HUNGARIAN CENTRAL STATISTICAL OFFICE

POPULATION AND HOUSING CENSUS 2001

31. Methods of the collection and processing of the data

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INTRODUCTION

In the 130 years history of the population censuses the prevailing Hungarian statistical service – presently the Central Statistical Office (HCSO) –the scope and the methods of the data collection were always in line with the requirements of time. In the data processing, by using the ever improving possibilities of the infrastructure of the information technology, the most advanced methods are applied. The aspiration was the same in case of the preparation, execution and data processing of the census 2001: the set of questions have been finalised on a wider professional consultation and in the data capture as well as in the data processing methods different from those applied at the previous censuses and at other Hungarian population surveys were applied.

The present publication gives a summary of the different phases of the preparation, the process of enumeration, the processing and dissemination of the population and housing census held in February 2001. It describes in detail the moments of the geographic preparation preceding the enumeration, comprises the respective Act and its parliamentary debate providing the census as well as the text of the Government decree governing the execution of it. The preamble of the decree contains information and explanation on the different topics of the census.

Separate chapters deal with the description of the different phases of the data processing including the new and advanced methods of the data capture and data processing, with the problems, methods and results of the quality control of the enumeration, with the forms and methods of the dissemination of data and with the financial issues of the census. The publication gives a detailed description on the concepts and definitions of the census.

The publication by illustrating the methodological problems necessary for the proper understanding and for reaching an appropriate conclusion makes efforts to support the persons interested in the census data.

While defining the subjects of the 2001 Hungarian census besides the traditions of the Hungarian censuses it has to be taken into account that the action was a part of the round 2000 world census programme decided by the UN Economic Commission for Europe and the Statistical Office of the European Community; the latter issued also „Recommendations for the 200 round population and housing censuses in the ECE region". The publication mentioned gives a summary table on the similarities and differences between the international recommendations and the censuses held mainly in the different EU and EU candidate countries.

The present publication is aimed at summing up the most important publications of the 2001 census and at the same time at easing the access and recognition of the instructions, manuals and forms of the census by the succeeding generations. The chapter describing the structure of the records of the data and the process of the data derivation surely will ease the future utilisation of the data. The „Supplement" contains the copies of the questionnaires and of the other important Forms, a comparison of the topics of the 13 Hungarian population censuses and the list of the publications of census 2001.

PREPARATION OF THE CENSUS

Geographic preparation

The Hungarian 2001 census hade been provided by the Act CVIII of 1999 of the Hungarian Parliament. The professional guidance of the census was the task of the Central Statistical Office, while the preparation and the execution of the enumeration was a responsibility of the notaries, district notaries of the different localities (the districts in Budapest). The Act at the same time authorised the Government to issue a decree for the regulation of the organisational tasks related to the census. The Government decree of 76/2000 (V.31) gives a detailed list of the duties of the notaries as well as of the persons in charge for the census in the localities. The realisation of the respective tasks had been directed by the methodological Guides issued by the Chairman of the HCSO.

The sudden development of the computer technology of the 1990s in general and in the administration in particular insisted the use of the electronic means and methods in the accomplishing of the respective tasks. In this technological process it had a prime importance the availability of the electronically captured and stored list of addresses of the 1990 census. The experience of an updating of this data-base in 1994 proved that it can be used as a starting point for building up the territorial framework and the new concept of the geographic preparation of the census became the replacing the former manual work with the use of personal computers.

Pilot censuses

As at the former censuses also in case of the 2001 census preliminary pilot censuses had been projected. Despite the innovation of the geographic preparation of the census would require several pilot operations it was not possible to perform them partly due to financial considerations, partly due to the changes in the legislation caused by the transformation of the political system. A pilot survey had been prepared by the HCSO already in 1994 but it had been postponed due to budget cuts and the coincidence of the planned enumeration period with the local elections. The same situation arose in case of the planned pilot census in 1988.

In 1999 it was already inevitable to conduct a pilot census covering all the possible phases and aspects of a full census. The pilot census had been performed in the cities of Hajduszoboszló and Pétervására as well as in 13 villages of county Heves. Nevertheless the final aim i.e. the simulation of entire organisational, technical work of a full-scale census could not be fulfilled. Firstly caused by the lack of the government's support it was not possible to find any supporter neither in the capital, nor in the larger villages of the country. (The lack of government's support means the changes in the legislation mentioned above. In case of the previous censuses the execution of the pilot surveys have been also provided by the law, consequently the participation in it have been compulsory. In 1990 the HCSO should have to rely on the voluntary cooperation of the notaries, local governments, there was not a word on a legal support)

In the course of the 1999 pilot census the following tasks should have to solve:

- appraisal of the parts of localities (other inner area, inhabited outskirts, outskirts of a holiday character, holiday resort) as well as the cross-checking the findings with the data of the official Hungarian Gazetteer;
- based on the local registers adoption, completion and correction of the addresses maintained by the HCSO, production of the updated list of public places, addresses necessary for the local inquiry;
- local inspection, where the main requirement was the assurance of totality as well as the registration of the most accurate;
- maintenance of the addresses, i.e. to enter the errors discovered on spot, to supplement the list of addresses with the missing information and finally to create a full list of addresses for the completion of the establishment of the enumeration districts;
- updating the maps, numbering the blocks of houses based on the local visit and control;

- to define the units of enumeration: determining the territorial units, more exactly the enumeration districts. The enumeration districts have been formed in such a way they contained real estates (buildings) of about 120 dwellings (addresses). (By segregating the enumeration districts it was not allowed to cross the boundaries of the parts of localities, the districts of the localities.);
- to complete the preliminary list of addresses and the bordereau of the enumeration districts. The former served as a base of the supply with forms, the latter was given to the enumerators. The bordereau described the area where the enumerator should have to conduct the census and a separate column for the information of the result of the visit;
- the execution of the correction of the errors and transferring the final set of data to the HCSO.

The programme for handling the electronically stored list of addresses of census 1990 worked properly, the deficiencies and inaccuracies detected in the test phase could be eliminated. The staff of the municipalities in the cities could independently run the programme, while the situation in the villages was characterised by the fact that even if there was the necessary computer available, the level of the computer knowledge of the persons was poor. As it was not easy for the persons to handle the programme in most of the cases the county offices of HCSO had performed the work. It had been planned that the formation of the territorial units, the enumeration districts would be performed with the linkage of the programme handling the addresses and that of the digital maps. Nevertheless due to the acceleration of the preparatory work it was not possible to acquire the linking maps. There was only a four month period for the execution of the pilot census (from the beginning of the preparations up to the closing the enumeration), the same period would be necessary for ordering the digital maps, preparing the linking programme. Consequently - due to the limited time - the expected procedure had not been executed, not even tested.

Legal and financial preparations, their implications to the census

Principally the legal preparation was proper, suited fully the requirements of the census. This means the population census had been ordered by the highest legislation, i.e. by a law, and the decisions on the further tasks and their definition relied on appropriate legal frame. The HCSO already on the summer of 1999 (even before having final experiments on the pilot census) presented the proposed text of the law on the population census to the Government. In the process of legislation the Law was passed (abridged with the law modifying the former law on statistics) only half a year later (December 7, 1999). The Government decree on the execution of the former Law was issued also with a six months delay. The decree approved on May 31, 2000 – as a legislation informing and deciding on the tasks of the notaries with regard to the population census – from the point of view of the practical works had a higher importance than the law on the population census. The issuance of the Government decree would be necessary in January 2000, immediately after the law had been passed.

The central budget, which included the estimate of the census for 2000, was passed by the parliament after the enactment of the act on population census, on December 21, 1999. The discussions for the acquisition of the appliances, means and services could be started only as from that date. There was another factor of the legal environment influencing, hindering the negotiations. This is the obligation of the law on public acquisition regarding the compulsory tendering in case of acquisitions exceeding a certain amount. As this was a time-consuming procedure for the execution of the necessary preparatory tasks only very narrow deadlines could be fixed. The consequences of the tense speed of work unfortunately had unfavourable impacts on the quality of the jobs performance.

The Government decree authorised the Chairman of HCSO for issuing the professional-methodological guides informing on and regulating of the practical work. Three of the guides have been published between June and November 2000, the fourth in February 2001. The procedures of the public acquisition had a negative impact also in the timely issuance of these manuals. In some cases (e.g. the programme handling the addresses) the necessary instructions could be published only after testing and correcting the products.

Administrative aspects, geographic issues

The first task in the execution of the previous censuses – including the 1990 population census – was the verification of the administrative status and the territory of the localities. This besides the verification of the administrative rank (town, village, etc.) meant the definition and segregation of the parts of localities (central inner area and the other inner areas, the inhabited areas of the outskirts). In this regard the respective internal channels of information

of the administration and the individual reports could not meet principle of the requirements on the totality of the census.

At the population census 2001 the previous job was already redundant because in the 1990s the HCSO introduced a systematic yearly data collection and updating of the subject. The parts of localities reflecting the administrative status of January 1, 2000 had been fixed with the help of the data collection and this had been entered into the 1990 address register of HCSO. Nevertheless by taking into account the extension of the census programme (for covering the holiday housing units) a separate data collection on the not inhabited holiday areas of the outskirts, the weekend cottages, and other areas formerly not subject to the census was necessary. The data collection could be performed as part of the general data collection programme (OSAP) of HCSO.

Taking into account the regular data collection it was anticipated that the job will be performed without any problems e.g. utilisation for the purposes of the census will be an automatic process. Despite in the process of verification of the addresses (by controlling the list of addresses) while the parts of localities were defined it turned out that in quite a number of localities the self-government authorities rejected the division and/or the denomination of the parts of localities formerly reported to HCSO. The clearing of these problems was not an easy task, because the electronic programme handling he addresses accepted the changes provided a proper documentation (including the number of the respective legislation) was available. To speed up and ease the practical work it was necessary to obey the respective rules of the programme.

Revision, updating and completion of the addresses

For the preparation of the list of addresses the HCSO supplied the municipalities with the enumerated addresses of census 1990 and with the addresses of the persons by the Central Office of the Ministry of Interior. Before matching the two lists of addresses it was necessary to correct and update the names of the public places. The respective task besides detecting the results of the campaign for renaming the public places after the change in the political establishment included also the accurate description of the public places in the outskirts (covering the so called “close gardens”, the shores of the rivers, the weekend resorts) i.e. addition the respective denominations of the public place (e.g. baulk, line, the name of the holiday etc.). The preliminary test had shown that by matching the two lists around 90 percent of the addresses had been properly identifiable and corresponding to the real situation. Nevertheless it turned out at the end that the use of the two lists of addresses caused quite many complexities and it would have been a much easier task to use the updated lists of census 1990.

The application of the computer programme on handling the addresses did not require sophisticated computer skills but as a result of the drugging out of the procedure of the public acquisition it was not properly adopted to the abilities of the users. The appliances of informatics as well as the skills and affinity of the respective staff at the municipalities had been different. That is why in the government decree describing the duties of the notaries (as responsible persons for the census in the localities) the tasks related to the use of the informatics have not been mentioned. As such the handling of the addresses had been performed potentially by the county directorates of HCSO, though they were authorised to pass the execution to the municipalities. Nevertheless by detecting the shortage of time the directorates handed over the job to some of the municipalities, while in case of the others a joint execution had been concluded.

At the very first central training turned out already that the computer programme for handling the addresses has had to be modified, alterations had been performed several times; by the end of the census already the 6th version of the programme was in use. The pilot census by its several compromises in relation to the programme provided only limited experience, some of the contextual deficiencies became evident only at the full-scale population census. A steady perfection of the programme was on until the end of the census though the final version could not meet all the requirements.

The control, correction and updating of the list of addresses was based on local visits. At visiting the addresses the following tasks should be performed:

- to assure the totality of the addresses: the list of addresses had to contain every house number, in the buildings with several dwellings the address of every occupied and vacant dwelling;

- the most accurate, detailed definition of the address: each real estate, building, dwelling must have a detailed address suitable for the individual identification. In the case of the dwellings it means: number in the street – number of building – staircase – level (ground-floor, level) – door;
- the unification of the addresses of HCSO and of the Registration Office of the Ministry of Interior in case those are only similar and the inclusion is possible only manually;
- in the process of the electronic preparation a real estate number was allocated to each of the addresses. The number should have been the same for every dwelling of the same building. In some cases number allocated by the electronic programme was different from the real number. It was necessary to perform the necessary corrections;
- the list of addresses contained addresses neutral to the census. Basically the addresses were marked with a "01" (dwelling in residential building) code, but other codes were used too. One of the tasks of the local visit was the allocating to the address the code corresponding to the real situation;
- recording the block identity number: the digital maps were marked with the block identity number, but on the paper maps bought by the municipalities the indication of the block number was the task of the responsible person of the census (block numbers have been used only in the inner areas and in the outskirts only in case with several streets).

For the use of the notaries to facilitate the revision of the list of addresses a detailed guidance for the correction of addresses was prepared. The guidance besides determining the characteristics of the accurate, individualised address described also the collection and control of some other information necessary for the enumeration, the procession of data and the use of the GIS after the census (e.g. the corner-houses having double addresses, ground-plots on corners, house with a passage way, etc). Despite the availability of the separate information some of those performing the field control fully or partly misunderstood this special task. The situation was hampered by the fact that due to the shortage of time the task of correcting the list of addresses and the updating of the maps had been executed parallel with the preliminary census of the holiday houses. Unfortunately due to the summer (vacation) period even staff of the directorates of the HCSO could not properly control the events and as such the deficiencies in the list of addresses turned out only at the enumeration.

Preliminary census of the holiday houses

Due to the seasonality in use the full-scale enumeration of the holiday houses could be realised in a summer period prior to the census. The preliminary census had been performed successfully in July-August 2000. The revision of the addresses in the holiday areas had been made by the enumerator simultaneously with the preliminary census. The enumerators had been recruited by the responsible person for the census in the locality (the notary) and the experts of the county directorates of HCSO had held the preparatory training. On the aim and content of the enumeration of the holiday houses – taking into account the possibility of meeting foreign guests – short information on different languages was prepared. The content of the questionnaire of the preliminary enumeration of holiday houses was the same as that of the population census, answering the questions was not problematic and even the owners of the holiday houses (eventually the foreign guests) have been very co-operative.

The completed questionnaires of the preliminary census have been taken over and stored until the end of the population census by the responsible person for the census in the locality. Before the launch of the enumeration the enumerators received the questionnaires on the holiday houses in their district, they had to control the contents and to copy the content (with the necessary revisions) to the (final) questionnaire of the population census.

Census maps

One of the basic pillars of the assurance of the totality of the census is the availability of appropriate maps. The map is convenient provided it is up-to-date in content, is suitable for the orientation, depicts all the public places (with the names), and by its scales, the indication of streets and block of houses can be used for marking the approximate limits of the enumeration districts. As far as the outskirts are concerned it is a minimal requirement the schematic – though identifiable - depiction of the inhabited areas (by points or by groups) as well as the indication of the landmarks for the proper orientation.

The HCSO supplied the localities with a population over 2000 and more with digital maps (with numbers of the blocks), while the smaller localities had used traditional, paper-based maps bought from the assets transferred for the purpose. The digital maps – due to the time requirement of the tendering, the unexpected problems of the copyright had been delivered later than planned and in some cases also the content of the maps was improper. For facilitating the field work, i.e. the corrections on site the contracting partner delivered map-segments, their reproduction and delivery resulted in delay of time.

The guidelines for correction of the addresses - already mentioned while discussing the visiting of the addresses – dealt with the clearing of the incidental deficiencies of the digital maps too. According to the guidelines it had to be marked the blocks, streets, parts of streets and or the linear landmarks (e.g. railway, stream) shown on the map but missing in reality and the contrary.

The provocative behaviour of the companies producing and selling the maps and the weak mapping knowledge of the notaries had characterised the acquisition of maps by the smaller localities. Due to the former facts there had been quite many problems with the acquired (bought) maps but due to the smaller size of the localities neither the definition of the enumeration districts nor the organisation and realisation of the enumeration was hampered.

