

4. Validity of survey results

We would like mention three principal causes for possible numerical differences:

- (1) We work with estimates of means of indicators under observation using the sample whose size is about 1% of the population (3 668 360 permanently tenanted dwellings). Austrian Statistical Office (In.: Energieverbrauch wire Haushalte im Jahre 1996/97; Ergebnisse des Mikrocensus Juni 1997, ISBN 3-7046-1329-9) estimates error of the estimation for 1% microcensus in an amount of +/- 20%.
- (2) Data obtained from another information source/sources need not to be comparable in terms of methodology.
- (3) Data under comparison do not refer to the same year.

Comparison of average values of living/habitable area with data from the Population and Housing Census 2001:

- (1): Average value of the habitable area (dwelling living area) from the sample survey can, with probability of 95%, lie in interval /63.4; 95.2/ m². Ascertained value amounts 79.3 m², value from Population and Housing Census 2001 (Statistical Yearbook of the CR 2002, CzSO 2002) amounts 76.3 m².
- (2): In the Population and Housing Census 2001 there was surveyed total dwelling floor area (sum of living rooms area, kitchen and other dwelling areas), in the sample survey there was dwelling floor area in total defined in the same way.
- (3): Time shift of the three years could not, with regard to housing stock size and its yearly changes (new housing construction minus permanently excluded dwellings), significantly influence average figure of total dwelling floor area ascertained in the Population and Housing Census 2001.

Conclusion: The average value of the habitable area obtained from the sample survey is in good agreement with the value obtained from the Population and Housing Census 2001. Validity of this parameter is sufficiently high and the same applies to the other average values of the parameters presented in tables 3.1.1 and 3.1.2.

Comparison of average value of dwellings energy consumption with energy balance data:

- (1) Mean value of energy consumption relating to one dwelling, calculated from the sample data, amounts 78.2 GJ/dwelling. According to "Energy balances of the Czech Republic in 2000, 2001 and 2002", CzSO February 2004, the specific energy consumption of households in last years was ranging within the limits 61.3 - 68.1 GJ/dwelling. Values calculated from energy balances lay in interval 78.2 +/- 15.6 GJ/dwelling. The above-mentioned data are not quite comparable because they refer to different years (with different number of heating degree days in heating season).
- (2) Values of total energy consumption, saturated by electricity and solid fuels combination, are extremely high and have an impact on average values of their overvaluation. Apparent overvaluation of solid fuels consumption is probably caused by inaccurate estimation of their consumption on the basis of their supplies but most probably even by noninclusion of efficiencies regarding the equipment on individual fuels and inaccurate estimation of remaining stocks.

Conclusion: Validity of computed data on energy consumptions and their division according to purpose of use (tables 3.4.1, 3.4.2 and 3.5.1) is sufficient.

Data validity on availability of energy appliances in dwellings ascertained in surveyed sample survey was checked by their comparison with data from these information sources:

- (a) Social situation of households in 2001 (data concerning housekeeping households), CzSO 2003,
- (b) Income, expenditure and consumption of households, 2003, I. volume, CzSO 2004,
- (c) Statistical Yearbook of the Czech Republic 2004, CzSO 2004 (table 9.11).

In all three sources of information there is availability of energy appliances stated on household, figures acquired from the microcensus "ENERGO 2004" are related to dwelling. Therefore sample survey data were computed on household. These data are methodically comparable with data from information sources (a) and (b). Microcensus results are in very good agreement with data listed in these information sources, especially if we consider the influence of two-year time shift (data from information source (a) concern 2001). Validity of data on domestic appliances availability in households is high enough if we take into consideration a fact that in the microcensus there were not surveyed numbers of these appliances but only their use.

Validity of data on availability of passenger cars in households/dwellings: In surveyed sample there one hundred households get 67.9 cars, Statistical Yearbook of the Czech Republic 2004 state that one hundred households get 69.3 cars in 2002. This conformity is, with respect to possible/probable sample estimate error, very good. Ascertained number of passenger cars in the sample recalculated per CR mid-year population in 2003 amounts to 2635 thousands, Central database for vehicles (www.mvcr/statistiky/crv.html) quotes passenger cars number in amount of 3702 thousands as at 31 December 2003. Ascertained number of vehicles in the sample does not cover the figure of the basic population even at respecting probable sample estimate error.

Validity of the figure on absolute number of vehicles in the sample thus needs not to be sufficient. Estimates of running (in service) cars individual characteristics are utilizable for revision/verification of only by estimation ascertained average characteristics (structure of used motor fuels, specific consumptions, annual run/average kilometers per year of in service cars).