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# Comparison of Respondent's profile of Computer-Aided Web Interviewing and Computer-assisted personal interviewing: The case of Ile-de-France mobility Surveys

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**12<sup>th</sup> ISCTSC in Portugal (20-25 March 2022)**  
**#146 - Comparison of Respondent's profile of**  
**Computer-Aided Web Interviewing and Computer-assisted personal interviewing:**  
**The case of Ile-de-France mobility Surveys**  
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### Introduction

For the current Global Travel Survey for the Paris region we have a very rich sampling database in order to draw the sample.

Our sampling database is from French national Institute of statistic and made with different administrative data such as: tax data (**with demographic information on individuals; household structure and household incomes**) and additional contextual data to enrich the tax information with variables to better describe the addresses where people live.

### Experimental description

We took this opportunity to test the administration of this survey by two media first a **Computer-assisted personal interviewing (CAPI)** and second a **Computer-Aided Web Interviewing (CAWI)** in order to study the effect of both media on the **response mechanism**.

	CAPI	CATI
Response Rate	7.3%	7.0%

For both media we compute a logit model to model the response mechanism.

## Methodologies and results

### Nonresponse mechanism

Effect	DL	CAPI		CAWI	
		Wald Chi-Square	Pr > ChiSq	Wald Chi-Square	Pr > ChiSq
Annual household Income	4	174.2	<.0001	49.0	<.0001
Age band of the household head	4	67.9	<.0001	25.2	<.0001
Occupancy status of the house	1	63.6	<.0001	16.2	<.0001
Household type	5	27.5	<.0001	39.6	<.0001
Department of residence	7	23.2	0.0016	27.7	0.0002
Number of person in the household	4	21.0	0.0003		
Type of housing	1	16.0	<.0001		
Housing surface	4	12.4	0.0146		
Low rental housing	1	11.3	0.0008		
Priority city district (QVP)	1	7.0	0.0082		

### A two stages weighting strategies

CAPI Adjustment	CAWI Adjustment
Calibration on Fideli	Calibration on Fideli
<ul style="list-style-type: none"> <li>Annual household Income (5 margins)</li> <li>Age band of the household head (5 margins)</li> <li>Occupancy status of the house (2 margins)</li> <li>Household type (6 margins)</li> <li>Department of residence (8 margins)</li> <li>Number of person in the household (4 margins)</li> <li>Type of housing (2 margins)</li> <li>Housing superficie (5 margins)</li> <li>Low rental housing (2 margins)</li> <li>Priority city district (QVP) (2 margins)</li> </ul>	<ul style="list-style-type: none"> <li>Annual household Income (5 margins)</li> <li>Age band of the household head (5 margins)</li> <li>Occupancy status of the house (2 margins)</li> <li>Household type (6 margins)</li> <li>Department of residence (8 margins)</li> <li>Day of the week (5 margins)</li> </ul>
Calibration on Census	Calibration on Census
<ul style="list-style-type: none"> <li>Department of residence (8 margins)</li> <li>Household size (4 margins)</li> <li>Motorization of the household (3 margins)</li> <li>Gender*age band (16 margins)</li> <li>Day of the week (5 margins)</li> </ul>	<ul style="list-style-type: none"> <li>Department of residence (8 margins)</li> <li>Household size (4 margins)</li> <li>Motorization of the household (3 margins)</li> <li>Gender*age band (16 margins)</li> <li>Day of the week (5 margins)</li> </ul>

## Estimation results

	CAPI	CAWI
Immobility rate	7.8%	11,4%
Daily number of trips	4.16	3.63
Daily number of round trips	1.54	1.34
Daily travel time (mn)	104	96
Daily travelled distance (km)	26.3	20.3

CAWI respondents (including after adjustment):

- ☒ Say they are more immobile (+46%)
- ☒ Underestimate :
  - the number of trips (-13%),
  - the daily travel time (-8%)
  - the distance traveled daily (-23%)

The characteristics of people with the largest CAPI-CATI discrepancies are as follows:	
<b>Immobility</b>	<ul style="list-style-type: none"> <li>- Male</li> <li>- 15-24 years old and 35-54 years old</li> <li>- Tuesday respondents</li> <li>- Living in Yvelines</li> <li>- With temporary impairment</li> <li>- Living in a household with one person or 3 persons HH or <b>4 persons HH</b></li> </ul>
<b>Daily number of trips</b>	<ul style="list-style-type: none"> <li>- 55-64 years old</li> <li>- Tuesday respondents</li> <li>- Living in Val de Marne and Essonne</li> <li>- With temporary impairment</li> </ul>
<b>Daily travel time</b>	<ul style="list-style-type: none"> <li>- 15-24 years old</li> <li>- Saturday respondents</li> <li>- Living in Seine-Saint-Denis</li> <li>- With temporary impairment</li> </ul>
<b>Daily distance traveled</b>	<ul style="list-style-type: none"> <li>- 05-14 years old</li> <li>- Wednesday respondents</li> <li>- Living in Hauts-de-Seine, Seine-Saint-Denis and Val-de-Marne</li> <li>- With temporary and permanent impairment</li> <li>- Living in a household with one person</li> </ul>

## Conclusions

Even adjusting the samples with response mechanism and variables of interest, we find large (and significant) discrepancies. The cause may depend on two factors:

- ☒ A non-ignorable non-response => Find other variables (that are link with the interest variables) to weight the surveys
- ☒ Measurement errors => Improve the design in order to interest people to give full answers