Defining the enumeration districts and other territorial units

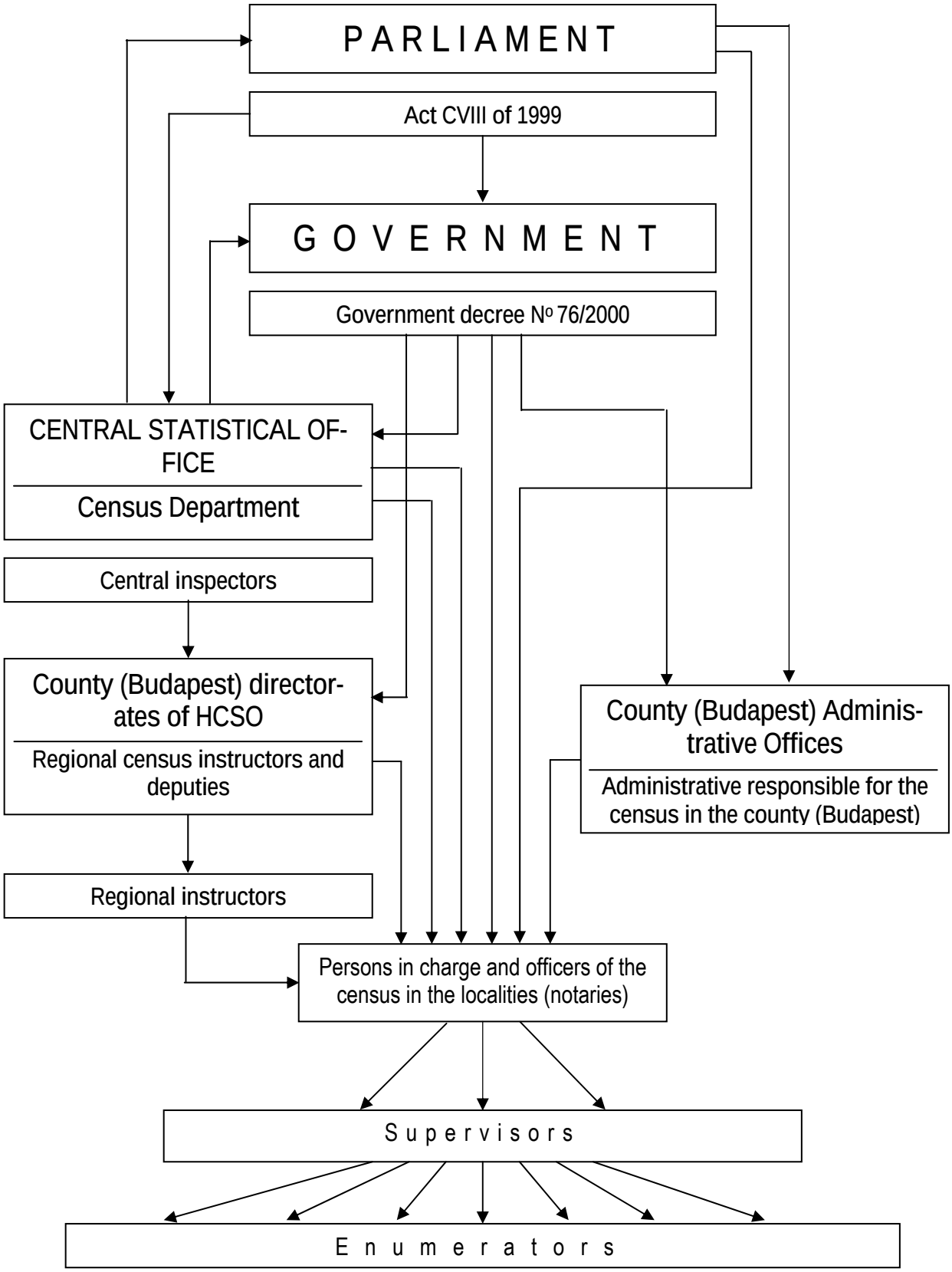
The establishment of the enumeration districts was based on the controlled and secured list of addresses As in the case of every population census the size of the enumeration districts should be fixed in a size which by taking into account the average intensity of labour would enable to finalise the execution of the census within the given time limit (in 2001 three weeks) without any difficulties. The HCSO recommended establishing the enumeration districts with 80-100 dwellings (more exactly housing units, subject to the census) and due to the technical requirements of the data processing it was not allowed to set more than 200 dwellings into one district. For the unambiguous segregation similarly it was a basic principle to have the demarcation lines of the enumeration districts parallel to the axis of the streets (or similar natural or artificial lines or landmarks. It was a rule furthermore that the enumeration district should be a homogenously built area (e.g. the enumeration districts of block of flats or socially unsatisfactory areas should not contain dwellings having a different surrounding). This type of guidance had been valid only in the inner areas, in the areas of scattered habitation. In the outskirts and in the areas which are difficult to visit it was possible to fix enumeration districts of a smaller size.

In the process of the establishment of the enumeration districts of the different parts of the locality (the central and other inner area, the inhabited areas of the outskirt and in the holiday resorts respectively) the territorial units of the enumeration should have been fixed within the limits of the respective part of locality. Furthermore by taking into account the experiments of the former censuses it was proposed to take into account by forming the enumeration districts the limits of the territorial units used in the development plans, the statistical surveys and the divisions used in city planning. The latter usually mean smaller organic parts of the localities mostly with homogenous utilisation on the territory, their border lines are streets of higher, medium traffic and streets connecting the former, those have an organic service and supply network which is developed as a united system. At the censuses of 1970 and 1980 the Ministry of Building Industry, of 1970 the respective department of the Ministry of the Interior set up the development zones in each of the towns and that of the large villages “in transformation to a town. In 2000 the responsible persons for the census in the localities rejected the recommendations of the respective ministry as regards the development zones. Only a few towns, such as towns of county Csongrád (with the exemption of Mindszent), Miskolc, Komló, Sárbogárd and two districts of Budapest (Újpest and Pesterzsébet) accepted the recommendation of the Ministry.

Connected to the use of the digital maps before forming the enumeration districts a new territorial unit, the category “block (of dwellings) surrounded by streets” was also introduced into the electronic programme. The importance of this category is that the planned utilisation of the GIS requires that the digital maps are linked to the addresses and the easiest way of doing this is the uses of the blocks. Consequently the identity numbers of the blocks became a part of the addresses and as such the data of the enumeration can be grouped by blocks too.

After defining the enumeration districts a bordereau for each enumeration district had been collected. The bordereau listed the preliminary data on the dwellings, institutional households, including the anticipated number of persons to be enumerated in the institutions. The content of the bordereau served as a base for the collection and delivery of the set of questionnaires, instruction manuals and other sheets to the county directorates. The former information had been used also by the responsible persons of the census (notaries) in recruiting the enumerators and supervisors.

Organisational scheme of the preparation and realisation of census 2001



List of addresses and bordereau of the enumeration districts

The list of addresses – produced in three copies - containing the addresses of the area to visit and enumerate by the enumerators was based and on preliminary inspection of the addresses. The copies have been distributed as follows: one of them served as working copy of the enumerator while two other copies have been kept in the folder of the respective enumeration district. The list furthermore served as a bordereau where also the results of the data collection and the summary results of the enumeration of the district are marked. In the previous censuses for informing on the latter a separate sheet had been used. The reason to merge the two sheets was that the printouts on the list of addresses each address of the enumeration district have been adjusted with a serial (address) number which combined with area code and the identity block number served for the identification of the addresses. The identity code with the former content had been used for connecting the stock of the addresses and the processed data of the census. The connecting the code to the definite enumeration district assured that in the course of the data collection and processing no accidental addresses had been included into the given enumeration district. The list of addresses contained the numbers of the real estates (buildings) necessary for the processing the information on the residential buildings. It was the duty of the enumerators to correct and adjust the list of addresses as too and as such the revised lists served for controlling the totality and for other technical operations afterwards

The number of enumeration districts accounted to 49 114. The census had been realised by 44 861 enumerators as some enumerators were able to enumerate more than one smaller district. On an average four (altogether 10 928) supervisors controlled the work performance of the enumerators. The number of the responsible persons for the census in the localities (notaries), as well as the staff working in the localities with less than 5 000 inhabitants and on the district notaries accounted to 2 532 persons.

Training of the enumerators

In the course of the preparations a detailed training for the enumerators, their supervisors and the responsible persons for the census in the localities had been executed. In the first stage of the training programme the respective experts of the Census Department of HCSO gave detailed information on the general issues as well as on the different parts of the questionnaire for the staff at the regional directorates of HCSO suitable for training the persons performing the field work. In the second stage the formerly trained coaches gave lectures on filling in the questionnaires and on other tasks related to the census for the enumerators, their supervisors and the responsible persons for the census in the localities.

To ease the preparation and the orientation the participants had received the manuals and the copies of the questionnaires of the enumeration preceding the training.

In November–December 2000 in the first stage of the training programme covered about 400 persons in 12 groups. The two-day courses were in Budapest and in the county seats, in most of the case within the premises of the Directorates, in some cases the courses have been held in rented spaces. In the second stage – in January 2001 – the training of enumerators and supervisors had been held in the premises supplied by the municipalities. Control of the regional trainings was performed by the central inspectors and the responsible persons of the census at the regional directorates of HCSO.

ELABORATION OF THE PROGRAMME OF THE POPULATION CENSUS

Some fundamental issues regarding the character of the enumeration have been decided already in 1997, when the Census Department of HCSO started the preparation of the 2001 population census.

The United Nations Organisation recommended the realisation of the population census within 1995 and 2004, while the European Union proposed 2001 for the census. Taking into account the former recommendations it had been decided that the census will be held with a reference date between midnight January 31, 2001 and February 1, 2001. (Reference date of the former censuses was usually 00.00 hour of January 1 of the years ending with "0".) The prolongation of the reference date by one month against the traditional timing had been motivated necessity of harmonisation the population census with the general agricultural census, the latter forming a part of the EU accession process.

The method of the enumeration was the one used in the previous censuses, the *questioning (interview) by the enumerator* though it was possible for the data provider to fill in the questionnaire personally.

Taking into account the negative experiments of the censuses in 1970 and 1990 (the processing of the collected data suffered substantial delay, part of the information collected have not been processed) no simultaneous survey was attached to the enumeration. This caused that it was not possible to enlarge the scope of the questionnaire but to concentrate on the base programme.

According to the international recommendations and the Hungarian methodology of the housing statistics the holiday housing units used exclusively for recreation are regarded as part of the housing stock too. The best time for enumerating these housing units is the summer period when the proprietors are generally on site and it is easier to collect the required information. The same is valid for the institutes (institutions) offering collective accommodation seasonally, more exactly in the summer period. Therefore in the summer of 2000 the HCSO – authorised by the law – on the larger recreation areas had organised the preliminary census of holiday houses, in the course of which it was possible to take into account the institutions of operating seasonally.

Since the 1990 census there happened significant changes in the operational, ownership and other structure of the institutions offering collective accommodation. The HCSO – opposite to 1990 census – returning to the former practice decided for the full-scale enumeration of the institutions. Besides the inhabited institutions also the vacant establishments suiting the criteria of an institution as well as inhabited institutes of collective accommodation without the obligation of registering (e.g. dormitories of the primary education) had been enumerated.

An important element of the geographic preparation of the census is the updating of the stock of addresses in the localities. As a base for execution of the job the stock of addresses of census 1990 and the stock of names and addresses supplied by the Central Data processing, Register and Election Office of the Ministry of Interior. After the electronic matching of the two stocks for finalising the list of addresses a local inspection (of the addresses) followed.

For the execution of the census it is important to conduct test censuses. To prepare the 2001 population census with a reference date of September 1, 1999 the HCSO conducted a pilot census in 14 localities of county Heves, in Hajduszoboszló and in Eger (in a part of the town). The aim of the conduct of the pilot census was

- to assess the applicability of the new methods of geographic preparation, to disclose the possible difficulties;
- to acquire experiences regarding the regulation of the administrative tasks related to the population census of the notaries, district notaries;
- to test the questionnaires, the instruction manuals;
- to measure and evaluate the behaviour of the population;
- to study the usability of the instruction manuals, the glossaries used in the data procession;

- to test the methods of data capture
- to control the programme for the processing and tabulation.

In the process of elaboration of the topics of the population census the HCSO continuously consulted with the responsible organisations and the data users. As it has been decided that the programme of the census shall over some sensitive issues the Census Department of HCSO contacted the leaders of the self-governing bodies of the ethnic minorities in Hungary, the organisations handicapped as well as the leaders of the denominations registered in Hungary. Besides intensive and continuous consultations had been conducted with the competent ministries, state organs, research institutes, committees of the Academy of Sciences, interest-bearing authorities, chambers and ombudsmen. The questionnaire of the census –tested at the pilot census - had been prepared with regard to the consultations mentioned. The final version of the questionnaires used in the full-scale census was prepared by the Census Department of the HCSO.

It is valid for the census 2001 too that the interested organisations, institutions formulated more topics, questions than facilitated by the financial capabilities of the census programme and by the readiness of co-operation of the data providers. As example some question which have been set aside from the final questionnaire of the census:

- renovation of the dwelling,
- availability of telephone, personal computer,
- organised garbage removal,
- use of land, livestock,
- character of the employer, foreign ownership,
- second job.

The respective Law on census 2001 referred to the final version of the programme completed by the end of 1999. The technical design of the questionnaire was finalised by the summer of the year 2000.

Due to the size and complexity of the data processing of the census special requirements should be met; the rapid development of the information technology in the last decades resulted in the use of the hardware and computing programmes of the most recent versions. In the data processing of census 2001 new technology was used too, namely the application of the *optical reading technology (OCR)* served as technical solution for the data capture. The technology means the scanning of the questionnaires, more exactly the code numbers and signs (“markers”) displayed on the questionnaires. The given technology had implications on the shaping of the structure and the visualisation of the answers on the questionnaire. The answering the majority of the question was possible by marking “X” into a tetragon, while in other cases (e.g. years, quantities) with the respective number. The answers with text could not be recognised directly by the technology therefore an advance coding – numerical visualisation of the information – was necessary.

On the initiative of the HCSO the Government of Hungary issued the decree 2323/1999 (XII.7.) on the execution of census 2001

As the preparation of the population census and the process for the modification of the Law XLVI of 1993 was a parallel task a combined proposal covering the two issues had been submitted as the proposal of Law to the Government and to Parliament afterwards. The Parliament on the December 7, 1999 session passed the “Act CVIII of 1999 on the 2001 population census and on the modification of Act XLVI of 1993 on statistics. The Act contained provisions on the topics of the census too. The Act was published in the Hungarian Official Gazette on December 16, 1999.

DATA PROTECTION OF THE POPULATION CENSUS

In the process of the legislation of the censuses both the legislators and those applying the legislation regarded the issue of the data protection as fundamental. Already at the establishing of the very first Hungarian census „*misjudgements*" arose. This is indicated by the intention of the wording of that time by saying that *„it should be resolved any remark saying the census is a mighty investigation for imposing any new burdens, increasing of taxes:*"

The approval of the Law LXIII of 1992 on protection of personal data and publicity of data of common interest (further law on data protection) is regarded as of the corner stones of the Hungarian legislation. The law on data protection basically values and regulates the guarantees of the protection of personal data as a right for informational self-determination. Nevertheless the Law prescribes that this right is not unlimited, the transfer of the data in a given legal environment is transferable.

Section 2 of the law on data protection defines the content of the personal and particular data. Related to the programme of the censuses the nationality, the religion and the state of health are basically regarded as particular data. Item (1) b and item (2) c of Section 3 describe that the handling of the personal data are allowed upon the provision o fan Act , while Section 5 defines the necessity of having a definite aim for handling these data. The Law furthermore defines that a compulsory provision of data should be based on a definite Law.

A complete "system of defence" - consisting of legal regulations of different level - for the protection of the data collected for statistical purposes is established. The execution of the Law XLVL of 1993 is regulated in detail by the Government decree 170/1993. (XII. 3.). Further detailed regulations, orders of the Chairman of HCSO – as part of the "'system of defence" deal with the implementation of the legislation of the statistical activity. Among the regulations issued by the Chairman of HCSO special attention should be devoted to regulation 4/1998. (SK. 7–8.), describing the requirements regarding the data protection. The regulation besides the exact definition of the concepts defines the responsibilities related to the data protection, regulates the technological steps of the flows in the data processing, defines the "security zones" and determines the of the provisions of the physical security. The regulation assures that the handling of the data collected for statistical purposes are treated properly both from the legal and technological aspects.

