

Beldam+:

An exercise in the integration of data (BELDAM-OVG)

Comparisons with OVG

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Overview

- ❑ The Beldam+ project
 - ❑ OVG
 - ❑ Beldam+
 - ❑ Some remarks
- ❑ Selection of main indicators
 - ❑ Use of transport modes
 - ❑ Main transport mode to work/school
 - ❑ Analysis of the trips
 - ❑ Analysis of the distance travelled

OVG

- ❑ “Travel behavior research Flanders”
- ❑ Performed since 1994 by the Flemish government
- ❑ To get insights into mobility characteristics and the travel behavior of Flemish residents (modal choice, trip purpose, vehicle ownership...)
- ❑ During a period of five years, approximately 16800 persons are interviewed
- ❑ 8800 in year 1 (base study-2008), followed by 1600 in years 2009,2010,2011,2012,2013
- ❑ Stratified random sample from the population of the Flemish Region
- ❑ Three parts: household questionnaire, individual questionnaire, travel diaries

Beldam+

- ❑ Integration of two similar surveys (Beldam – OVG)
- ❑ Integration only done with OVG 4.2
 - September 2009 – September 2010
 - Closest to Beldam: December 2009 – December 2010
- ❑ OVG only for residents of the Flemish region
 - ❑ Significant increase in the number of observations at Flemish level (and to a lesser extent at national level)
 - ❑ The Walloon results and the results for Brussels are not affected
- ❑ Effect of data integration on various mobility characteristics and comparisons with OVG (next slides)

Some remarks

- ❑ The benefits:
 - ❑ To confirm/validate Beldam results for Flanders
 - ❑ Integrated dataset is larger (higher number of observations)
 - ❑ In theory: the higher the number of observations, the smaller the standard deviation and thus more reliable results for the variables which are joined

Some remarks

- ❑ The benefits (2):
 - ❑ BELDAM contains some specific questions that are not asked in the OVG (e.g. secondary activities, accessibility, long distance travel, etc.). People who know the OVG well, can still learn a lot from BELDAM
 - ❑ It is a nice effort in terms of data fusion and it may be an incentive/example for how future mobility studies in Belgium can be better aligned or integrated

❑ Important to note (1):

❑ Several variables cannot be integrated, since no information at all available in OVG or in Beldam

❑ E.g. Car availability when making a trip (only OVG)

❑ E.g. Discounts or reduced fares for public transport use (only Beldam)

❑ Some variables can be integrated but may have (slightly) different meaning

❑ E.g. “Mileage per year”

❑ OVG: mileage last 12 months

❑ Beldam: average mileage / year

❑ E.g.. “Total monthly net income”

❑ OVG: inclusive child allowance

❑ Beldam: exclusive child allowance

Some remarks

- ❑ Important to note (2)
 - ❑ Less detail for some variables
 - ❑ Aggregation of categories to make them consistent with OVG
 - ❑ E.g. “Trips made with tram/metro”
 - ❑ OVG: considered as 1 category
 - ❑ Beldam: considered as 2 separated categories
 - ❑ Summation of trips made by “tram” and made by “metro” and store in the aggregated category “Tram and metro”

Some methodological remarks

- ❑ Methodological disclaimer (1)
 - ❑ Different methodology: e.g.
 - ❑ Filling in the questionnaires
 - ❑ Beldam: all persons in a household
 - ❑ OVG: only 1 (random) person in a household
 - ❑ Approach to the respondent
 - ❑ OVG: always face to face interviews
 - ❑ Beldam: only face to face interviews on a random sample
 - ❑ Ideally methodology should be completely the same

Some methodological remarks

- ❑ Methodological disclaimer (2)
 - ❑ A different methodology poses some risks:
 - ❑ The number of average trips can be higher (in face-to-face than paper-pencil) since busy people who do a lot of trips are now persuaded to participate (interviewer insists on it)
 - ❑ The number of average trips can be lower (in face-to-face than paper-pencil) since people who are now persuaded to participate even if they do not often travel (e.g. older persons; persons with impairments)
 - ❑ Differences can be due to behavior, or to methodology, and it is impossible to distinguish which proportion is due to methodology, and which is due to real behavior

Results - Use of vehicles

Table 1: Use of vehicles (car drivers)

| | Beldam | | Beldam+ | |
|---------|----------|----------|----------|----------|
| | Flemings | Belgians | Flemings | Belgians |
| Daily | 40.1% | 39.1% | 40.9% | 39.5% |
| Weekly | 20.4% | 17.6% | 19.7% | 17.2% |
| Monthly | 4.6% | 4.3% | 4.4% | 4.2% |
| Yearly | 1.6% | 1.7% | 1.8% | 1.8% |
| Never | 33.1% | 37.2% | 33.3% | 37.4% |

- ❑ Comparisons with OVG are striking:
 - ❑ About 40% is a daily car driver
 - ❑ 3 travelers on 10 never drive a car

Results - Use of vehicles

Table 2: Use of vehicles (bike)

| | Beldam | | Beldam+ | |
|---------|----------|----------|----------|----------|
| | Flemings | Belgians | Flemings | Belgians |
| Daily | 19.9% | 13.3% | 19.3% | 12.9% |
| Weekly | 23.8% | 17.0% | 23.5% | 16.8% |
| Monthly | 16.4% | 14.2% | 17.3% | 14.7% |
| Yearly | 15.7% | 17.3% | 14.6% | 16.7% |
| Never | 24.2% | 38.2% | 25.2% | 38.9% |

