

**Name of collection:** Multipurpose survey on everyday life aspects / Indagine Multiscopo "Aspetti della vita quotidiana"

<p><b>Nature of collection</b> If possible, use the classification of collection types shown above e.g. <i>ICT use collection – business</i>. For "other" collections, provide details e.g. <i>Other ICT collection – ISPs</i>.</p>	ICT Use Collection - Household / Individual - 2006						
<p><b>Collection agency</b></p>	Istat - National Institute of Statistics						
<p><b>General references to collection material</b> Metadata, questionnaires etc</p>	<p>Questionnaires for the 2006 survey are available at the following address: <a href="http://www.istat.it/strumenti/rispondenti/indagini/famiglia_societa/vitaquotidiana/">http://www.istat.it/strumenti/rispondenti/indagini/famiglia_societa/vitaquotidiana/</a></p>						
<p><b>Survey basis or vehicle</b> E.g. Labour Force supplement, standalone survey, administrative byproduct data</p>	<p>The module on ICT usage in households and by individuals is embedded in the annual multipurpose survey "Aspects of Daily Life" which is the main survey of Istat's integrated system of multi-purpose social surveys. This annual survey is the supporting and normalising element of the whole social informative framework. It collects a set of data concerning individuals, households and events which affords to construct and analyse the citizen's demand, besides comparing it with services supply, already surveyed by Istat.</p>						
<p><b>Frequency of collection</b></p>	Annual						
<p><b>Collection history</b> Reference dates and/or periods from the first to the latest collection</p>	<p>2005: Start 14/02/2005 – end 28/02/2005 2006: Start 14/02/2006 – end 28/02/2006</p>						
<p><b>Whether collection is mandatory or voluntary</b></p>	Participation in this survey is mandatory because it is part of the National Statistical Plan.						
<p><b>Scope and coverage of collection</b> Target population in terms of size, industry, population groups etc</p>	<p>Main background variables covered: Sex, age groups (3-5, 6-10, 11-14, 15-17, 18-19, 20-24, 25-34, 35-44, 45-54, 55-59, 60-64, 65-74, 75 and over), Education level, regions at NUTS2 level.</p> <table border="1" data-bbox="440 1559 1010 1756"> <thead> <tr> <th><i>Households</i></th> <th><i>Individuals</i></th> </tr> </thead> <tbody> <tr> <td><b>Final sample 17.090</b></td> <td><b>Final sample 36.999</b></td> </tr> <tr> <td><b>Universe 20.439.971</b></td> <td><b>Universe 44.270.114</b></td> </tr> </tbody> </table>	<i>Households</i>	<i>Individuals</i>	<b>Final sample 17.090</b>	<b>Final sample 36.999</b>	<b>Universe 20.439.971</b>	<b>Universe 44.270.114</b>
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<p><b>Main classifications used</b> E.g. industry, size, commodity, occupation</p>							

<b>Collection methodology</b> E.g. face-to-face, mail, Web, telephone interview	The survey uses paper and pencil interview (PAPI) technique and it is based on a face-to-face interview questionnaire and a self administrated questionnaire. The ICT module is in the self administrated questionnaire.
<b>Reporting and Statistical units</b> Enterprise, establishment, household, etc	Households and Individuals
<b>Sample frame used</b>	Public register of households (name of the components of the household, address of the household)
<b>Sampling method</b> E.g. stratified random sampling, cluster sampling	<p>The sampling pattern is a complex type and makes use of two different sampling plans. Municipalities are divided into two sub-groups on the basis of the resident population:</p> <ul style="list-style-type: none"> <li>• The group of Self-Representative municipalities (which we'll refer to as AR municipalities) made up of larger demographic size of municipalities;</li> <li>• The group of Non Self Representative municipalities (or NAR) made up of the remaining municipalities.</li> </ul> <p>Within the group of AR municipalities, each municipality is considered as an independent layer and a pattern known as cluster sampling is used. The primary sampling units are represented by households registered in the Public Registry, taken systematically from the Public Register of the municipality itself; for each registered household included in the sample, the characteristics that are the subject of the survey for all the actual components that belong to the same household are extracted.</p> <p>Within the group of NAR municipalities a two stage pattern with layering of the primary units is adopted. The Primary Units (UP) are the municipalities, the Secondary Units are the households registered in the Public Registry; for each registered household included in the sample, the characteristics that are the subject of the survey for all the actual components that belong to the same household are extracted.</p> <p>The municipalities are selected with probabilities that are proportional to their demographic size and without reintroduction, and the households are extracted with probabilities that are equal and without reintroduction.</p> <p><b>Stratification</b></p> <p>During the survey in question, the municipalities were stratified according to their demographic size and the following conditions:</p> <ul style="list-style-type: none"> <li>• self-deliberation of the sample on a regional level;</li> <li>• selection of a sample municipality within each layer defined on the municipalities of the NAR group;</li> <li>• choice of a minimum number of households to be interviewed in each sample municipality; for this survey, this number was set at 24;</li> </ul> <p>Formation of layers with a more or less constant size in terms of resident population.</p>
<b>Sample size</b> For the most recent collection	<b>24,008</b>
<b>Response rate</b> The responding proportion of the live in-scope population, most recent collection	<b>79.4%</b>
<b>Methods for dealing with non-response (item and unit)</b> Indicate whether imputations are made for non-response and a short description of	Advance notification in the form of a letter, system of reminders.