As the programme of census 2001 dealt also with the issue of national/ethnic affiliation, religion and the state of health, the Law LXXVII of 1993 on the rights of national and ethnic minorities has to be taken into account too. The provisions of the latter law include that the issue of nationality can be handled only without the name of the data provider. Consequently partly due to this and partly for gaining the support of the population in regard of the census – first time in the history of the censuses in the country, and unprecedented internationally – it had been decided that the enumeration of the population the name of the respondent will not appear, the questionnaires will be unanimous. The data commissioner of the Parliament supported the census programme, the described before had been positively valued by him. As far as the sensitive issues are concerned by some experts, organisations the voluntary data provision was requested. To comply with this desire again a solution alien from the practice of the former Hungarian censuses had been applied; the Law described the obligatory answering of the questions but answering the questions on the sensitive issues was compulsory.

LEGISLATION OF THE CENSUS

Government decree 2323/1999 (XII. 7.) on the execution of the 2001 census

The Government on the budget, organisational matters, requirement of the information technology possibilities of utilisation of the results of census 2001 decides the following assets:

1. For the realisation of census 2001 the state budget under the heading of the HCSO shall allocate in the following assets:

   – 2001 HUF 9 billion
   – 2002 HUF 71 million
   – 2003 HUF 31 million

   Responsible: Minister of Finance
   Chairman of Central Statistical Office

2. The remuneration of the participants in the population census shall be covered by the defined budget. While distributing the budget among the localities the size of the resident population of January 1, 2000 will be taken into account. On the norms, titles, the accounting and controlling of the notaries shall be governed by a separate Government Act.

   Responsible: Chairman of Central Statistical Office
   Minister of Interior
   Minister of Finance

   Deadline: March 31, 2000

3. For the data capture by taking into account the experiments gained at the 1999 pilot census, a feasibility study should be prepared. For executing the tasks of the data capture a public tender should be conducted; the evaluation of the tender should be performed in the light of ensuring the quality requirements and the stipulations of the Law on Data Protection. A decisive aspect of the evaluation is that the data capture should be finished within six months.

   Responsible: Chairman of Central Statistical Office

   Deadline: March 31, 2000

4.[1] Government decree will be issued on the financial issues and rules of utilisation of the continuous update, handling, operation of the central address register based on the stock of addresses in the localities.

   Responsible: Minister of Interior
   Chairman of Central Statistical Office
   Minister of Finance

   Deadline: October 31, 2000

[1] Abrogated by December 20, 2000 by Government decree No 2312/2000 (XII: 20.)

Act CVIII of 1999 on the 2001 population census and on the modification of Act XLVI of 1993 on statistics[2]

The Parliament based on item (1) in Section 6 of the Law XLVI of 1993 constitutes the following act on the 2001 population census, as well as on the modification Law on statistics:

Census 2001

Section 1

(1) In the territory of the Hungarian Republic with reference date of midnight between January 31, 2001 and February 1, 2001, by taking into account the Law on Statistics, the Law LXIII of 1992 on Protection of personal data and publicity of data of common interest and the Law LXXVII of 1993 a general census of the natural persons and the housing stock (further population census) shall be executed.

(2) Subject of the population census are the Hungarian citizens living in the country or having a registered or temporary address in the country, the foreign citizens and stateless persons staying in Hungary for more than three months as well as the housing and holiday unit sin the country, including the institutions of collective accommodation.

(3) The field enumeration should be executed between February 1, 2001 and February 21, 2001.

(4) Additional census of the persons not enumerated in the base period should be closed by February 28, 2001.

(5) The preliminary field enumeration of the holiday houses should be realised between July 1, 2000 and August 31, 2001.

Section 2

The population census shall cover the following data of the natural persons, holiday and housing units as well as that of the institutions providing collective accommodation (e.g. dormitories, hospitals):

a) regarding the natural persons: gender, date of birth, address (place of residence), marital status, family status, fertility, school attendance, educational attainment, main source of income of the persons, households, occupation, name and place of the employer, daily travel commuting, state of health, citizenship, religion, nationality, mother tongue, knowledge of languages, title of use of dwelling, ownership in a holiday housing unit;

b) regarding the residential and holiday housing units: destination (type), ownership, number of premises, floor-space, public utilities, equipment, maintenance, type of heating, year of construction, walls, surrounding (environment);

c) regarding the institutions offering collective accommodation (e.g. dormitories, hospitals): destination of the institution, financial form of maintaining, ownership, number of staff, number of beds, number of sanitary premises, surrounding (environment), availability of public utilities, type of catering; type of the building of the institution, size, year of construction, walls, equipment, type of heating, date of last renovation, types and number of premises, period of operation, running.

Section 3

(1) Provision of data – with the exception of the questions in item (2) – is obligatory. The data providers should answer the questions of the population census in accordance with the facts and within the time limits indicated in Section 1.

(2) The provision of the data on state of health, religion, mother tongue and nationality is compulsory.

(3) The data collected by the population census should be used exclusively for statistical purposes.

[2] The Parliament passed the Law on at its session on December 7, 1999

Section 4

(1) The professional management of the preparation and execution as well as the data processing and dissemination is performed by the Central Statistical Office.

(2) The preparation and realisation of the population census is the responsibility of the notaries, district notaries of the localities (the districts is Budapest).

(Sections 5–15 Modification of the Law on statistics)

Section 16

(1) The Government is authorised to issue a decree for regulating the tasks related to the organisation of the population census as well for defining the tasks of the notaries and that of the heads of the administrative offices in the counties and in Budapest.

(2) Financial assets to cover the costs of the population census should be allocated in the yearly budget.

Árpád Göncz.
President of Hungary

Dr. János Áder
Chairman of Parliament

Preamble to Act CVIII of 1999 regarding the 2001 population[3]

GENERAL ISSUES

Based on item (1) in Section 6 of Law XLVI of 1993 on statistics it is the task of the Central Statistical Office the execution of the decennial full-scale housing and population census (further population census). In Hungary as from 1870 in general with a 10 years frequency regular population census is executed.

The previous full-scale census had been conducted with a reference date of January 1, 1990. The first census of the third millennium is the 14th official Hungarian census and it constitutes a part of the series of worldwide population censuses recommended by the United Nations as from 1950. The countries of the developed world – including Europe – shall conduct a population census or similar operation around 2000.

It is reasonable to realise a population census in Hungary, because it

- gives a unique and comprehensive picture on the size, demographic composition, education, employment, housing conditions, household and family characteristics of the population;
- serves as an indispensable base for the preparation and execution of the political decisions, the information gained are especially important and essential help in forming the geographic, housing, family, social, employment and unemployment policies;
- because the population census besides collecting and publishing data on the country as a whole, on the counties and on the localities is able to present quantified information on any optional territorial unit, including the part of localities. As such the local decision-makers are in a position to better understand the internal structure of the "local society"; they will be able to formulate their arguments for the realisation of the equalising function of the Law on territorial development;
- follows the recommendations of the international organisations both regarding the subjects and definitions of the population census. Consequently Hungary – before joining the European Union – will be able to supply information fully comparable with the respective data of the other countries. This will definitely support our aspirations towards the integration;
- contributes to better understanding of our history; the long historical time-series inform on the changes of the social-economic situation, but also the analysis of the transformation process of the 1990s is of interest. The data might also give assistance in exploring the social, sociological aspects causing the dramatic decline in the size of the population and in the elaboration of the measures for slowing down the former tendency;
- is inevitable that the development of the market economy and that of the information society a resulted in a substantial increase in the data requirements related to the population census. The international experiences support that the population census data are more and more demanded by the actors of the market economy, of the private sector and of the society;
- the data of the prevailing population census are being used for several years by the scientific researchers, serve as a base for establishing the sample of the representative surveys, and constitute the informative source for further studies and analysis on the level of the country the regions, localities, etc. wide and regionally.

A sample survey might be an alternative of the traditional census. Though the essential in the population census is the principle of full coverage. In case of a sample survey covering only a part of the population it would not be possible to use the data in describing the characteristics of the different localities, parts of localities. This means that the local decision-makers would miss even the most useful data for elaborating the projects in the regional development.

Another alternative of the census is the use of administrative registers containing the data on population. As from 1975 there is a population register in Hungary. The population register is an administrative data-base, the data are

[3] Abstracts from the Preamble of the Law XLVI of 1993 on the census 2001 and modification on statistics

not handled for statistics. It is limited in content, only a few data of the persons (citizenship, name, place and date of birth, marital status, mother's name, permanent and temporary address) is registered, consequently it is not fulfilling the requirements of the national and international requirements of the population census. It is not possible to derive information on basic issues such as the characteristics, composition of households, which are important for evaluating the living conditions; crucial information, such as e.g. the educational attainment, the characteristics of the employment, the family relations, the housing conditions of the persons are missing from the population register. Consequently the actual data of the population register can not substitute the population census; the use of these data for statistical purposes – mainly due to the poor content – is very limited.

There are other registers in Hungary which contain information on the different topics of the census (e. g. the data base of the employment centres, the taxation authority, the files of the social security, etc.), but those registers are available only on some definite groups of the population; the content, structure and methodological definitions of the data-bases is different; the linking of the data-bases is technically and due to reasons of protection of personal data almost impossible. Consequently the use of these registers for population censuses is very limited. The administrative registers are being used for census purposes in the Scandinavian countries, where the establishment of the system of registers – by taking into account the statistical requirements too - lasted for several decades. For the linkage of the registers the personal identity numbers are used (allowed by the legislation of the protection of personal data), nevertheless some topics of the census are still interrogated by using questionnaires

At present the population census is the only data-source which might satisfy to meet both on national level and locally the information in any optional combination on the data on persons, families, smaller group of persons, dwellings and residential buildings.

The postponement of the census would result substantial decline of the value of our statistical data stock; it would result in a break of the historical process launched in 1870, especially on local, sub-regional and regional level could result a loss in the data which would hamper the decision-making, would hamper the chances of the integration of the country especially as regards the exchange of information on the population censuses vis a vis the organisations and countries of the United Nations Organisation and the European Union respectively. Last but note least as for the turn of the millennium no information would be available on the characteristics of the population, the housing and living conditions

The population census should be managed according to the Law XLVI of 1993 on statistics, the Law LXIII on the protection of private data and openness of the public data and the Law LXXVII on the rights of the national and ethnic minorities. The legal acts mentioned contain the specifications and describe the guarantees regarding of the data protection, dispose on the sanctions on the refusal of the provision of data during the enumeration, and some other important issues of the census. Despite the fact that the Act compel the data providers for the provision of the information according to the real situation it was not allowed to ask for any documents form the data provider. To answer the so called sensitive questions (nationality, religion, disability) was compulsory, it was allowed not to give an answer to the question.

DETAILED PREAMBLE

Section 1

The Law contain provisions on the reference date and the duration of the enumeration as well as on the legal background regulated by the laws on statistics and on data protection. It defines furthermore that the population census – including the supplementary enumeration – should be concluded by the end of February 2001.

The experience gained at the previous censuses proved that by the optimum duration of the enumeration lasts for three weeks as the widening of the time gap between the reference date and the day of answering the questions of the census by the individuals might result in substantial inaccuracies. To secure the proper execution of the sophisticated and detailed organisational work is also calling for a relatively short enumeration period.

The Law defines the subjects of data providers, i.e. the enumeration should cover the Hungarian citizens living in the country (irrespective of having or not having a registered permanent residence or temporary address), the Hungarian citizens living outside Hungary but having a registered permanent residence or temporary address in the country, the foreign citizens staying in Hungary for more than three months as well as the stateless persons and refugees.

Similarly to the regulations of the registration of addresses even in the census the primary (permanent) and the secondary addresses could be distinguished. The enumeration of the former information as well as that of the title of registration necessary for the intra-and extrapolation of the population is enumerated.

Different addresses of the persons – actual, permanent, second – have been registered. By using the former categories it is possible to allocate the persons into different habitation groups, such as resident, present, registered, etc. population.

The enumeration covers the previous address and the place of birth (in both cases on the level of locality). The first address of the persons is the place of birth which serves as a starting point for defining the incidental migration during life the person. Taking into account that the majority of the persons in the towns (and in the larger localities) is born in a hospital or similar establishment and as such the birth registration is on the locality of the health institution, the locality of the actual address is marked as place of birth. By confronting the locality of the previous (permanent) address and that of the actual address the date and direction of the last migration. The registration of the address one year prior to the census was recommended by the international organisations.

The marital status is always a basic question of the census.

For the better understanding of the demographic and social developments of the country it is important to collect information on the marriages, consensual partnerships.

One of the most important information collected by the census is the educational attainment. The answers given to the questions related to the educational attainment give indispensable information on the wealth of knowledge, accumulated intellectual potential of a country.

The assessment of the economic activity – based on the main source of living of the persons – is a basic task of the population census. Analysis of the data is possible in time series of the country as well as internationally; the categories used in the Hungarian censuses are convertible to the categories applied by other countries.

In case of the economically active population the most important question is the type of occupation. For the exact definition information should be collected on the scope of activity ad on the tasks performed by the given person. The information is necessary for grouping the economically active population into the categories of the revised classification of occupations, elaborated in 1990. The Hungarian classification suits the requirements of the classification used by the European Union.

A substantial outcome of the social and economic transformation is the widening of the forms of employment and as a result of the privatisation and the capital import the change in the employers' structure.

As from the beginning of transformation of the economy the unemployment is an issue of high importance. Since 1949 the programme of census 1990 was the first dealing with the question of unemployment. The programme of census 2001 shall investigate the issue on the basis of the recommendations of the International Labour Office. Worth underlining that only the population census is able to investigate the unemployment combined with other characteristics and thus assisting the elaboration the local employment programmes of the sub-regions and localities.

The evaluation of the entire economic activity of the population it is quite important to collect information on the agricultural activity performed in the year preceding the census.

As far as the state of health of the population is concerned: several of the Hungarian censuses up to 1949 dealt with the issue and the question on disability had been raised in census 1990 too. The respective data are especially valuable for the elaboration of the programmes for improving the position of the persons with disabilities. This type of information might be interested not only for the responsible state authorities but also for the interest bearing organisations of the persons with disabilities. As the state of health is regarded as a sensitive issue it was not obligatory to answer the question.

The question on citizenship is a core topic of the recommendations of the European Union, the respective information is a basic tool for the estimation of the international migration. The question is part of the programmes of the Hungarian censuses as from 1970.

An important part of the anticipated programme of the census is the topic related to the ethnic affiliation and that of the religion, denomination. Both topics should be treated carefully as they are regarded as sensitive issues. The answering the question was not an obligation.

The investigation of the nationality in the Law is in compliance with the UN-ECE recommendation decided by the international statistical conference on ethnicity held in Budapest between 2–5th o September 1992. The importance of the investigation of the religion, denomination is significant as the last inquiry of the subject was only in the course of census 1949. There is no information available on the substantial changes neither on national, nor on geographic level.

The interrogation of the knowledge of languages other than the mother tongue is important not only because it is an indirect indication of the ethnic affiliation but also due to the fact that in the period of preparing to the accession into the European Union the knowledge of languages constitutes an important part of the human capital.

The investigation of the households and families is significant because the households are the smallest economic units, while the families the smallest kin, blood related groups of the society. Undoubtedly the households and families despite the notifications on signs of crisis shall constitute the stable basic grouping of the Hungarian society. This continuity itself calls for the enumeration of the structure, type, living-and housing conditions of these segments of the population. Moreover it is indispensable for studying and elaborating the measures improving the critical population processes in Hungary.

In the last decades – especially in the last years - in the family the structure remarkable alterations ere detected. Like the trends in Western an Northern Europe new forms of families, such as the consensual partnerships had been generally accepted. According to the new investigations in the towns this relation is widely dispersed, the prejudices in the villages are also weakening and it is a reality that the majority of the deliveries of children outside the marriage are realised by women living in consensual partnership.

Another problematic segment of the families is constituted by the parent (widowed, divorced, or never married) living with child(en). The only way to get real information on the living conditions of this population group – and also of the persons living in consensual partnership – is the enumeration by a full-scale population census.

