a high % of budget

Private car
Public transport

Source: data from Lyon Household Travel Survey, 1995, in Nicolas et al., 2001
% of income allocated to urban mobility by household income in 4 urban areas:

- Bordeaux urban area 1998
- Lyon conurbation 1995
- Grenoble urban area 2002
- Paris region 2002

Source: data from Lyon Household Travel Survey, 1995, in Verry, forthcoming

✓ These results are not specific to Lyon’s conurbation
Conclusion: how to make effective urban mobility for all?

Different measures, depending of our appreciation of the situation

If the hypothesis is, anyway, past trends will continue…:

Urban sprawl, dissociation of urban functions, automobile dependence

- subsidized public transport is developed only in dense areas
- **a priority measure**: to facilitate access to car for low income households:
  - Unemployed: financial helps to get the driving licence
  - Loan of a car for the first months when the job requires it,
  - ‘Low cost’ vehicles,
  - Public subsidies for motorisation of low income groups…

But this model is economically and socially fragile:

**What will happen in case of increasing fuel prices?**
Conclusion, how to make effective urban mobility for all?

But if there is the will to control urban evolutions:

No miracle solution,… but a set of long term, coordinated, multi sectorial measures:

- **Urban planning:**
  urban renewal with social housing policy,
  diversity in the types of dwellings,
  diversity of functions, proximity opportunities
  urbanization of the suburbs

- **Transport:**
  various modal alternatives to the car
  reduction in the private advantages of the car
Related references of the Transport Economics Laboratory

Sorry, most are in French…


Thank you for your attention

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