Re-weighting and historical revision of Survey of Household Spending public use microdata files

This 1997 SHS PUMDF uses new survey weights which take into account new population projections from the 2001 Census. In order to make estimates comparable over time, the weights for all SHS PUMDFs have been revised using the new projections. The weights and new calibration strategy were implemented for SHS for the years 1997 and onward resulting in revised estimates of household spending for each year. To ensure comparability, users of SHS data should take care that comparisons are made between years that use the revised weights. See the Excel file "weights-reweighting-1997" for a table showing the principal statistics of the revised weights.

The estimation of population characteristics from a sample survey is based on the idea that each sampled household represents a certain number of other households in addition to itself. These numbers are called the survey weights of the sample. To improve the representativity of the sample, the weights are adjusted so that the estimates from the sample are in line with population totals, or benchmarks, from other independent sources of information that are considered reliable. This is called weight calibration.

SHS uses two sources for calibration. The first source is the Census of Population which provides demographic benchmarks. From 1997 to 2003, SHS used benchmarks derived from the 1996 Census. Since the Census is conducted once every five years, Statistics Canada projects the Census results for later years (up to the present), and then revises those estimates when the next Census data become available. The projections use a variety of secondary information, including administrative data on births, deaths and migration. The second source used for adjusting the survey weights for SHS are T4 data from Canada Revenue Agency, which ensures that the estimated distribution of earners in the survey matches the one in the Canadian population.

It was decided to take advantage of this historical revision to also introduce an improved calibration strategy for the SHS weights. Improvements to the calibration strategy were deemed necessary to put emphasis on SHS needs (such as the age groups used for calibration) and to take into account the quality of the benchmarks. It was also felt that there were too many benchmarks leading to too many constraints on the weights, and that this produced undesirable results, such as negative weights, which were not acceptable.

The changes made were as follows:
- Age-sex
  - At the provincial level, controls for sex have been eliminated. There are 8 age groups (0-6, 7-17, 18-24, 25-34, 35-44, 45-54, 55-64, 65+) instead of the 18 age-sex groups used previously.
  - No change at the CMA level: 2 age groups (0-17, 18+)

- Controls for the type of household (lone parent and couples with children) were removed.

The following calibrations were unchanged:
- No change to the controls for size of household (1 person, 2 persons, 3+)

- No change to the T4 adjustments to the weights of the population for income from wages and salaries (0-25th percentile, 25th-50th, 50th-65th, 65th-75th, 75th-95th, 95th-100th)

Due to their smaller population, only two age groups are used for the three northern territories: number of persons under 18 and number of persons 18 and older. The weights are also calibrated to the totals for one-person households, two person households, and households with three or more persons. Before the historical reweighting the calibration strategy varied slightly between the territories and between survey years. The northern calibration is now consistent across all three territories and over time.