There had been quite substantial changes in the ownership structure, equipment of the dwellings; the infrastructural investments substantially improved the supply of water and gas of the dwellings. The data of census 2001 shall give a comprehensive picture on this development, on the size and structure of the housing stock.

The programme includes the enumeration of the institutional households too. In this regard shall be recorded all the important characteristics – e.g. type, number of beds, information on the buildings of the institution, etc.).

Section 3

The section In compliance with legislation above defines: the duties of the data providers; the questions to be answered obligatorily or voluntarily; the obligation of utilisation of the data exclusively for statistical purposes. The latter secures the data providers that the individual data – which had been registered in any case without indicating the name – will be published only in aggregated forms. The Law underlines that the collected data should be used only for statistical purposes.

Section 4

The Law defines that in accordance with the past experiences the professional management, the processing and dissemination of data is the obligation of the Central Statistical Office. The local preparation, execution of the census – as at the previous censuses - is a duty of the local governments, which practically mean the local administrative organs. The Law nominates for local responsible of the census the notaries (district notaries) of the localities (in Budapest the districts).

The preparation of the census is a time-consuming activity; the geographic preparation itself requires the solving of a number of connected tasks, including the preparation of the notaries and the administrative management of the municipalities, the recruiting, training of the enumerators, supervisors. The success of the enumeration definitely depends on work of the properly prepared staff of enumeration having a full knowledge of the census program and the ability for communicating with the population. The appropriate remuneration of the work performance should be

arranged. The proper organisational and financial management of the work of the 40 Thousand enumerators and that of the 10 Thousand supervisors is a must.

The precondition of the smooth preparation and realisation of the programme is the implementation based on a proper legislation. Therefore the Law should be passed still in 1999 with a short period of entering into force.

Government decree of 76/2000. (V. 31.) on the 2001 population census

The government based on item (1) of Section 6 of the Act CVIII of 1999, modifying the Act XLVI of 1993, on statistics and population census decrees the following.

Section 1

The professional management of the preparation and realisation of the census is performed by the Central Statistical Office (further HCSO). To guarantee the fulfilment of the task as well as for the harmonisation of the activities of the different organisations taking part in the census the Chairman of HCSO will nominate a census inspector in the Head Office and in the county (Budapest) directorate of HCSO.

Section 2

The head of the administrative offices in the counties, in the capital shall nominate a person responsible for the census. Task of the head of the census is to control the timing of the census, in co-operation with the county directorate and that of the regional inspector to co-ordinate the activities on the level of the county.

Section 3

(1) The financial sources for covering the expenses related to the census are allocated to the budget of the HSCO on an estimate designed for the census.

(2) In the different localities (districts of the capital) the notary, district notary – as responsible person for the census in the locality – shall assure the preparation and realisation of the census. In this capacity the notary, district notary

- Is responsible for all the tasks related to the census including the financial management;
- is securing that the assets designated to the census are treated separately in the accounting of the self-government.

The acceptance of financial commitments and issuance of order of payments should follow the general guidelines of the public finances described in the Government decree 217/1998 (XII. 30.).

(3) In the localities with a population exceeding 5000 inhabitants the responsible person for the census in the locality shall nominate an officer of the census.

(4) The financial norms of the notaries of the localities are shown in the Annex of the decree.[4]

Section 4

The methodological guides relating to the preparation and realisation of the census shall be issued by the Chairman of the HCSO according to the timing till December 31, 2000. The guides should contain the tasks, the listing of the responsible functions, the financial regulations, the deadlines as well as the way of solving the potential problems, questions.

Section 5

(1) The responsible person for the census in the locality should act according to the guides issued. The regional census instructor of HCSO and the regional supervisors are authorised to control the professional quality and timing of the work of the responsible person for census in the locality.

[4] See in the Official Journal (Magyar Közlöny), No. 52, 2000

(2) Tasks of the responsible person for the census in the locality

a) nominate a census officer;
b) revise the names of the public places , the numbers of the houses, updating and completing the numbering of the houses;
c) provide the maps necessary for the census;
d) organise the preparations and the realisation of the preliminary census of the seasonally used holiday houses;
e) update the list of addresses by local inspection;
f) group the addresses into enumeration districts, to demarcate the enumeration districts on the maps;
g) organise the work, training of the enumerators and that of the controllers of the enumerators, to supply the identity documents, forms, sheets;
h) inform the inhabitants with the usual means and media of the locality;
i) ensure the execution the census in the quality and time defined by the Act;
j) arrange the documents of the enumeration, to hand over on time to the county directorate the questionnaires of the enumeration, the maps showing the demarcation lines of the different enumeration districts;
k) arrange the financial issues related to the persons taking part in the preparation and realisation of the census.

Section 6

(1) The work of the field instructors of the census will be assisted by the set of regional supervisors set up from the collaborators of the county directorates (of HCSO).

(2) Tasks of the instructor and of the regional supervisor

a) to ensure the communication between the central and local organisations responsible for the preparation and execution of the census;
b) complete implementation of the instructions specified in the guidelines keeping contact with the responsible person for the census in the localities;
c) to support and control the work, co-operation in the organisational, co-ordination activity of the responsible person for the census in the localities;
d) to ensure the conformity between the preparation and the execution of the census;
e) to control the working frame, the professional training and activity of the enumerators;
f) to take part in assuring the technical conditions of the preparation and execution.

Section 7

This decree shall come in force on the 8th consecutive day of declaration.

Viktor Orbán
Prime Minister

PREPARATION AND ACCOMPLISHMENT OF THE DATA PROCESSING

Monitoring system

In the process of the population census two monitoring systems were used. During the preparation and enumeration of the census the Presidency of the HCSO received updated information on the actual state of works based on regular reports of the regional directorates submitted – on E-mail or in other written form – with specified content to the Census Department. Besides there had been applied a computer-based monitoring program which as from the reception of the completed questionnaires together with the attached documents enabled to follow the steps of the processing by enumeration districts. The first step of the computer assisted monitoring system was the input of the preliminary data of the enumeration districts. The data of the execution of the different stages of the census were entered into the monitoring programme.

Preparation of the data capture

At the end of the enumeration period the properly filed questionnaires had been delivered to the respective regional directorate of HCSO. After collecting the completed questionnaires a detailed revision of the completion as well as a coding of the open questions followed. The coding had been performed by the staff of the HCSO, their job performance was controlled by a group of supervisors. The persons engaged in coding and revision of coding had participated in a training course. The coding of the open questions was based on manuals containing several thousands, in some cases several ten thousands of categories on the different topics. For facilitating the job computer assisted search-programmes had been elaborated.

At the revision of the completion of the questionnaires the physical condition was also qualified. The questionnaires strongly damaged (torn, rumpled), dirty or corrected in the cells of the identification number should have been copied onto a proper sheet of the questionnaire. Thanks to the prudent preparation it was possible to reduce the quantity of enumeration districts not suitable for automatic data capture so that by the end of the day the share of the extraordinary data captures remained under the anticipated level.

Taking into account that the coding and revision of coding is regarded as handling of the data on persons in accordance with the respective legislation the list of the persons had been entered into the central register on data protection.

Selection of the technology of data capture

The different stages of the preparation and processing of the data of the first population census of the millennium had been unlike as those of the previous censuses:

- the geographic preparation by using the stock of addresses of the 1990 census was supported by personal computers; the shortened stock of the basic addresses collected from the updated stock of addresses served for securing the uniformity of the identification numbers of the addresses subject to the census and that of the identification numbers enumerated on the address as well as for the checking of the totality of the questionnaires;
- for the data capture the optical code identification system (OCR) technology – a method used already by several countries – had been applied;
- in deciding on the forms and shapes of the questionnaire the requirements of the OCR technology had been taken into account;
- the stages of the work were monitored as from central collection of the questionnaires up to the production of the electronically processed data-base.

Within the organisational frames of HCSO a Census Committee for the harmonisation of the General Agricultural Census (GAC) and the population census 2001 was set up. The Committee based on the documents on census

2001 submitted by the respective experts investigated the alternative solutions – traditional manual or OCR method – for the data capture. It became obvious that – due to the shortage in adequate capacities in the country – the traditional method of the data capture would not allow to resume the job within the required time, it would not be possible the guarantee the desired level of the data protection, secrecy as well as the proper handling of the data. Moreover the international practices proved that by using the OCR technology the data capture can be performed within shorter time limits and in a better quality. Due to the quantity of the information to capture, the required quality as well as the size of the necessary investment it was inevitable that the selection of the supplier of the technology should be realised by tendering. In November 1999 the President of HCSO based on the proposal of the Committee decided that the data capture of the census will be accomplished by use of the OCR technology.

Process of public procurement

On May 16, 2000 the HCSO announced a public procurement tender. The tender for the elaboration of the methods of data capture, implementation and running of the OCR technology to permit the processing of the data of the census was called On March 16, 2000. In the evaluation of the offers submitted by the applicants besides the specialists of the HCSO also external experts familiar with the OCR technology had participated.

In evaluating the offers the HCSO judged the following:

- accuracy of the details of the offer;
- quality and content of the proposed technical solution;
- outcome of the comparative evaluation of the offers;
- financial conditions;
- time requirement of the accomplishment of the job.

The evaluation of the offers was the task of the Evaluating Committee set up in the HCSO. The offers submitted to the Evaluation Committee had been valued separately. As a result of the evaluation the offer of Bull Hungary Ltd. had been accepted, the result of the tender was published on July 18, 2000. After publishing the results of the evaluation the applicants not qualified submitted a request to the Arbitrary Committee on Public Procurements. The Arbitrary Committee on Public Procurements revised the evaluation of the HCSO. The HCSO lodged an appeal with the Budapest Court. The latter obligated the HCSO to form a renewed Evaluation Committee and as such to a repeated evaluation. The renewed Evaluation Committee qualified also the offer of Bull Hungary Ltd. as the most favourable. The decision had been accepted by the Evaluating Committee of the Public Procurements and it had permitted the signing of the contract.

Based on the permission of the Arbitrary Committee of Public Procurement on November 6, 2000 a contract between the HCSO and Bull Hungary Ltd. for the elaboration, execution and running of the data capture of the questionnaires of census 2001 was signed. According to he contract Bull Hungary Ltd. had taken the obligation of processing the questionnaires of the population census within the defined deadline; the task starts with the delivery of the revised questionnaires to the place of the data capture and ends with the pulping the questionnaires processed.

Tasks related to the OCR technology

The basic requirements of the accomplishment were the following:

- to set up the unit of the data capture, the formation of the IT infrastructure, the recording (capture) of the information recorded on the questionnaires by the OCR technology, the control and adjusting the registered data according to the requirements of HCSO;
- the planning and elaboration of the application software necessary for the data capture as well as adaptation, harmonisation and integration into an organic system the software delivered by the French La Poste.

The DocuPost software contains the following elements:

- reading (scanning);
- processing the pictures;

- character (marker) identification based OCR technology;
- treatment of irregularities;
- video-coding;
- data transmission to the central architecture.

The reading of the paper based questionnaires was followed by the digitalisation of the data and the further step was the characterisation of the OCR picture-files. It had to be assured that the scanning technology gave a graphic appearance of adequate quality i.e. the stock of characters generated by the OCR function should reflect the recorded data with a given correctness. The value of the correctness was:

- in case of marker identification 99,9 %,
- in case of hand-written values 96,6 %.

Further important requirement was to respect of the dead-lines; to follow i.e. direct the individual activities; to assure the quality; to safeguard the questionnaires and the digital data; to develop and operate the system of production; to guarantee the contact and communication with the HCSO and the monitoring system. A basic novelty was that – for first time in the history of the Hungarian censuses – the work of the experts trained for editing was an integral part of the process of data capture.

In case the questionnaires contain inaccurate or note properly fields the result of the OCR shell record incorrect information. The intention was to correct the so called logical errors (i.e. those reflecting to inconsistencies between the answers) still in the OCR centre. It was the desire of the HCSO to set up a team of experts recruited from the staff of the HCSO. The latter were qualified enough to disclose the errors and to execute the necessary corrections by using the picture-filed of the scanned questionnaires.

Despite the fact that both the HCSO and Bull Hungary ltd. have had independent team for managing the project, a joint project team consisting of the persons delegated by the partners had been formed. The latter – within the limits fixed by the employers – had worked independently until the closing of the working phase.

The process of capture and processing of the data

The shaping, construction and printing of the personal and housing questionnaires, that of the bordereau containing the identification numbers of the enumeration districts was prepared according to the requirements in quality and in appearance demanded by the OCR technology.

The smallest unit of the processing was the aggregate of the personal and housing questionnaires of a particular enumeration district. The bordereau contained the number of the personal and housing questionnaires of the enumeration. The questionnaires had been delivered from the Budapest and county directorates of HCSO to the OCR centre in delivery parcels; both the timing and the size of the parcel (the number of questionnaires delivered) was strictly defined.

The data capture followed the above sequence and timing. At first a representative sample of the questionnaires had been processed. The initial delivery plan – partly for equalising the peaks in the working load of the regional directorates – had been modified after resuming the data capture of the representative sample. The corrected timing could be kept; finally the job was resumed two weeks before the projected dead-line.

After closing the processing of the representative sample the regional directorates were informed on the quality of the enumeration and coding, on the most common errors, on the enumeration districts where critical faults were detected. The latter resulted in a continuous improvement of the collected material.

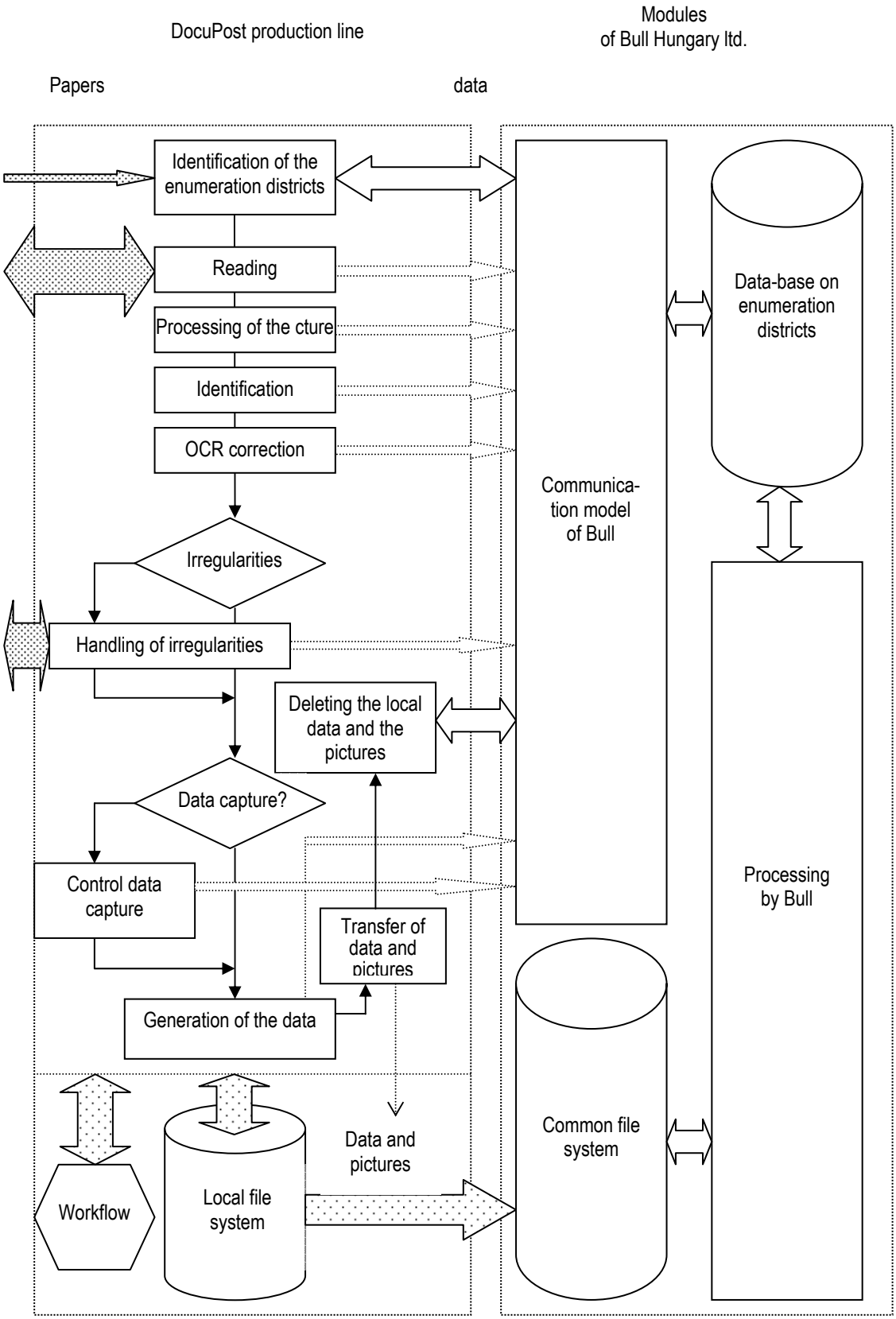
The steps of the processing were as follows:

