

Representativeness of the LISS-panel 2008, 2009, 2010

date 22 April 2010
author(s) Klaas de Vos

version 1.0
classification sensitive
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1 Introduction

This note presents a number of tables and figures comparing the composition of the LISS-panel at three points in time with the Dutch population. It aims to show to what extent attempts to improve the representativeness by selective recruitment have succeeded. The tables show the panel as of April 2008, when the first recruitment phase was completed, one year later at April 2009, and January 2010, at the end of the new recruitment phase.

2 Results

2.1 Total population vs. total panel / all household members

Table 1. Gender and age groups in LISS, compared with the national statistics

| Age | Panel (all hh. members) 2008 | | | Panel (all hh. members) 2009 | | | Panel (all hh. members) 2010 | | | Stats Neth. 2008 (private hh.) | | |
|-------|------------------------------|--------|---------|------------------------------|--------|---------|------------------------------|--------|---------|--------------------------------|--------|---------|
| | Male % | Fem. % | Total % | Male % | Fem. % | Total % | Male % | Fem. % | Total % | Male % | Fem. % | Total % |
| <20 | 13.7 | 14.0 | 27.7 | 13.4 | 13.6 | 26.9 | 12.6 | 12.5 | 25.1 | 12.4 | 11.8 | 24.2 |
| 20-39 | 12.1 | 13.1 | 25.1 | 12.0 | 13.0 | 25.0 | 12.1 | 13.1 | 25.2 | 13.1 | 13.0 | 26.2 |
| 40-64 | 19.1 | 19.5 | 38.6 | 19.2 | 19.5 | 38.7 | 18.9 | 19.5 | 38.4 | 17.8 | 17.6 | 35.5 |
| 65-79 | 4.0 | 3.7 | 7.8 | 4.3 | 4.0 | 8.3 | 5.1 | 4.7 | 9.8 | 5.1 | 5.8 | 10.9 |
| 80+ | 0.5 | 0.3 | 0.8 | 0.6 | 0.4 | 1.0 | 0.7 | 0.8 | 1.5 | 1.1 | 2.1 | 3.2 |
| Total | 49.4 | 50.6 | 100 | 49.5 | 50.5 | 100 | 49.4 | 50.6 | 100 | 49.6 | 50.4 | 100 |

Table 1 shows that by 2010, the overrepresentation of young persons and the underrepresentation of elderly in the households participating in the LISS panel has clearly decreased. On the other hand, the population shares in the age groups 20-39 and 40-65 hardly changed, and 40-65 year olds remain overrepresented in comparison to the total population.

Table 2. Number of household members in LISS, compared with the national statistics

| # household members | Panel (households) 2008 % | Panel (households) 2009 % | Panel (households) 2010 | Stats. Neth. 2008 (private hh.) % |
|---------------------|---------------------------|---------------------------|-------------------------|-----------------------------------|
| 1 | 23.7 | 24.2 | 27.9 | 35.5 |
| 2 | 35.9 | 35.9 | 36.0 | 32.7 |
| 3 | 13.6 | 12.6 | 11.5 | 12.4 |
| 4 | 18.8 | 18.9 | 16.9 | 13.4 |
| >=5 | 8.0 | 8.4 | 7.6 | 5.9 |

Table 2 confirms the results of the previous table by showing that the share of single person households has increased whilst the share of households with three or more persons has decreased. In fact, from being overrepresented in 2008, three person households are now somewhat underrepresented.



Table 3. Household type distribution in LISS, compared with the national statistics

| | Panel (households) 2008 | Panel (households) 2009 | Panel (households) 2010 | Statistics Netherlands 2008 (private hh.) |
|-------------------------|-------------------------------|-------------------------------|-------------------------------|--|
| Household type | % | % | % | % |
| Single persons < 65 | 19.1 | 19.3 | 21.3 | 24.6 |
| Single persons 65+ | 4.6 | 5.0 | 6.6 | 10.9 |
| Couples w.o. ch. < 65 | 23.2 | 22.6 | 21.9 | 18.9 |
| Couples w.o. ch. 65+ | 9.2 | 9.8 | 10.8 | 10.1 |
| Couples with 1 child | 11.2 | 10.1 | 9.0 | 10.2 |
| Couples with 2 children | 17.8 | 17.7 | 15.8 | 12.9 |
| Couples, 3+ children | 7.4 | 7.5 | 6.8 | 5.3 |
| Single parents | 5.1 | 5.1 | 4.8 | 6.4 |
| Other | 2.4 | 3.0 | 3.0 | 0.7 |

Table 3 compares the distributions by household type. It shows that the share of single elderly as well as single persons younger than 65 have increased. As a result of the increase in the share of elderly couples, they go from being underrepresented to overrepresented. For couples with one child, we see developments in the opposite direction.