methods used.	
<p><b>Weighting of results</b> Weighting method e.g. by employment, number of enterprises, revenue</p>	<p>The estimates produced by the survey are essentially estimates of absolute and relative frequencies, referring to households and individuals.</p> <p>The estimates are obtained via a calibration estimator, which is the estimation method used for most ISTAT surveys on enterprise and households.</p> <p>The principle which each sample estimation method is based on is that the units belonging to the sample also represent the population units that are not included in the sample.</p> <p>This principle is achieved by attributing a weight to each sample unit that indicates the number of units of the populations represented by the same unit. If, for example, a weight equal to 30 is attributed to a sample unit, then this unit represents itself and another 29 units of the population that were not included in the sample.</p> <p>In order to make the next illustration clearer, we will introduce the following symbols: d, indicator of reference territorial level for the estimates; i, indicator of the municipality; j, indicator of the household; p, indicator of the household component; h, indicator of layer of municipalities; y, generic variable object of the survey; <math>Y_{hijp}</math>, value of y observed on the component p of the household j of the municipality i of the layer h; <math>P_{hij}</math>, number of components of the household j of the municipality i from the layer h; <math>Y_{hij} = \sum_{p=1}^{P_{hij}} Y_{hijp}</math>, total of the variable y observed on the household j of the municipality i from the layer h; <math>M_{hi}</math>, number of households resident in the municipality i of the layer h; <math>m_{hi}</math>, sample of households in the municipality i of the layer h; <math>N_h</math>, total of municipalities in the layer h; <math>n_h</math>, number of sample municipalities in the layer h (in the survey in question it was <math>n_h = 1</math>); <math>H_d</math>, total number of layers in the general territorial domain d.</p> <p>We hypothesise that we wish to estimate, with reference to a generic domain d, the total of the generic variable y object of the survey, expressed by the following relation</p> $Y_d = \sum_{h=1}^{H_d} \sum_{i=1}^{N_h} \sum_{j=1}^{M_{hi}} Y_{hij} \quad (1)$ <p>Estimate of total (1) is given by: <math>\hat{Y}_d = \sum_{h=1}^{H_d} \hat{Y}_h</math>, being <math>\hat{Y}_h = \sum_{i=1}^{n_h} \sum_{j=1}^{m_{hi}} W_{hij} Y_{hij}</math>,</p> <p>in which <math>W_{hij}</math> is the final weight to be attributed to all the components of the household j of the municipality i of the layer h.</p> <p>From the previous relation, it is assumed, therefore, that in order to obtain the estimate of the total (1) it is necessary to multiply the value of the variable y taken on by each sample unit for the weight of this unit<sup>1</sup> and to add up the total of the product obtained in this way, from the domain of interest.</p> <p>The weight to attribute to the sample units is obtained by means of a complex procedure, that:</p> <ul style="list-style-type: none"> <li>• corrects the distorting effect of the lack of total response due to the impossibility of interviewing some of the selected households, due to the fact that they were not traced or that they refused to participate to the interview;</li> <li>• takes into account the knowledge of known totals with important additional variables (available from external sources to the survey), in the sense that the sample estimates of the known totals of the additional variables must coincide with the known values of the same.</li> </ul> <p>In the survey in question, 18 known totals were defined for each geographical region, that refer to the distribution of the regional population by gender and by six age categories of the regional population in the six areas, A<sub>1</sub>, A<sub>2</sub>, B<sub>1</sub>, B<sub>2</sub>, B<sub>3</sub> and B<sub>4</sub>. Therefore, by indicated the known total of the k-th additional variable for the generic geographical region with <math>{}_kX</math> (<math>k=1, \dots, 18</math>) and the value assumed by the k-th additional variable for the corresponding household hij with <math>{}_kX_{hij}</math>, the condition described above is expressed by the following equality</p> ${}_kX = \sum_{h=1}^H \sum_{i=1}^{n_h} \sum_{j=1}^{m_{hi}} {}_kX_{hij} \quad (k=1, \dots, 18)$ <p>in which H indicates the overall number of layers defined in the region. If, for example, <math>{}_6X</math> indicates the number of males aged over or equal to sixty-five years, the additional variable <math>{}_6X_{hij}</math> is the number of males aged sixty-five or over in the household hij.</p> <p>The procedure that allows the <i>final weights</i> to be attributed to the corresponding sample units is organised into the following phases:</p> <ol style="list-style-type: none"> <li>1) <i>Direct weights</i> are calculated as a reciprocal of the probability of being included in the units;</li> <li>2) the corrective factors for the lack of a total reply are calculated, as the inverse of the reply rate of the municipality to which each unit belongs;</li> <li>3) The <i>basic weights</i> are obtained, or correct weights by lack of total reply, by multiplying the direct</li> </ol>

<sup>1</sup> In order to obtain estimates that were consistent the weights for individuals and households are defined in such a way that each hij household and all the components of the same household are assigned the same final weight  $W_{hij}$ .