- filing: the filing of the questionnaires was based on the cod bar of the envelopes (containing the personal and housing questionnaires of a given enumeration district), than the questionnaires had been stored in the input-storage room. The concrete place of storage was registered by a PC;

- preparation for reading: the documents (sheets) were unfolded A/3 formats into batches by enumeration districts and for facilitating the follow-up of the documents a mark (so called case mark) was applied;
- the use of the DocuPost system: for the scanning of the questionnaires scanners of high production capacity were used. The counter of the scanner gave information on the number of questionnaires detected, the latter should have been the same as the number of documents of the bordereau of the given enumeration district;
- data and picture acceptance
  - converting the A/3 pictures into A/ format pictures;.
  - identification of the markers and hand-written data with the help of the OCR-technology;
  - control of the characters generated by the process of identification by using the set of values, logical control rules and completion requirements defined by HCSO; correction by interactive video-coding (monitor applied);
  - handling the exceptional cases such as creased, spotted paper, hardly adjustable pictures;
  - for the quality control of the identification, manual data capture of 1 percent of the documents of the enumeration districts based on a random selection;
  - the data and pictures produced were stored in a data-base for the central processing while the scanned questionnaires were stored in the output storage room (see the process of the questionnaire and the links between the two systems in Figure 2);
- primary control: the data had been checked on the base of the logical interrelations fixed by HCSO. The errors automatically reparable have been collected by the correction mechanism built into the system of logical control;
- primary correction: correction of the logically detected by the defined formulas was followed by a repeated control and correction, if necessary; theoretically all the logical errors were eliminated;
- control of completeness: the questionnaires of the faulty enumeration district have been returned to the expert group which was responsible for the correction of the first error in the package;
- correction of completeness: in case there was different information between the basic addresses listed on the bordereau and the addresses marked on the questionnaires or the identification number was incorrect the experts should have to correct the data either on the questionnaire or on the bordereau;
- control correction by the experts: in case the completeness of the enumeration district was correct the questionnaires have been checked by the expert groups in the following order: household and family, demography, occupation, education, other. A repeated checking followed each of the corrections. Only in case the questionnaires did not contain “not acceptable” errors or “faults cancelled by the chief of the experts” they could be passed to the next control group;
- analysis of the errors: the HCSO checked all the data of the delivery unit already controlled in the processing centre. In case errors, logical inconsistencies were detected in an enumeration district the delivery unit was rejected and returned to the expert group;
- control and transfer of the pictures: the pictures of the enumeration districts handed over to the HCSO had been controlled by the expert of HCSO on a random base. Provided the quality was appropriate the pictures had been copied to WORM and the latter transmitted to HCSO;
- elimination, milling: after the approval of the data and pictures of the enumeration districts by the HCSO the questionnaires had been eliminated, milled.

Figure 2

Flows of the paper and data transfer



Hardware of the capture and transmission of data to the central hardware

The system of data capture contained the following basic servers:

- data-base server: a (T0SU01) UNIX based ORACLE data-base dispatch server
  - the server was designated for the primary input of data from the XML files received from DocuPost system as well as for the expert's control;
  - configuration: Bull EPC-400 with 4 processor, 0,75 Gbyte memory, 2*9 Gbyte hard disc, 8mm 7/14 Gbyte DLT, CD-ROM, DAS 2000 disc array, 2 Mbyte cache memory, 9*18 Gbyte hard disk;
- data transfer: the corrected information captured by enumeration districts had been copied to CD-ROM delivered to HCSO;
- picture servers (T0SK01)
  - the servers stored the pictures taken over from the DocuPost production line servers until the experts did not close the control and correction i.e. until the transfer of the data to HCSO ;
  - configuration: 2*Pentium III, 512 Mbyte memory, 150 Gbyte hard disc, RAID commander;
- Domain Controller (T0SP01)
  - it performed the tasks of the Domain Controller, handled the users' data-base and carried out the administration of the network.;
  - configuration: Pentium III, 64 Mbyte memory, 30 Gbyte hard disc.

Means of filing, storing

The delivery (processing) units containing the questionnaires were given a bar code which had been controlled (read) at the start and the closing of each stage of work (storing, preparation, scanning, handling the exceptional cases, correction, elimination, milling).

Hardware of the identification, control and editing

Taking into account the security requirements of the processing of the questionnaires the production system was based on four DocuPost production lines running simultaneously. The base equipment of each of the lines was a Kodak 9500 scanner based on Windows 2000 software. The configuration of the lines in more detailed:

- server of the production line (TnSB01): as a part of the DocuPost system directed the work stations in scanning and processing of the pictures, stored temporarily the data and pictures produced by the system;
- scanning work station and Kodak scanner (TnWL01): directed the scanner;
- picture-processing and OCR device (4 in each production line) (TnWF01...TnWF04): the four work stations corrected the deficiencies caused by faults in reading (inclinations, deformations). The device was devoted also to character identification;
- handling of the exceptional cases (with flatbed scanner) (TnWK01): for handling the problems occurred in reading (creased, spotted paper, hardly adjustable pictures);
- register device of the production line (one for each line) (TnWA01): to complete the local administrative tasks.

Hardware of the subsystem of the expert group

The correction of the substantial faults, deficiencies requiring special knowledge was performed by the experts delegated by the HCSO. The respective work was supported by 20 workings stations (PC-s), working a Windows 2000 environment, each with a 21" monitor.

Transmission of the data to the HCSO

A detached working station (T0WC01) was used for copying the correct data to the CD-ROM.

Transmission of the pictures to HCSO

The scanned questionnaires had been copied to 5.2 Gbyte capacity WORM-s on a separated work station (T0WW01).

The structure of the system is shown in *Picture 3*.

Human resources and software in the data capture

The data of the questionnaires and the data necessary to command and follow the work-flow had been stored in a UNIX based Oracle data-base. In the control performed by experts more than 300 Delphi based control programs applying PL/SQL were used. The other servers were based on Windows NT, the PC-s applied the Windows 2000 operation system. After running-in the production the accomplishment of the job employed a staff of 160-170 persons in two shifts. In each of the shifts 40 video-coder and 22 experts of the HCSO were engaged.

The whole process of the processing of the questionnaires had been followed by the *Workflow* system elaborated by Bull Hungary ltd. The centralised data-base was stored on the Unix/Oracle server. This is a unified and well arranged system on the work-flows and the connecting activities, administrations:

- it followed the working procedures and activities in detail;
- secured and harmonised the different elements of the system.

To follow the working procedures was aimed at supplying continuously the responsible persons in the functioning of the system as well as those in controlling the production with precise and detailed information on the state of production. The Workflow system commanded the harmonisation of the different software components (programmes) in a way that there was a steady communication with the different modules of the subsystems.

The Workflow recorded different registers, filed the occurrences, incidents and followed the developments of the data-base. It registered the competences, journalised the connecting and disconnecting of the participants into the respective processing phase. As far as the corrections are concerned it had been registered the name of the expert, the exact time of the correction, the denomination of the field corrected and the false and the corrected value. At defined intervals the Workflow had sent information on the developments to the monitoring system of HCSO.

Subsystems of the OCR

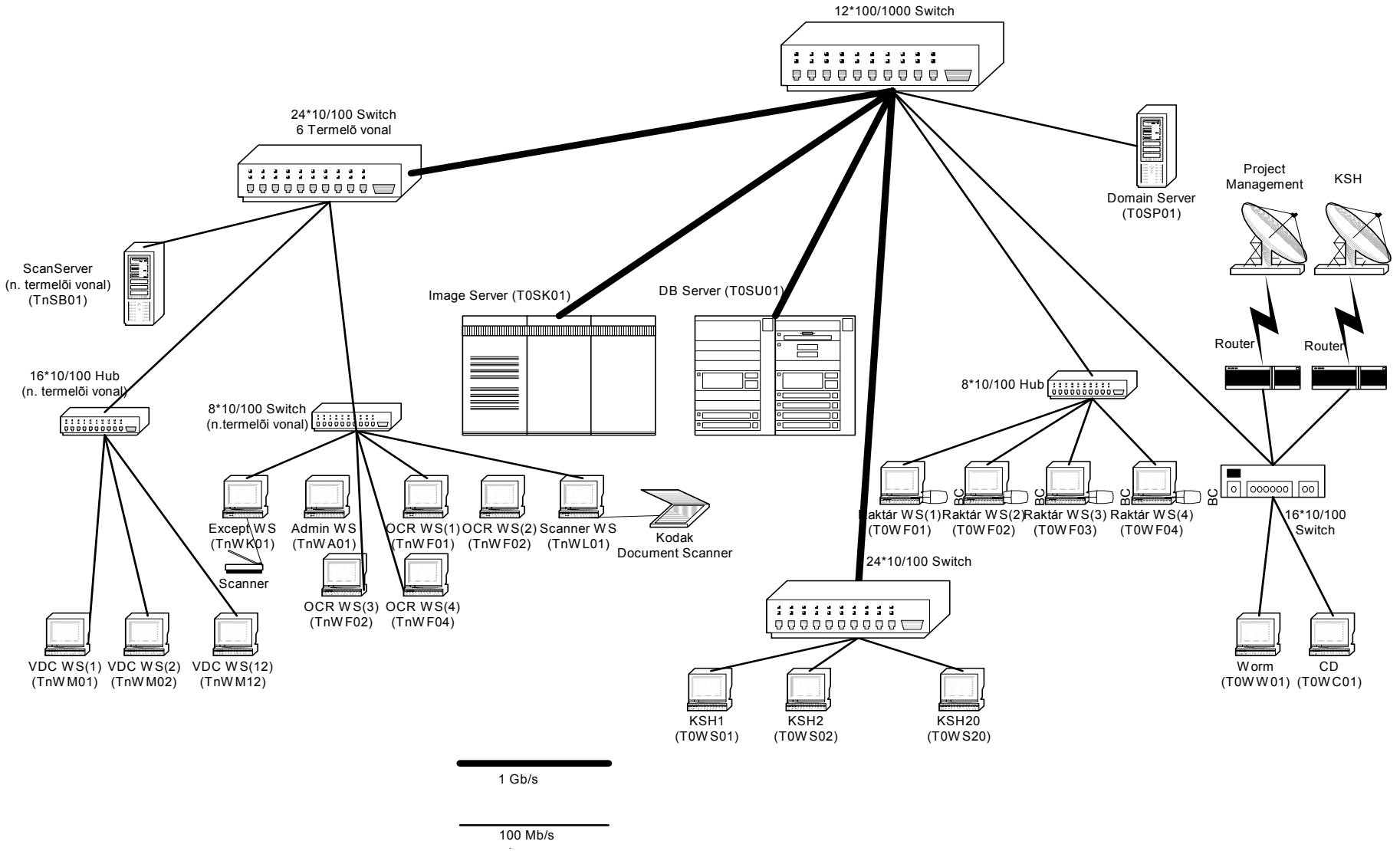
He OCR system contains the following subsystems:

- subsystem for reading (scanning)
- subsystem for identification,
- correcting, control subsystem;
- management, supervision subsystem;
- subsystem for data output.

The subsystem for reading (scanning) converted the information of the questionnaires into pictures. The process was the following: the defined batches of the questionnaires have been digitalised page by pages with a high performance scanner than the digitalised pictures have been stored and sent to the next phase of the processing.

Figure 3

Components of the OCR hardware



The requirement of the optical reading was that the documents met the strict and special formal and quality requirements. The formal and quality requirements were as follows:

- quality of the paper;
- punctual positioning of the field of markers;
- printing the text irrelevant to the processing (not to be scanned) with a blind tint (red in the given cases);
- correct size and distance between the markers;
- uninjured documents;
- quality of handwriting (the shaping of the characters, the colour of ink of the ball-pen, the thickness of the written characters, respecting the frames of the fields for handwritten information, etc).

The subsystem for identification with the help of the formulas for identification converted the pictures into digital characters. The different character identification systems are suited for recognising different characters. The application of a given identification software depends on the feature of the characters; one of the software is suitable for recognising the written characters, while the other for identifying markers.

The identification subsystem consists of a frame programme and the recognising programs activated by the former. For recognising the different fields – as both written characters and markers were used – different recognising programmes have been applied.

The correcting, control subsystem secured the correction of the following errors:

- erroneous information recognised and labelled by the recognition programme and
- semantic and syntactic errors not identified by the recognition programme.

In the first case the fields marked with a special label automatically appeared on the screen (of the monitor) at the working station responsible for the correction and the correct value of the given field had been captured with the traditional manual method. This task did not require special knowledge as regards the topics of the census.

In the second case the error could be filtered only upon considering the logical or other (i.e. code-interval) relationships. The task requires experts with definite special knowledge. The errors of this type had been grouped based on the subjects, thematic groups and the correction had been performed by the expert specialised for the definite topic.

The subsystem correction fulfilled the task of the primary control, the expert's control and the correction. The errors explored by the logical control together with the fragment of the (scanned) questionnaire were shown on the screen of the monitor of the person responsible for the correction. The expert entered the necessary correction with the above manner. (See *Figure 4.*).

The HCSO for the corrections defined five topics with a definite sequence. The system should have to be formed in such a way that given corrections should have been done by the defined working station were from the questionnaires should have been transferable to other working stations. The sequence of the controls was as follows:

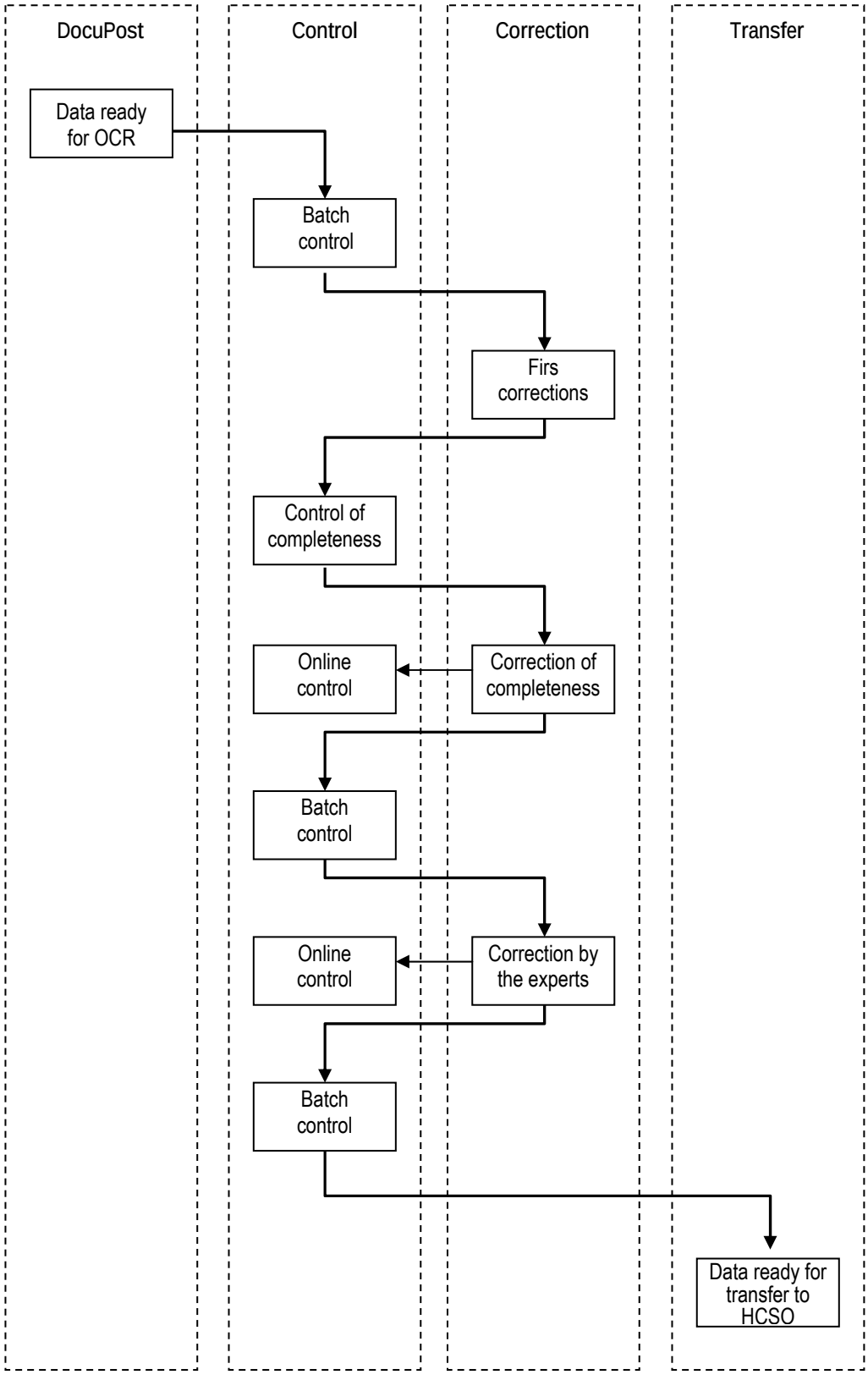
- completeness;
- household and family structure;
- demographic questions, addresses;
- main source of living, occupation;
- education and other topics.