- ❑ Again consistency between Beldam and OVG
 - ❑ A quarter does never use a bike
 - ❑ Almost 2 on 10 uses a bike on a daily base

Results - Main transport mode to work/school

Table 3: Main transport mode to work/school address

| | Beldam | | Beldam+ | |
|-------------|----------|----------|----------|----------|
| | Flemings | Belgians | Flemings | Belgians |
| Car | 55.9% | 57.3% | 55.8% | 57.2% |
| Walk | 6.6% | 9.1% | 7.0% | 9.4% |
| Moped/motor | 1.5% | 1.4% | 1.3% | 1.3% |
| Bike | 17.6% | 11.1% | 17.7% | 11.1% |
| Train | 7.8% | 7.8% | 7.4% | 7.6% |
| BTM | 10.2% | 12.8% | 10.2% | 12.9% |
| Other | 0.4% | 0.4% | 0.6% | 0.5% |

- Same conclusions in OVG:
 - The majority uses the car
 - Limited use of PT: about 1 on 6 uses PT

Results - Analysis of the trips

Table 4: Average number of trips

| | Beldam | | Beldam+ | |
|-------------------|----------|----------|----------|----------|
| | Flemings | Belgians | Flemings | Belgians |
| Number per person | 2.51 | 2.38 | 2.48 | 2.36 |

- ❑ Note: numbers based on total number of respondents (incl. the non-travelers)
- ❑ Influenced by various extern (short term) factors
 - ❑ Temperatures in winter, fuel price...
- ❑ Slightly higher average in OVG
 - ❑ 2.88 trips a day per person

Table 5: Distribution of the trips by main transport mode

| | Beldam | | Beldam+ | |
|-------------|----------|----------|----------|----------|
| | Flemings | Belgians | Flemings | Belgians |
| Car | 65.4% | 64.8% | 66.3% | 65.4% |
| Walk | 13.4% | 16.6% | 12.4% | 16.0% |
| Moped/motor | 0.9% | 0.8% | 0.9% | 0.8% |
| Bike | 12.7% | 8.4% | 12.6% | 8.3% |
| Train | 2.6% | 2.6% | 2.7% | 2.7% |
| BTM | 4.1% | 6% | 3.9% | 5.9% |
| Other | 1.1% | 1.0% | 1.2% | 1.0% |

- Similar results in OVG
 - E.g. car use 66.8%
 - E.g. bike 13.2%

Results - Analysis of the trips

Table 6: Distribution of the trips by distance

| | Beldam | | Beldam+ | |
|----------|----------|----------|----------|----------|
| | Flemings | Belgians | Flemings | Belgians |
| < 0.5 km | 6.7% | 8.0% | 6.9% | 8.0% |
| 0.5-3 km | 28.8% | 27.5% | 28.3% | 27.3% |
| 3-5 km | 13.8% | 13.5% | 14.1% | 13.6% |
| 5-10 km | 18.4% | 18.5% | 18.6% | 18.8% |
| 10-25 km | 20.0% | 20.3% | 19.3% | 19.9% |
| > 25 km | 12.3% | 12.2% | 12.8% | 12.5% |

- Consistent with results in OVG
 - 1 on 2 trips are shorter than 5km
 - 3 on 10 trips are longer than 10km

Results - Analysis of the distances traveled

Table 7: Average distance of a trip by gender (km)

| | Beldam | | Beldam+ | |
|--------|----------|----------|----------|----------|
| | Flemings | Belgians | Flemings | Belgians |
| Male | 13.83 | 13.93 | 15.01 | 14.66 |
| Female | 10.65 | 10.58 | 10.73 | 10.62 |

- Women more active on local level
- No comparisons with official OVG-results (also next slides)
 - OVG: average distance per person per day

Results - Analysis of the distances traveled

Table 8: Average distance of a trip by age (km)

| | Beldam | | Beldam+ | |
|-------------|----------|----------|----------|----------|
| | Flemings | Belgians | Flemings | Belgians |
| 6-14 years | 7.15 | 7.02 | 7.04 | 6.95 |
| 15-24 years | 12.53 | 12.70 | 13.33 | 13.20 |
| 25-34 years | 15.36 | 15.14 | 19.08 | 17.19 |
| 35-44 years | 13.70 | 13.68 | 13.12 | 13.31 |
| 45-54 years | 13.28 | 13.21 | 13.76 | 13.49 |
| 55-64 years | 12.10 | 12.07 | 12.71 | 12.44 |
| 65-74 years | 10.37 | 9.99 | 10.11 | 9.82 |
| 75+ | 7.05 | 7.37 | 7.35 | 7.56 |

Older persons and children more active on local level compared to middle age categories

Results - Analysis of the distances traveled

Table 9: Average distance of a trip by trip purpose (km)

| | Beldam | | Beldam+ | |
|-------------------|----------|----------|----------|----------|
| | Flemings | Belgians | Flemings | Belgians |
| Bring/get | 8.83 | 9.14 | 8.86 | 9.16 |
| Work | 19.28 | 19.67 | 19.94 | 20.07 |
| Shop | 6.23 | 6.62 | 6.11 | 6.56 |
| Services (doctor) | 6.59 | 6.68 | 6.30 | 6.51 |
| Recreation | 13.77 | 13.96 | 14.23 | 14.27 |

- Work trips can be labeled as “long distance trips”
- But also high distance for recreation
 - Clustered supply of sport facilities

Thanks for your attention