	<p>weights by the corresponding corrective factors by the lack of total reply;</p> <p>4) The corrective factors are built, that allow one to satisfy the condition of equality between the known totals of the additional variables and the corresponding sample estimates, on a regional level;</p> <p>5) Finally, the final weights are calculated by the product of the basic weights by the corrective factors obtained in step 4.</p> <p>The corrective factors in step 4 are obtained by the solution of a problem of retrained minimum, in which the function to minimise is a distance function (suitably chosen) between the basic weighs and the final weights and the restrictions are defined by the condition of equality between the sample estimates of the known totals of the population and the known values of the same. The pre-chosen distance function is the truncated logarithm function; the use of this function guarantees that the final weights are positive and contained within a per-determined interval of possible values, thus eliminating the extreme positive weights (too big or too small). Tall the estimation methods that arise from the solution of a minimum restriction problem as described above come under a general class of estimators known as calibration estimators<sup>2</sup>. One important estimator belonging to this class, which is obtained by using the Euclid distance function, is the <i>generalised regression estimator</i>. As will be better explained in paragraph 3, this estimator plays a central role as it is possible to show that all the calibration estimators converge asymptotically, as the sample number increases, to the generalised regression estimator.</p>																																																																																								
<p><b>Relative standard errors (or coefficients of variation) on main aggregates</b> For the most recent collection. These can be expressed as a range of values. For a given variable, the RSE or CV is equal to the ratio of the square root of the estimate of the sampling variance to the estimated value. It can be expressed as a fraction or a percentage.</p>	<table border="1"> <thead> <tr> <th><i>Indicator or subindicator</i></th> <th><i>Number of respondents</i></th> <th><i>Estimated proportion</i></th> <th><i>Standard error</i></th> </tr> </thead> <tbody> <tr> <td><b>Proportion of households having access to the Internet at home</b></td> <td>6.699</td> <td>40,0</td> <td>0,005219</td> </tr> <tr> <td><b>Proportion of households using a broadband connection</b></td> <td>2.641</td> <td>16,2</td> <td>0,003431</td> </tr> <tr> <td><b>Proportion of individuals regularly using the Internet: overall</b></td> <td>13.027</td> <td>37,2</td> <td>0,003074</td> </tr> <tr> <td>Proportion of ind. regularly using the Internet: <b>males</b></td> <td>7.338</td> <td>56,7</td> <td>0,006487</td> </tr> <tr> <td>Proportion of ind. regularly using the Internet: <b>females</b></td> <td>5.689</td> <td>43,3</td> <td>0,00578</td> </tr> <tr> <td>Proportion of ind. regularly using the Internet: <b>age group 16-24 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regularly using the Internet: <b>age group 35-44 years</b>	3.296	26,6	0,004686	Proportion of ind. regularly using the Internet: <b>age group 45-54 years</b>	2.212	16,3	0,003811	Proportion of ind. regularly using the Internet: <b>age group 55-64 years</b>	961	7,4	0,002723	Proportion of ind. regularly using the Internet: <b>age group 65-74 years</b>	230	1,7	0,001457	Proportion of ind. regularly using the Internet: <b>low educational level</b>	3.076	22,3	0,00435	Proportion of ind. regularly using the Internet: <b>medium educat. level</b>	7.109	23,5	0,004448	Proportion of ind. regularly using the Internet: <b>high educational level</b>	2.842	54,2	0,006367	Proportion of ind. regularly using the Internet: <b>students</b>	2.432	17,8	0,003953	Proportion of ind. regularly using the Internet: <b>employees</b>	6.608	51,4	0,006218	Proportion of ind. regularly using the Internet: <b>self-employed</b>	2.095	16,0	0,003781	Proportion of ind. regularly using the Internet: 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<sup>2</sup> In Anglo-Saxon literature on this subject, these estimators are known as *calibration estimators*.

<p>bias, comparability problems over time, definitional issues, coverage deficiencies, timeliness of frame, high item non-response (identify topics which are particularly problematic).</p>	
<p><b>Output details</b> Please list (or link to) relevant publications for this collection. You can also email relevant files to the OECD.</p>	<p>Main results of the 2006 survey are available at the following address: <a href="http://www.istat.it/salastampa/comunicati/non_calendario/20061218_01/">http://www.istat.it/salastampa/comunicati/non_calendario/20061218_01/</a></p>
<p><b>Other comments</b></p>	
<p><b>Contact/s</b> Where available, provide names and email addresses.</p>	<p>Adolfo Morrone Head of the unit SDS/D Culture, leisure and new technologies via A. Ravà, 150 - 00142 Roma - Italy tel. +390646734841 fax +390646734596 adolfo.morrone@istat.it</p>