Hierarchy of the experts:

- chief of the leading experts;
- leading expert;
- correcting expert.

Figure 4

Flows in correcting and control subsystem



The correcting experts corrected the errors explored in the given group. The number of experts in a team varied according to the number of errors and the time requirement of the corrections. Each group was managed by a leading expert who was responsible for the allocation of work as well as for deciding on the corrections of the doubtful cases.

The handling of those complicated cases in the process of data capture which could not be settled by the leading experts was the task of the chief of the leading experts. The chief of the leading experts besides the solving the complicated cases was also responsible for the compliance with the dead-lines, the organisation of the daily work even by reallocating the leading experts. There was a permanent contact between Bull Hungary ltd. and the chief of the leading expert, the latter was obliged to keep informed the HCSO on the actual stage of the work performance.

The functioning of the subsystem for data capture management had been directed by a supervision subsystem. The latter followed the data-flow, the functioning of the different components of the system and by taking into account the values of the production was able to intervene into the processes. The subsystem controlled the quality, gathered basic information for statistics on the processing of the questionnaires, measured the work performance at the different working stations and the level of completion of work. The supervision system supplied information to the central monitoring system in every second hour.

The final results of the data capture had been produced by the subsystem for data output. The subsystem managed the transfer of the data captured correctly and corrected by the experts to the next phase of the processing of the population census. As a by-product of the OCR technology pictures were produced which with the help of an appropriate device/technology can be recovered and further analysed. The picture-files are the photocopies of the original (scanned) documents.

Central data processing

Processing of the representative sample of questionnaires

The central data processing started with the procession of the representative sample. The first task was the definition of the system of control and correction of data. Taking into account that contrary to the previous censuses there has not been selected a separate sample but the representative sample used remained part of the census material the Census Department of HCSO decided that only those questionnaires will be processed as part of the sample where there are no errors detected in the answers given to the questions for publication.

A not proportionate 12 percent sample of the questionnaires was selected. In grossing up the sample the multipliers used were different by (types of) hosing units. Each person in one particular housing unit – consequently later on the households and families – was allotted with the same multiplier. The tabulation of the data-base calculated by grossing up the representative sample started in November 2001.

Processing the census as a whole

The processing started with the acceptance of the data and was followed by the logical control and the correction of the errors. In the course of a population census in general it is necessary a control and correction system consisting of several thousands of logical rules, interrelations. Due to the fact that the enumeration programme of the 2001 census was significantly broader than that of the previous censuses the size and complexity of the system of rules substantially exceeded the one applied in 1990.

The practice of the previous censuses the Census Department of HCSO (or its predecessor) was the one who ordered, while the prevailing IT Department of the HCSO the supplier of the processing of the census. In the processing of census 2001 a system was introduced where the statistician and the IT expert have been regarded as equal partners. In this model the statistician had been supported by IT programmes not applied earlier. The latter facilitated the direct and autonomous work related to the qualification, correction and analysis of the data. The HCSO for improving the efficiency of work – unlike the previous regulation – authorised the computer specialists elaborating the programmes to enter into the computer system of the HCSO from a remote computer (e.g. to perform a distance work). The given experts could control the running of the actual programme and to intervene if necessary

from their homes. The former technological background facilitated the continuous – even round the clock - functioning of the data processing systems of the population census.

The given integrated IT technology required a more intensive co-operation between the experts of the two departments both humanly and professionally. The staff of the two departments could entirely face this challenge. The division of work as from the point of view of the data processing is as follows:

- the task of the Census Department was to set up the system of rules exploring the inconsistencies between the variables, to define the necessary formulas, algorithms, to elaborate the rules for ensuring the compliance with the concepts of the publication and to control the concrete values of the data;
- the task of the IT Department was to explore the inconsistencies in the data stock, on the base of the system of rules set up by the Census Department; by taking into account the defined corrective algorithms being able to eliminate the inconsistencies and the lack of data to write and to run efficient programmes; to develop the new variables adjusted to the definitions and concepts of the publications and to present the tables ready for printing.

In 2000 the respective organisations initiated the elaboration of several expedient IT applications. By performing the job the experiences of the previous censuses – where the challenges from the point of view of informatics had been similar – were taken into account. The organisation of the co-operation of the two interested departments had been renewed furthermore the new thinking, approach in the elaboration of the IT applications permitted the renewal of the methods in elaborating the new applications and in improving, further developing the existing ones. As far as the target-oriented applications are concerned the following topics are important: the meta-system, the wider, increasing use of SAS applications, the telework, remote job performance as well as the recently developed frame for production of tabulations (FPT).

The meta-system developed for the processing of the population census is the result of a long-lasting work process. The first appearance was the Population meta-base describing the 300 control rules elaborated for the OCR based data processing. For loading and updating the meta-base a so called full-screen application was elaborated which resulted that the definition of the control rules – including the definition of the names of the variables, the relation marks and/or the relations between the variants - became the direct competence and task of the statisticians. This resulted in eliminating the possible misunderstandings. The former meta-base served as the basis for establishing the meta-data for the central control of the entire data stock of the census. The final meta-system contained several thousands of control rules.

One of the solutions for eliminating the internal inconsistencies among the data on persons and dwellings is the definition of rules for direct correction. These rules had been stored also in the meta-data base. The statistician was able to define the procedures of the correction with the help of an end-user application where the meta-base was commanded by a menu. The end-user should input the identification of the correction rule and the respective solution for the correction. As a result the meta-data system developed for the census stored not only static data but also the information describing the quality of the data, the rules for correcting the data as well as the formation of the new variables. The meta-data system assured the unambiguous identification of variants and the homogeneity of the redundant variants in the different data structures.

The elimination of the complicated cases – where the inconsistencies of more than two variables had to be solved - had been assisted by the system of programmes of the imputation method. The procedure is based upon the concept that the faulty combination of the codes of the original variables might be corrected by replacement with the correct value of the best combination of the similar variants.

The basic variants - 183 of the personal questionnaire and 32 of the dwelling questionnaire – were stored in the *SAS data bank.*. For the tabulation programme altogether six data structures (dwelling, building, household, family, persons, commuting) had been formed which obviously contained the redundant variables too. The number of the variants and indices exceeded the number of the base variants.

While from the point of view of the IT experts the production of the so called control tables is a critical element, it is an important element for the statisticians for getting acquainted with data. For supporting the formation of the (communication) tables the Enterprise Guide module of the SAS environment had been connected to the end-user in a way that the statistician was able to produce the tables on the PC in Windows environment and tools. The pro-

cedure was as follows: for the necessary logical and syntactic tests a sample had been chosen resource codes dedicated to the Census Department had been stored on a common field of the two departments. The IT expert launches the running of the different UNIX programmes on this common field and on the following day the statistician will be able to deal with the results of the procedure.

For sake of accelerating and securing the continuity of the work it was necessary to facilitate the timed running of the control tables. By this solution the disk transfer address did not hamper the daily work of the programming and corrections. The tele-management (telecommuting) permitted by the HCSO enabled the remote job entry and the control of the timed loading and executing of the programmes in the evening, during the night and on the weekends. It was possible to control the loading, to intervene and restart the programmes in "dead hours" As result the daily workflow in the IT department became more fluent and it was possible to connect the consecutive stages within a shorter period of time.

Already at the previous census it was regarded as a significant achievement the production of printable communication tables, though the production was a result of series of linked transmissions with a long time for getting trough the press. Even in case of census 2001 it was required to produce tables ready for printing yet there was a substantial change in the realisation; by the application of a unique solution the automated production of tables was realised. With the help of the VBA application Frame for Production of Tabulations (FPT) developed by the IT Department, the experts of the Census Department were capable to prepare the sheets of the tables according to the standard Word styles in ready for printing form. The *FPT* generated the sheets into templates and the statisticians should have to define (code) the content (frequencies, values, indices, relative values) of the different cells. The FTP generated the series of the tabulating programmes on the basis of the former templates and a UNIX application produced the values of the cells. The FTP in the next step by inserting the data of the cells into the Word tables produced the printable tables. The edition of the final forms of the publications – including into the volumes the retrospective data – had been performed at the Census Department the software developed at the Department.

The FPT based on the system of cross-references, administers the tables with the same vertical and/or horizontal headings, as a consequence any correction should be done only once. The FPT registers the level of readiness and the access by individual tables. The application face was the full screen of the monitor of the statistician.

The fulfilment of the task required significant IT developments. Only for picturing the size: for the production of the tables of the sample 300 programmes while for the elaboration of the full-scale data-base 500 programmes had been prepared. Parallel with the paper-based publications there are published on the home-page of the HCSO the volumes of the census. The application enabling the interactive navigation on the basis of the map of the country had been developed in the Census Department of HCSO.

The above software development was supported by the hardware provided by the IT Department of HCSO. The Census Department performed the task of his power and authority with a dedicated NT server, the data-base was stored on a dedicated UNIC server. The latter secured the registering of the accesses and the daily archivation, saving of the data.

IT developments at the Census Department

In the sake of the quick and more adequate data processing and dissemination besides the central IT developments it was necessary to develop some appropriate tools for the evaluation, analysis and publication of the data at the Census Department too. The main developments were as follows:

- elaboration of the software converting the paper based data stock into files for dissemination on CD-ROM-s;
- GIS applications, elaboration, adaptation, and improvement of GIS programmes, GIS support for the navigation;
- development of a software for the graphic editing;
- development of the software producing the printable tables and the editing of the retrospective data combined with the respective information of census 2001;

- development of the tools and software for the graphic editing interpretation of the home-page of the census data as well as all the information on the activities, publications, etc. of the home-page of the Census Department.

The graphical developments besides facilitating the screen editing assured the data files for the preparations of the high-quality printing technology.

COMMUNICATION OF CENSUS 2001

In the 1990s the so called *public relation* activity, the communication with the population had become as an independent profession, activity. While in 1990 the respective work could be performed by the HCSO itself by the end of the 1990s an action like the population census could have been managed only in co-operation with a company qualified for the job. In March 1999 for solving the planning and realisation of the communication of the 2001 census the HCSO – in the process of a simplified public procurement – closed a contract with a specialised company. The HCSO defined the communication company should closely co-operate with the Census Department responsible for the preparation and execution of the programme.

Planning and realisation

The communication programme started two years prior to the census. Compared to the previous censuses this was a new situation as the planning and realisation of the communication programme had been performed parallel to the development of the professional programme of the population census, the legal preparation and the fulfilment of the additional tasks. It was a new development the HCSO managed at the same period of the year another important survey, the general agricultural census and the communication concept of the latter was implemented also by the same agency. This was partly favourable as some of the methods applied (e.g. the utilisation of the green telephone number) had been tested prior to the population census but on the other hand the simultaneous accomplishment of the two tasks generated a heavy burden for the experts of the company, consequently they could not concentrate on the communication of the population census.

It was favourable that a census committee had been set up for the co-ordination of the two censuses. The committee was designated to discuss the problems emerged and to submit proposals for the solving the problems to the Chairman of HCSO.

In July 1999 two important decisions relating to the communication were taken. The management of the HCSO accepted the same symbol (logo) already applied at the census 1990 as well as the slogan of the census “Everybody counts!” The communication company proposed the application of a “secondary symbol” for securing the uniformity of the publications of the 2001 census. By the summer of 1999 the editing of a handbook “Population censuses in Hungary” had been started. The publication was a basic information source for those working in the media as well as for those engaged in the organisation of the census.

By August and September 1999 the most important communication tools of the pilot census were available: the tools (ball pens, suitcases) of the enumerators had been tested, the leaflets, internal and external newsletters had been finalised, the local media had been contacted and the staff of the two directorates allotted to conduct the pilot census obtained the necessary communication skills. As the most important communication ways and means had been tested, the pilot census is regarded as efficient also from the point of view of communication. The first concrete information to the public was a result of the articles, news sporadically published in the mass media. The leading experts of the population census assigned for the communication have been trained for the public performance on a communication course.

The final programme of the communication had been divided into three phases: the introductory, the intensive and the clearing phase.

The aim of the introductory phase was the efficient information of the different target groups on the basic particulars on the population census. The main steps of the phase are as follows:

1. Several printed publications for giving information to the professional and general public have been issued.
   - Approximately 10 000 copies of the volume “Population censuses in Hungary” have been published. The book informed the professionals, the persons taking part in the technical preparation of the census on the aims and necessity, on the history, the necessary preparatory tasks, the realisation of the population censuses as well as on the issue of the protection of personal data. Information was given

on the legislation and the proposed questionnaires of the census. The book at the same time served as a base for the documentary film shown in the intensive phase by several TV channels.

- It have been already detected at the previous censuses and also the investigations of the communication company proved that the information, motivation of the younger generations on the population census are weaker and more imperfect than that of the average citizen. One of the best publication was the "Student's pocketbook 2000–2001" prepared for this group of the population combined efficiently the professional and popular approach to the census.
- In the implementation phase there was a steady intensification of the sensitivity of the population in regard to the protection of personal data consequently it seemed necessary to deal with the issue in a separate publication. The book "The protection of personal data in the legislation of the Hungarian censuses" gave a detailed picture to the professionals, the representatives of the media on the handling the issue of the data protection as from the very beginning of the Hungarian censuses
- The Statistical Review (publication of the HCSO) like in the case of the 1990 census dedicated a special thematic issue to the 2001 population census. The special issue printed in larger number of copies than the average and has given useful information to the professional circles interested in the census.
- Internal and external newsletters were circulated, a special newsletter dealt with the census of the holiday houses. The newsletters gave updated information on the progress, on the different identity documents, on the green number and topics of the census
- Special newsletters have been distributed on the programs, events where a larger mass of population have participated. Worth of mentioning the magazine "One, two, three…" published on the site of the different road-shows as well as the special issue of the magazine prepared for the sport festival organised. The magazines contained the main issues of the newsletters and the articles dealing with some interesting questions of the locality (county) of the respective event. The public was informed on the programs, events via leaflets.

2. The enumeration of the holiday houses was a special communication exercise. That was the start of using the leaflet designed for the on site information of the population, the launch of the information of the local and countrywide media as well as the application of the "green number" designed for the interactive information of the population.

3. High importance was devoted in the communication plan to the events requiring high financial resources but involving large number of people as well as to the meetings of the high-level professionals. From the planned events, programs 15 Danubius road-shows, and the sport festival in September 2000 have been realised. The local and nationwide quiz of the students, the students' contest and the scientific conference had been postponed due to the pressure of time, the high workload of the census professionals and the financial restrictions.