Table 4. Marital status and age groups in LISS, compared with national statistics

| Age | Married % | Divorced % | Widow(er) % | Never married % | Total % |
|--|--------------|---------------|----------------|-----------------------|------------|
| Panel 2008 – all hh. members | | | | | |
| <20 | 0.0 | 0.0 | 0.0 | 27.7 | 27.7 |
| 20-39 | 9.9 | 0.9 | 0.0 | 14.3 | 25.2 |
| 40-64 | 29.2 | 4.3 | 0.8 | 4.2 | 38.5 |
| 65-79 | 6.1 | 0.5 | 0.9 | 0.2 | 7.8 |
| 80+ | 0.5 | 0.0 | 0.3 | 0.0 | 0.8 |
| Total | 45.7 | 5.8 | 2.0 | 46.5 | 100.0 |
| Panel 2009 – all hh. members | | | | | |
| <20 | 0.0 | 0.0 | 0.0 | 26.9 | 26.9 |
| 20-39 | 9.1 | 0.9 | 0.0 | 15.0 | 25.0 |
| 40-64 | 29.1 | 4.4 | 0.8 | 4.4 | 38.7 |
| 65-79 | 6.5 | 0.6 | 1.0 | 0.2 | 8.3 |
| 80+ | 0.6 | 0.0 | 0.3 | 0.1 | 1.0 |
| Total | 45.3 | 6.0 | 2.1 | 46.6 | 100.0 |
| Panel 2010 – all hh. members | | | | | |
| <20 | 0.0 | 0.0 | 0.0 | 25.1 | 25.1 |
| 20-39 | 8.9 | 0.9 | 0.0 | 15.4 | 25.2 |
| 40-64 | 27.7 | 4.7 | 0.9 | 5.0 | 38.4 |
| 65-79 | 7.4 | 0.7 | 1.3 | 0.3 | 9.8 |
| 80+ | 0.8 | 0.0 | 0.6 | 0.1 | 1.5 |
| Total | 44.8 | 6.4 | 2.9 | 45.9 | 100.0 |
| Statistics Netherlands 2008 (population) | | | | | |



| | | | | | |
|-------|------|-----|-----|------|-------|
| <20 | 0.0 | 0.0 | 0.0 | 24.0 | 24.0 |
| 20-39 | 8.8 | 0.9 | 0.0 | 16.3 | 26.0 |
| 40-64 | 24.8 | 4.4 | 0.9 | 5.2 | 35.3 |
| 65-79 | 7.3 | 0.9 | 2.2 | 0.6 | 11.0 |
| 80+ | 1.2 | 0.2 | 2.1 | 0.2 | 3.8 |
| Total | 42.0 | 6.3 | 5.3 | 46.3 | 100.0 |

From Table 4 we can infer that even though the total percentage of persons in the age group 40-64 remains too high (as we saw in Table 1) we still see developments in the right direction as the percentage of married persons in this age group decreased whilst the percentage of single persons increased.

Table 5. Level of urbanization in LISS, compared with the national statistics

| | Panel 2008 (all hh. members) | Panel 2009 (all hh. members) | Panel 2010 (all hh. members) | Statistics Netherlands 2008 (population) |
|--|---------------------------------------|---------------------------------------|---------------------------------------|---|
| Level of urbanization (number of addresses per km2) | % | % | % | % |
| >=2,500 | 12.9 | 12.7 | 13.8 | 19.4 |
| 1,500-2,500 | 25.7 | 25.5 | 26.2 | 23.1 |
| 1,000-1,500 | 22.3 | 22.5 | 22.3 | 18.3 |
| 500-1,000 | 23.0 | 23.1 | 22.2 | 19.4 |
| <500 | 16.2 | 16.2 | 15.5 | 19.8 |
| Total | 100.0 | 100.0 | 100.0 | 100 |

Table 5 shows that the changes with respect to the population differentiated according to level of urbanization have been marginal. In fact, some of the changes are in the wrong direction. The degree of overrepresentation of persons living in areas with 500-1000 addresses per km2 has decreased somewhat, as has the degree of underrepresentation of highly urbanized areas. On the other hand, the degree of overrepresentation of areas with 1500-2500 addresses per km2 and the degree of underrepresentation of the least urbanized areas show a small increase.

Table 6. Homeownership in LISS, compared with the national statistics (households)

| | LISS, 2008 | LISS, 2009 | LISS, 2010 | Stat. Neth., 2009 |
|----------------------|---------------|---------------|---------------|-------------------------|
| Owned accommodation | 70.9 | 70.6 | 68.6 | 58.9 |
| Rented accommodation | 28.5 | 28.5 | 30.5 | 41.1 |
| Free accommodation | .6 | .8 | .9 | |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Table 6 shows that homeowners remain overrepresented in LISS. The degree of overrepresentation has decreased slightly.