   - The information communicated by the programs reached on an average 15 000 persons on each of the 15 localities of the road-show. The audience most probably gave a proper representation of the population living in the given localities. The reporters of the radio informed the public on the preparation for the 2001 census, on the topics of the questionnaires and on the other important issues of the population census in the frame of a high quality program, interest interviews and radio plays. For raising the efficiency of the communication a quiz "Let's count together" with the questions dealing of statistics and population census had been organised. The information program had been supported by distributing advertising leaflets and gifts.
   - On September 9, 2000 the closing program of the introductory phase was held in the sculpture park of the Népstadion with the slogan *„Move on Hungary, Population Census 2001"*. By making use of the popularity of the sports, the idea of organising the event was to open the door for the providers and users of the data, for the politicians and the representatives of the media to get in contact with each other and to tune the population for the forthcoming census. As the participation was below the expectations the program did not fully comply with the expectations.

   In October 2000 the intensive phase of the communication was launched. As from this date the traditional forms and means of the communication technology (i.e. movie spots, posters, adverts) were utilised.

By taking into account the experiences of census 1990, for assuring the unified communication on the census already at the very beginning of the introductory phase a press material had been prepared in the form of questions and answers. The series of the questions and answers have been continually updated by the Census Department of HCSO; the last version was published in November 2000.

Prior to the preliminary census of holiday houses a so called backstage conversation was started in the course of which the journalists have been supplied with updated information on the steps in organising the network of the enumerators, the training of the participants, the formation of the questionnaires and the different actions in the communication campaign. The participants could utilise as background materials the documents distributed there.

In January 2001 on a so called press-breakfast the board members of HCSO and the managers of the census Department had the opportunity to meat the pressmen particularly interested in the census. The informal discussion contributed to the support of the media in a large extent.

A topping event of the contacts with the media was the central press conference held by the President of the HCSO on January 23, 2001. The press conference had been followed by the launch of the intensive communication campaign, e.g. the acceleration in reporting on the happenings, conducting interviews on different topics of the census and publishing reactions, comments on the actual developments. The articles, pamphlets and issues published had been initiated from two sources: the journalists, who attributed high value to the news on the census on one hand, and the HCSO which from its side initiated the publication of the targeted advertising material in the different organs of the media.

It was important to organise the monitoring of the press which meant the continuous collection of the publications of the written and electronic media. The daily reports of the monitoring have given more or the less sudden information on the attitude of the public, the questions, obscurities in regard to the census and have given the possibility for reaction, intervention if needed

In the communication campaign one of the most important exercises was to supply the Budapest and regional directorates of HCSO with the necessary supporting press material. The post evaluation of the communication program has shown that the task had been performed correctly. The method applied at the general agricultural census e.g. the authorisation of the regional directorates to use in the intensive phase additional resources for supporting the central communication campaign, was a proper solution. Nevertheless it was a basic requirement that the local media should have to broadcast the publicity materials, TV spots only after those appeared in the central press moreover the succession of the different adverts had been centrally determined. The harmonised and unified campaign was a result of the consecutive order of the information communicated to the public.

For reaching as wide range of the population as possible a media-plan had been elaborated. It had a prime importance to convey the information to the segment of the population of a lower education level, the group of people less sensitive to the communication. The supply of information to the highly qualified intellectuals and to those important in influencing the public opinion was equally important. Regarding the latter group a more sophisticated, seductive explanation of the programme was needed.

Thematic of the population census contained some topics, questions (i.e. nationality, disability) to which it was not compulsory to answer. A special media plan was elaborated for convincing the persons living with disabilities to answer the given questions. In media plan the local governments as the organisations having close contacts to the population had been taken into account too. It was anticipated that the supportive media appearance of the local leaders might influence the realisation of the actions.

Efficient tools of the marketing were the *paid press advertisements*. There had been published a full page interview prior to the launch of the enumeration which was followed by a half page publication during the enumeration and a quarter of a page have been released after resuming the field works. The full page advert informed the public on the exact date of the enumeration, it gave a short review on the history of the censuses, on the utilisation of the census data. The role of the enumerators, the main elements of the questionnaires, the most important aspects of the protection of personal data had been explained as well as the information on the free green telephone line was given. The half page advert informed the population on the progress of the census while on a quarter of a page advert the acknowledgements of the

HCSO to the population for the co-operation had been communicated. The advertisements mentioned before have been published in the local media as well.

Important tools in the publicity campaigns are the *jumbo posters* applied frequently in the recent years. It is regarded that one of the most attractive mean for transiting the main information and commanding the attention of the people. The jumbo posters propagating the population census have been penetrated al over the country and those have been visible on places not easily accessible (like traffic junctions) too. From a total of 334 jumbo posters 86 have been placed in Budapest, while the rest in the countryside.

The messages of the jumbo posters have been supported by placards placed on the public transportation means (trams, suburban trams). The latter adverts covered the whole territory of the capital, including the main traffic lines and the outer districts of Budapest. The country had been covered by adverts placed on the long-distance buses starting from Budapest as well as on the buses connecting the seats of the counties with the other localities of the given territory. As on the suburban trains between Budapest and Gödöllő and Ráckeve respectively the adverts on the census have been placed on the inside advertising surfaces of the coaches.

The very classical communication mean of the population census is the *"Announcement*", its wording have been formulated by the Census Department of HCSO. The announcement had been printed in 180 thousand copies in A/1 format. The number of copies have bee decided upon the proposal of the National Association of the Notaries. The announcement informed the population on the date of the census, the main questions to be answered, the protection of personal data the law decreeing the census and the utilisation of the data. The placing of the announcement was the task of the municipality; it should have to be placed on every board, surface of the official announcements e.g. in public areas, at the entrances and internal areas of the establishments (i.e. educational and health institutions, budding of the municipality, cultural establishments, customer service areas).

A useful tool for informing the pubic were the informative *leaflets* tested already at the pilot census. The leaflets have en printed in 4 million copies and contained all the necessary information for the population such as the date, aim, necessity of the census, the process of the enumeration, the content of the questionnaires, the data protection, the meeting with the enumerator, the identity documents of the enumerator and the green number. The leaflet has been posted by the enumerator at every household.

In the intensive phase of the communication high importance was given to the electronic media. Two *tv-films* and *radio spots (*one of 6*0* minutes another of 30 minutes and two 15 seconds) have been created. The tv films as from mid January up to end of February 2001have been projected on both channels of the Hungarian Television , the TV2, the RTL, the Danube TV as well as the regional tv stations belonging to the Hungarian Association of Local Televisions. The radio spots have been released within the same period by the radios Kossuth, Danubius, Juventus, Info Radio and 19 regional radios. The longer (60 and 30 minutes) spots contained basic information (like the timing of the census, the process of enumeration, the identity documents of the enumerators), the first of the 15 minutes spots was aimed at to pique the people while the second 15 minutes spot besides acknowledging the co-operation of the population called the persons not enumerated in the regular period of the census to contact either the municipality or one of the offices of the HCSO. The spots have been handed over by the regional directorates of HCSO to several regional, local broadcasting companies. The post-evaluation of the campaign has shown that each segment of the population was informed at least o the fact that a population census was held.

The history and topics of the population censuses - based on the professional advices of the experts of the Population Department – have been shot into a *documentary film with* 10 series (each 5 minutes long). In drawing the movie also historical documents and contemporary newsreels were used. The parts of the documentary illustrated the developments in the technology in the methods of the census by explaining the different topics of the census. A distinct part dealt with the history of the housing census, with the main topics (i.e. demography, occupation, households and families) and with the data protection. As a supplement to the series a separate film served for "initiating" the population into the enumeration process by informing also on the expectations towards the population. In drawing the former movie the *documentary* prepared for the training of the enumerators had been also used. The documentary informed the 60 thousand enumerators and supervisors on the ways and methods of contacting the population and on the

manners of questioning. The documentary film mentioned above has been screened – unfortunately not in prime time – by the 1st channel of the Hungarian TV, the Danube TV and the local TV stations. Due to the unfavourable conditions of the projections despite the very positive reactions of the test-groups the documentary had a weak impact on the public.

After resuming the census it was expedient to conduct an opinion survey on a sample representing the population aged 18 years and over. A specialised company conducted the opinion poll with a questionnaire containing 43 questions and several sub-questions. The survey was conducted in March 2001. The aim of the survey was to collect information whether how convincing and successful the communication of the census was, to what extent the public was informed on the census and how the people felt on the importance and usefulness of the programme. The size and its structure by the different population groups were good enough for gaining the proper answers as regards the different questions. This post evaluation involves some lessons (i.e. the reception of the anonymity of the enumeration) which might help the decision-making on some specific issues.

The reports, interviews and articles selected by the *monitoring of the press* were analysed by the Census Department of HCSO. The findings largely contributed to the evaluation of the communication program of the census.

The manuscripts of the different information materials have been produced by the experts of the Population Department of HCSO. Consequently it was advisable to change the wording of the lingo by external communication experts. This resulted in a better understanding of the publicity materials by the public and by some specified groups (i.e. mayors, deputies of the local municipalities) involved into the processes of the census.

The internal and external newsletters served as important tools for communication. These documents were assigned to assist the persons participating in the implementation of the census. The communication plan handled the newsletters as a less important issue. According to the preliminary negotiations the newsletters would be published bimonthly containing several interviews, stories in readable wording illustrated by different pictures. Despite the publication of 10-12 newsletters have been anticipated altogether only four internal and external newsletters were distributed beyond that none of them was issued in the intensive phase. Only two newsletters have had a definite function, the one dealing with the pilot census and the other summarising the information related to the census of holiday houses.

The publicity communicated by the written and electronic media was successful. This statement is especially valid for the messages published in the intensive phase which played important role in the awakening of the population to the consciousness of the census. The population got the information on the census mainly from the so called publicity spots released by the most popular electronic media. The impact of the documentary was not as successful as many efforts were needed to prepare it. Nevertheless it might support in the future the professional training I general and at a higher level in particular.

In the communication process basically only the marketing and publicity actions, media appearances previously planned have been accomplished. Despite while preparing the media contacts the treatment of the unexpected press reactions were also discussed no concrete plan but the “questions and answers” scheme was prepared. The period till the end of 2000 was basically seamless; with the exemption of some topical issues (i.e. the tender for the data capture, the enumeration of the holiday houses, the adoption of the census law) there was no unplanned media appearance. The closer the date of the enumeration was the larger the “news-value” of the census became. Taking all in round the Press section of HCSO and the communication company secured the necessary documents for informing the media, while the journalists could contact the experts prepared for the information and for issuing any statement.

The investigations regarding the efficiency of the publicity campaign proved that a significant portion of the population got the information on the census from the *unplanned media appearances*. In the intensive phase of the campaign the high-ranking officials of the HCSO quite often were interviewed by the newsreels of the most important TV channels which resulted that almost the entire population became aware of the census.

Among the mass events of the communication program the Danubius road-shows were unequivocally successful. The shows not only heralded the 2001 census but also helped the realisation of the relevant task, e.g. the enumeration of the holiday houses. Contrary to the sport-festival the efficiency and organisation of the road-shows was well received by the regional directorates. Regarding the sport- festival the main problem was that the high costs of the event were not in proportion with the results: much less people participated on the program than expected and the press reaction was also very modest.

After all is said and done the utilisation of the communication budget was in line with the plane, it has served properly the success of the campaign. It is advisable to use the majority of the elements of the programme in the course of the next population census.

Press reactions

The media appearance of the census 2001 was influenced by the fact that despite the understanding among the political forces relating to the necessity of the census as well that of the majority of the topics of the programme, the issue of the religion, denomination resulted in dividing the different parties. The lack of understanding the question of the religion affected the whole enumeration process; as a consequence the media gave diverse interpretation on the census. The progress of the enumeration have been also influenced by the data commissioner of the Parliament who‘s curiosity had been provoked by the sensitive issues of the programme: the media show of the commissioner was pretty frequent.

The media associates in general valued the population census positively, though there were some rather hard and unfair attacks against it. Unfortunately even the lightest negative reaction of the press could have a strong effect on the realities. It is the nature of the media that as the communication of the curiosities, the irregularities and the negative events hose seem more interesting for the readers the journalists have been the most interested in looking for these.

The associates of the Census Department of the HCSO could collect and analyse a large amount of articles, reports, etc. released by the media.

Two third of the publications analysed have been published in December 2000 and January, February 2001 of the 320 appearances in the printed media. 61 percent of the articles was published in the four daily newspapers distributed countrywide, in the Heti Világgazdaság weekly as well as in the Blikk and Budapest Metro dailies, the latter two representing the yellow press. The majority of the appearances were two-column articles, occasionally half or full-page reports, information were published.

From the professional point of view the quality of the majority of the appearances (80 percent) was good or excellent, the share of the articles containing false or misleading information was below 10 percent.

The articles of the country-wide printed media published in 2000 reflected the reality while as from the beginning of 2001 it was ever growing the number of articles containing misinterpretations, misunderstandings. The practice was the most common in February 2001 when rather the real information would be needed. Fortunately the situation did not cause irreparable problems as the great number of the correct, realistic reports, articles neutralised them or even the same media corrected the misinterpretation, misunderstanding in its forthcoming report on the census.

Nearly one third of the articles contained the statements, interviews with the census experts or the content of the appearance was based on their information. The share of the publication of this kind was higher in the local press. The correct information of the population was secured by the fact that most of the census experts quoted worked as associates of the HCSO.

The most difficult task in analysing the media appearances is the judgement of the style, intonation. Disregarding the unambiguous cases the evaluation contains subjective elements too. Nevertheless a judgement on the style of the articles, appearances was mad.

Two third of the articles was neutral, those simply reported on the different steps, events of the census without any commentaries. Favourably approached the subject quarter of the publications, emphasis was given to the positive elements of the census. From the angle of communication more than 80 percent of the appearances were beneficial to the census.

Even the negative press reactions – representing around a quarter of the total of the appearances – should not be regarded as harmful to the execution of the census. The given publications contained also useful and practical information nevertheless in many cases contained one or more comments causing negative reactions of the readers. As a matter of fact the readers are more interested in the negative news therefore their influence is stronger. The majority of the negative articles, reports have been published in the enumeration period. These reports sometimes did not even miss the subjective judgements by inflating some smaller local organisational problem to a dramatic situation countrywide.

In the countrywide printed media the debated issues have been represented as follows: 22 percent dealt with the secrecy of personal data, 28 percent touched the anonymity, 41 percent mentioned the religion, denomination and 29 percent regarded the nationality as a debatable subject. The majority of the articles dealing with the former issues were published in January and February 2001.

As regards the denomination, religion the daily newspapers reflected properly the different approach of the political parties. Some of the papers gave higher importance to the negative reactions, while the others dealt mainly with the positive aspects of the issue. As far as the remaining topics of the census are concerned there was a high share of the articles of neutral nature.

The *printed media in the counties* – like in 1990 – was more objective and positive. The majority of the 600 articles were qualified as good or excellent. As the share of the excellent articles was 23 percent countrywide the same figure regarding the articles published by the local media reached 40 percent. The positive style of the local media was a result of the very active participation of the county directorates in the local press campaigns. AS in the countrywide publications the opinion of the census experts has been communicated in nearly one third of the publications, in the appearances of the local media the associates of the regional directorates were quoted or mentioned in 57 percent of the articles. As a consequence the positive tone of the articles in the local media was 62 percent, while the same figure was only 16 percent in the countrywide press. It is obvious that the sensitive issues have been debated in the local press also with a lower intensity

The 400 units of the countrywide electronic media have the same characteristics as those of the press. In this circle the quality of the publications was excellent in 75 percent (the similar index of the countrywide press was only 5 percent, despite the expert of the HCSO was present in 47 percent of the releases). The majority of the appearances of the electronic press have been released by the state radio and television. The releases of the commercial programs were more critical

SAMPLING

Relationship of the population and housing census to other household surveys

Data collections based on probability (representative) samples have a twofold relationship to the population census: on the one hand the census itself might comprise such surveys, on the other hand the population census might serve as the major framework and data source for subsequent population or household sample surveys. The first group consists of data collections allowing for quick publication of preliminary data or the evaluation of the quality of the census (post-enumeration surveys). The second comprises single or recurrent surveys and their tests, usually carried out by statistical offices.