Table 7. Homeowners(%) by household size in LISS, compared with national statistics

| | LISS, 2008 | LISS, 2009 | LISS, 2010 | Stat. Neth., 2009 |
|--------------|---------------|---------------|---------------|-------------------------|
| 1-person hh. | 46.6 | 46.1 | 46.7 | 37.1 |



| | | | | |
|---------------|------|------|------|------|
| 2-person hh. | 73.9 | 73.4 | 72.4 | 64.3 |
| 3-person hh. | 74.2 | 72.9 | 72.4 | 68.6 |
| 4-person hh. | 86.8 | 87.9 | 86.3 | 81.0 |
| 5+ person hh. | 86.7 | 85.7 | 82.3 | 77.2 |
| Total | 70.9 | 70.5 | 68.3 | 58.9 |

From Table 7 it can be inferred that homeowners are overrepresented in all household size groups. The degree of overrepresentation of homeowners has decreased among two- and more person households.

2.2 Population 16+ vs panel members

Figure 1. Age distribution of panel members compared to national statistics (men)

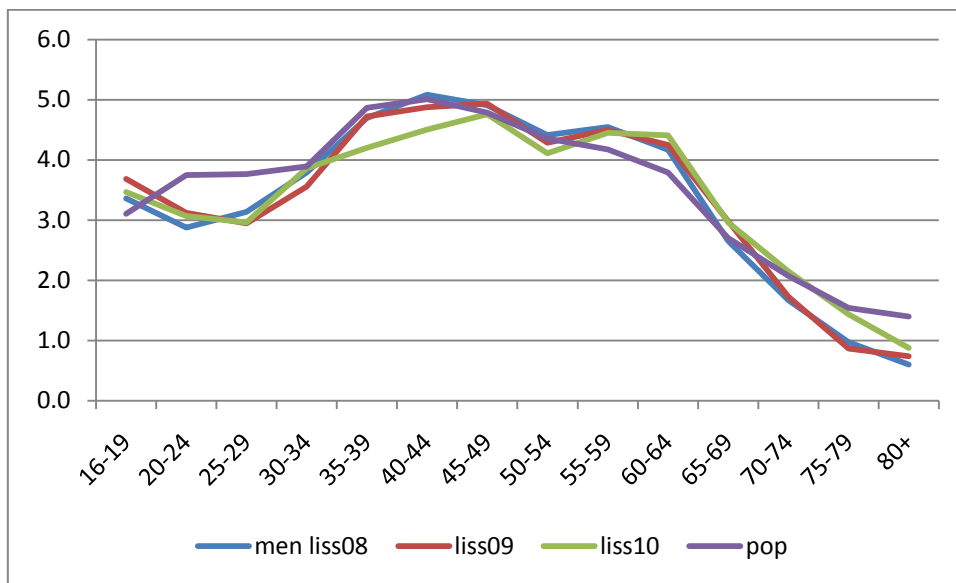
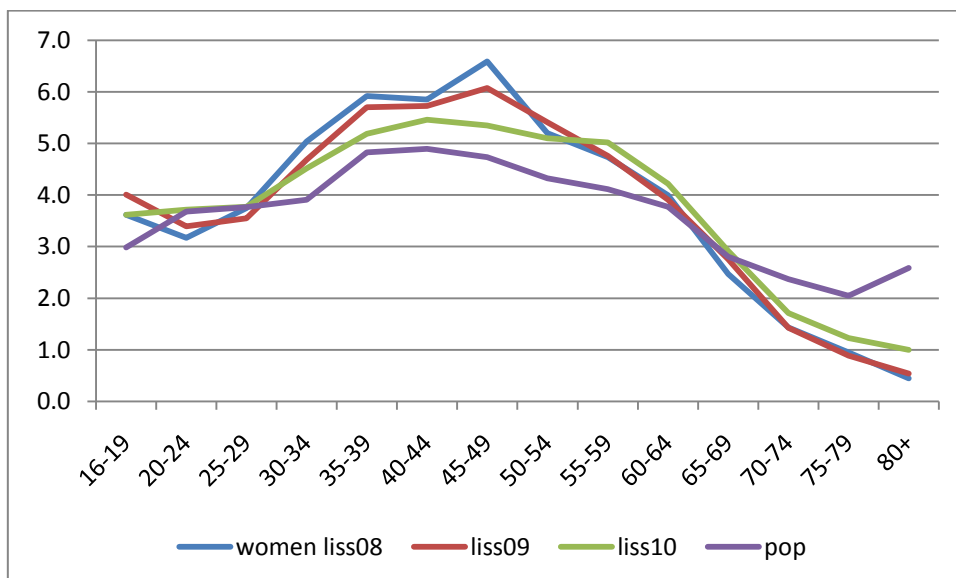


Figure 2. Age distribution of panel members compared to national statistics (women)





From Figure 1 and Figure 2 we conclude that the age distribution of female panel members differs more from the actual population than that of male panel members (persons aged 16+ in panel households who have agreed to respond to questionnaires). Moreover, the difference between age distribution of the actual population and the age distribution of female panel members has decreased substantially between 2008 and 2010. For males, where the difference was smaller to begin with, we see no clear improvement.

Table 8. Ethnicity in LISS, compared with the national statistics

| Origin, age >= 16 | Autochthonous | 1st gen. immigrant | 2nd gen. immigrant | Total |
|---|---------------|--------------------|--------------------|-------|
| | % | % | % | % |
| LISS, 2008 | | | | |
| Autochthonous | 87.7 | 0.0 | 0.0 | 87.7 |
| N-Western immigrant | 0.0 | 3.3 | 1.2 | 4.5 |
| Western immigrant | 0.0 | 3.0 | 4.8 | 7.8 |
| Total | 87.7 | 6.3 | 6.0 | 100.0 |
| LISS, 2009 | | | | |
| Autochthonous | 87.4 | 0.0 | 0.0 | 87.4 |
| N-Western immigrant | 0.0 | 3.4 | 1.3 | 4.8 |
| Western immigrant | 0.0 | 2.9 | 4.9 | 7.8 |
| Total | 87.4 | 6.3 | 6.2 | 100.0 |
| LISS, 2010 | | | | |
| Autochthonous | 85.6 | 0.0 | 0.0 | 85.6 |
| N-Western immigrant | 0.0 | 4.3 | 1.6 | 5.9 |
| Western immigrant | 0.0 | 3.7 | 4.8 | 8.5 |
| Total | 85.6 | 8.0 | 6.4 | 100.0 |
| Statistics Netherlands 2008 (population) | | | | |
| Autochthonous | 81.1 | 0.0 | 0.0 | 81.1 |
| N-western immigrant | 0.0 | 7.3 | 2.2 | 9.5 |
| Western immigrant | 0.0 | 4.3 | 5.1 | 9.4 |
| Total | 81.1 | 11.5 | 7.4 | 100.0 |

Table 8 shows that there has been an increase in the percentages of panel members with a foreign background. However, the gap between the percentages of immigrants in the total population and that in the panel has not yet been closed. It should be noted that this will at least partly be due to the fact that the panel does not include persons with insufficient language skills in Dutch.

Table 9. Ethnicity and gender in LISS, compared with the national statistics

| Origin, age >= 16 | Panel 2008 | | Panel 2009 | | Panel 2010 | | Stat. Neth. 2008 (population) | |
|---------------------|------------|--------|------------|--------|------------|--------|-------------------------------|--------|
| | male | female | male | female | male | female | male | female |
| | % | % | % | % | % | % | % | % |
| Autochthonous | 40.9 | 46.8 | 41.1 | 46.4 | 40.6 | 45.0 | 39.8 | 41.3 |
| N-western immigrant | 1.9 | 2.6 | 2.0 | 2.7 | 2.5 | 3.4 | 4.8 | 4.7 |
| Western immigrant | 3.6 | 4.2 | 3.5 | 4.3 | 3.7 | 4.7 | 4.4 | 5.0 |
| Total | 46.4 | 53.6 | 46.6 | 53.4 | 46.8 | 53.2 | 49.0 | 51.0 |



From Table 9 the conclusion emerges that especially male non-Western immigrants are underrepresented. Moreover, the degree of underrepresentation has decreased less than that of female non-Western immigrants.

Table 10. Ethnicity in LISS, compared with the national statistics

| Origin, age >=16 | Panel 2008 % | Panel 2009 % | Panel 2010 % | Stat. Neth. 2008 (pop.) % |
|----------------------|--------------------|--------------------|--------------------|---------------------------------------|
| Dutch | 87.7 | 87.4 | 85.6 | 81.1 |
| Turkish | 0.9 | 1.0 | 1.2 | 2.0 |
| Moroccan | 0.6 | 0.6 | 0.8 | 1.7 |
| Netherlands Antilles | 0.8 | 0.8 | 0.9 | 0.7 |
| Surinam | 0.8 | 0.9 | 1.2 | 2.0 |
| Indonesia | 2.5 | 2.5 | 2.6 | 2.8 |
| Other non-western | 1.4 | 1.5 | 1.8 | 3.1 |
| Other western | 5.3 | 5.3 | 5.8 | 6.6 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 |

Table 10 shows that the degree of underrepresentation is highest for persons with a Moroccan ethnic background. Although the additional recruitment succeeded in increasing the number of Moroccans, they remain the most underrepresented. As mentioned earlier, this may at least partly be related to insufficient command of the Dutch language.