There was a strong expectation demonstrated by potential data users for a preliminary dissemination of 2001 census data. This needed a fairly big representative sample, while – mainly for financial considerations – there was no possibility to carry out a post-enumeration quality check survey. The main sample surveys based on the census have been the following ones (with the starting year of the data collection or the introduction of the new sample).[5]

- household budget survey (HBS), 2003;
- labour force survey (LFS), 2003;
- travelling habits of the population (THP), second half of 2003;
- microcensus (April 1, 2005) and related surveys
  - income survey,
  - statistics on income and living conditions (SILC),
  - use of informatics and telecommunication tools in households (ITF).

The sample design of these surveys will be presented in the following chapters. As far as the 2005 microcensus and its related surveys are concerned, the description of their sampling procedure should, to some extent, be considered as „preliminary", as their processing is still underway, i.e. the present description cannot take all the aspects into consideration. These aspects relating to sampling procedure, estimation and evaluation of reliability will be presented in detail in later publications.

Representative sample of the population census

Sample weights for selection and data processing

In Hungarian censuses preliminary data processing was first based on 1-percent and, later on, 2-percent self-weighting samples of the dwelling stock and the population. In conformity with the relevant EU standards, the year of the last Hungarian census was 2001, as against the former ones that had been carried out in years ending with 0. Another departure consisted in the first use of optical recognition for data entry. The constraints related to the new technology, as well as the expectation for basic census data well before the 2002 parliamentary elections, determined the method of sampling.

The representative sample of the 2001 population census differed from those of former censuses, both in its structure and weighting system. The selection of the enumeration areas was based on the preliminary collective lists of enumeration areas, with equal weights for all processing units of the selected enumeration areas.

[5] This chapter does not extend to pilot surveys and to data collections limited to specific areas of the country initiated by different institutions. The very starting year of labour force surveys in Hungary was 1992, while that of household budget surveys was 1976; for these the dates stand for the introduction of the new sample.

Establishing final sample weights

The sample weights were finalised after the data entry and consistency and logical checking of the data. The final weights were based on the preliminary ones, but not merely according to the enumeration area as a whole, but to the relevant processing units (housing units and the households and families and their members belonging to the housing units. From the selected enumeration areas only those data of the relevant processing units had been put into the processing file of the representative sample that proved to be complete and logically correct from the point of view of the planned data of the preliminary processing. The weighting system of the representative sample had to be adjusted to the full-scope data of the population census, as to be considered as *final* data for any enumeration area of the census. These were:

- number of persons belonging to the resident population, by sex;
- number of dwellings and holiday units by number of rooms;
- number of other occupied housing units;
- number of institutions.

From the sampling point of view the population living in institutional households needed a specific procedure, as the relatively important size of enumeration areas it could not have been well represented in a sample of enumeration areas. Thus, all the institutions with more than 30 inhabitants became part of the sample, and both these institutions and their inhabitants had a definite weight of 1.

The representative sample of the population census was in fact a sample of enumeration areas. For the sampling procedure the enumeration areas were classified into *territorial groups* according to the following stratification aspects:

- districts of Budapest (23 territorial units),
- towns of county right (22 territorial units),
- counties and, within them, towns (urban areas) and villages (rural areas) (2*19 territorial units),
- within the above categories, inner and outer areas,
- within the above categories the size of enumeration areas, measured with the number of addresses in them.

On the total, 213 strata were established. The average size of the strata according to the number of actually enumerated addresses was 2347, with 23 as minimum and 11,603 as maximum.

For the stratification according to size of enumeration areas, the method of so-called „natural classes" was used, resulting in a minimal variance from the point of view of the estimations, given the number of strata – 3–5 in our case. While establishing the sampling rate of enumeration areas, there was some liberty of choice pending on the relevant features – number and average size of areas – of the territorial units. As a result, in Budapest and Pest county the appropriate size of the sample of enumeration areas was 5–6 percent, while in other counties a sample size between 10 and 20 percent were deemed relevant; this resulted in a 12 percent sample on the country level.

The sampling rates by strata have determined the *primary* weights, that became valid for every unit within a sample area. The final weights of the representative sample have been established for both the formerly presented territorial groups and the 176 individual electoral constituencies in conformity with the following criteria:

- for each territorial group the estimated value of the number of housing units (conventional dwellings, holiday units, occupied other housing units) institutions, as well as of the resident population should be equal to the respective totals found on the summary sheets of the enumeration areas;
- the changes of the original sampling weights (based on the sample design) occurring in the course of the correction procedure should be minimal;
- the final sample weights be values rounded to integers.

The tool of establishing final sample weights has been the so-called *calibration procedure.* The following requirements were to be taken into account:

- none of the final sample weights should exceed the double of its original value;

– the weights should be rounded to integers;
– none of the sample weights should be inferior to 1; and
– institutions with more than 30 inhabitants and the inhabitants themselves should be provided with the sample weight 1.

In the first phase of the calibration the calibrated sample weights could be comprised between 1 and the double of the original sample weight at most, so the calibration criteria were almost always satisfied, only the number of occupied other housing units showed some departures in a couple of territorial groups.

In the second phase the sample weights were to be rounded to integers, with no or little alteration of the results of the calibration criteria obtained in the first phase for dwellings, holiday units, occupied other housing units, institutions, as for the numbers of resident population. In the end of the calibration procedure the differences owing to rounding had not to exceed ±1000 persons, but in the overwhelming majority of cases it was a few hundreds or even less.

The representative sample of the population census contained the data of 1,322 thousand persons belonging to the resident population of nearly 500 thousand addresses in 7,848 enumeration areas. Given that the sampling weights were calculated by calibrated estimation, the sampling error could not be estimated by analytical procedures. In such cases usually one of the methods based on the secondary processing of the sample is to be used. From among these, the estimation of the sampling error of the 2001 census data used the so-called ***jackknife method***, the basic idea of which in case of multi-stage, non-stratified samples is the following:

> Let us suppose that a probability sample contains *k* primary sampling unit, and let $\hat{\theta}$ be a parameter estimation from the sample. This parameter can be a total value, or an average or a ratio. Let us delete from the sample the primary unit no. *l*, and estimate the parameter on the remaining sample, and let's mark the result with $\hat{\theta}(l)$. The estimated value of the square root of $\hat{\theta}$ with the jackknife method is:

$$\mathrm{var}(\hat{\theta}) = \frac{k-1}{k}\sum_{l=1}^{k}(\hat{\theta}(l)-\hat{\theta})^2.$$

In conformity with former practices, sampling error for a confidence interval of 95 percent means the positive square root of the variance of the data estimated with the jackknife method, multiplied by 1.96.

Sample of the household budget survey (HBS)

Since 1976 the samples of household surveys of the HCSO have been based on the enumeration areas o population censuses, that is, these latter have been indispensable for the sampling design. In the case of the household budget survey (HBS) a special advantage has been the following: between 1992 and 2002 the sample of the HBS was always based on the addresses of about 1960 census enumeration areas, and from each area 6 addresses were given to the yearly and on the average 1.5 to the quarterly sample. For a given period the 1960 enumeration areas were practically fixed;[6] yet, the interviewers had to survey the state of the addresses every two years in order to revise the relevant information, e.g. the data on the type and size of the households living there. In the HBS it was allowed to use supplementary addresses, if needed and under specific conditions, e.g. on the basis of the information coming from the survey of addresses, the non-responding households could be recovered by a similar other household. As a consequence, the above role of enumeration areas in the HBS sample has been maintained in the new sample, too.

The new sample design of the HBS – based on the 2001 population census – has just one essential departure with respect to the former sample design: the households where the readiness to co-operate with interviewers had been expected to be good, were taken with a lower probability, while those for whom non-response had rather been expected, were taken with higher probability. Yet, the overall sample size remained nearly the same (about 11,700 households). The sample is a two- or three-stage stratified dwelling sample:

[6] When all the addresses and private households of an enumeration area had already been included in the sample, this area had to be exchanged with a new one.

– *self-representing localities*, where the primary sampling units are enumeration areas and the secondary ones are dwellings;
– *non-self-representing localities,* where the primary sampling units are localities, the secondary sampling units are enumeration areas, while the final ones are dwellings.

The selection of localities was based on the probability proportional to their size, while that of enumeration areas on a systematic random procedure, following the increasing order of the codes of these areas. In practice the selection of housing units meant that of households.

Items for stratification: 1: size categories of localities, 2: type of households.

Size categories of localities:

Category	Number of dwellings	Category	Number of dwellings
1.	0– 249	5.	1 300–2 499
2.	250– 999	6.	2 500–3 799
3.	500– 799	7.	3 800–6 999
4.	800–1999	8.	7 000 or more

Localities within category 8 have been *self-representing*, while all the others non-self-representing.

Strata according to types of household

non-self-representing localities	
stratum no. 1	head of household aged 60 years or over
stratum no. 2	head of household aged under 60
self-representing localities	
stratum no. 1	head of household aged 60 years or over
stratum no. 2	head of household aged under 60, with secondary educational attainment or less
stratum no. 3	head of household aged under 60, with third-level educational attainment

Let's see the phase of the sampling that ends with the designation of the enumeration areas[7]. For this it is necessary to know the sampling rate in the self-representing localities and in size categories 1–7. On the basis of the sampling rates, the requirement of taking six so-called primary addresses from each of the sample areas into the yearly sample, determines the number of areas to be selected in the self-representing localities. The same requirement is valid if the number k_r of areas to be selected from the localities of the sample will be given by categories, defining within the category the *number of localities* for the sample (k_r=3 in the second category and k_r=10 in the seventh). The sampling rate for the sample as a whole is 0.315 percent; in Budapest it is 0.327 on the average, while in the different size categories it varies between 0.285 and 0.316 percent.

The designation of the enumeration areas of the sample means that we have at our disposal the sampling frame to be used for selecting the actual HBS samples during ten years. For the accomplishment of this task, one should know the sample distribution within the strata according to the age and the educational attainment of the head of household, in particular within the respective localities and enumeration areas of the sample. In 2003 this information had been taken from the population census, while later on it came from the survey of the addresses. The goal in the case of non-self-representing localities is that the probability of getting to the sample in stratum 1 according to the head of household be the half with respect to the average probability of the category, while in the case of self-representing localities for stratum 1 the probability should be the half and in stratum 3 it should be the double of the

[7] The sample includes enumeration areas containing at least 40 addresses. Thus, the smaller enumeration areas had to be aggregated.

average probability to get in the sample, characterising the locality.[8] For every category and/or self-representing locality the number of households to be taken into the sample from strata 1–2 and 1–3, respectively, can be calculated, and these should be conveniently distributed amongst the sample areas. Since the distribution of the areas' addresses/households between the strata according to the head of household can be supposed as known, the problem can be solved.

The rotation scheme, belonging to this somewhat sophisticated but correct sample design, is based on the separation of cases, depending on the number of cases of the actual sample belonging to the respective areas.[9]

Before presenting the weighting of the HBS data, two more general remarks are needed: first, in almost all the sample surveys calibrated weights are used, i.e. the original or primary weights of the sample design are modified, corrected for some reason – e.g. to compensate non-responses (this statement is true for the samples of all surveys presented in this methodological overview); second, the household surveys deal with the population living in private households only, and not with those living in institutions. Thus, the calibration concerning this type of survey means to some extent the adjustment of the sample to the *non-institutional population*.

In the calibration procedure for establishing the final sample weights of the HBS, both personal and household level auxiliary variables have been used. As a result of the calibration, the size of the groups estimated from the sample according to certain numbers by age groups and to certain economic activity classification equals to the relevant value from the full-scope set (more exactly: to its reliable estimation), and this is also true for the household level auxiliary variables. From the geographic details' points of view the calibration takes into consideration three major units: Budapest, the towns of county right together, and the remaining parts of the country. In the case of the yearly data, the conciliation according to the figures by age groups will not be carried out for the three geographic units, but at the regional level.

To estimate the sampling error of the HBS data the jackknife method is used, except the quantiles, of which the error is to be measured by bootstrap method.

Sample of the labour force survey

Unlike the HBS, the labour force survey (LFS) was the first household survey of the HCSO where the enumeration areas of the population census had not been taken as primary sampling units. There were two main reasons of this.

1. Before the census it was decided to establish an address register from the list of addresses allowing in any time for drawing a dwelling sample conveniently representing the population. In view of the expectation for timely publication of the data, such a sample has a clear advantage with respect to that based on enumeration areas: while a sample of areas is representative in the period of its selection, this can be less true on the horizon of a decade. The starting point of the planning of the LFS sample had been that the address register would shortly be completed.
2. Given the important size of the sample of the labour force survey – 37 thousand households quarterly –, it was out of question to check and visit prealably all the addresses, thus the sample areas have not had the same function as those of the HBS. In the LFS no supplementary addresses are used. That is to say, the sample had to be drastically redesigned.

In the build-up of the new sample the principle of optimal allocation had been given a major role. This means that for a given sample size the localities of the sample as well as the distribution of the sample amongst the territorial units should be realized in a way to have for a selected variable a (nearly) minimal error. The use of the optimal allocation was allowed by information coming from the population census and, as the population census had also contained the question on employment, the level of unemployment has become the „selected variable". Let us remark that in the period of designing the LFS sample, only the results of the representative sample of the census were available instead of those of the full-scope ones. However, the later experiences of the labour force survey have demonstrated the good quality of the sample. The scheme of the sampling was the following.

[8] From the selection of dwellings we have now switched to the selection of households, provided this will not result in an important distortion.

[9] For more details see *Éltető, Ö.:* Selection procedure of the new HBS sample and experiences in year 2005. Statistical Journal, 82/8, August 2004, pp. 648–667. (In Hungarian)

Items to be taken into account for the stratification:

1. county boundaries,
2. ten size categories depending on the number of dwellings of the locality,
3. share of the registered unemployed within the permanent population.

Size categories: their limits have been established as each of them contain nearly one tenth of the dwelling stock of the country.

Limits of size categories in the sample of the LFS[10], on 1 February, 2001:

Category	Number of dwellings	Category	Number of dwellings
1.	10 – 472	6.	8 162–15 621
2.	473 – 960	7.	16 398–28 345
3.	962 – 1 876	8.	28 627–38 484
4.	1 977–3 971	9.	41 250–59 208
5.	3 975–8 123	10.	63 302–83 476

Self-representing localities are those belonging to categories 5–10.

Non self-representing localities:

- primary strata: size categories 1–4 and their cross-classes;
- secondary strata: a further division of the above, according to the relevant information on the registered unemployed.[11]

Primary (and, at the same time, final) sampling units in self-representing localities: dwellings.

Primary sampling units in strata of non-self-representing localities: localities. Method of selection: according to probability proportional to size.

Secondary (and, at the same time, final) sampling units in strata of non-self-representing localities: dwellings.

Selection of dwellings (in all cases): systematic random sampling. Before the selection procedure the dwellings of the localities should be ranked according to the following order: inner area-outer area, code of the enumeration area (resulting in a so-called implicit stratification).

Final sample weights, calibration: the age and sex distribution of the persons in the sample are to be adjusted to ten age group figures both for males and females by counties, and the number of households of each county is to be fitted to the quotient of the population number and the average household size. The external information here is the data of the population census recalculated with the method of demographic components on the one hand, and the data directly taken from the population census (average household size) on the other hand.

Method of calibration: iterative proportional approximations.

Rotation: every household entering the sample will provide labour market information in six consecutive quarters and then should definitely leave the sample.

Non-response rate: 15 percent in the first wave, 10–10 percent in the subsequent waves.

Calculation of error: stratified jackknife method, using the programme VPLX elaborated by *Robert E. Fay*.

Accuracy characteristics: on the country and regional levels the sample satisfies the requirements for accuracy stipulated in Regulation no. 57/1998 of Eurostat.

[10] The districts of Budapest have been considered as separate territorial units.

[11] There are big differences between the economic activity composition of small localities of Western and Southern Transdanubia.

The present locality sample of the LFS – as against the former 750 ones – consists of 662 localities. The number of strata in this sample is 275; besides, the 167 self-representing localities or territorial units are themselves separate strata of the sample, too. Despite the lower number of localities, the sampling error of the data proves to be inferior to those of the former sample. This is partly due to the optimal allocation, and partly to the simpler structure of the sample, i.e. to a smaller effect of the cluster sampling.

Sample of the survey on the travelling habits of the population

The new sample of the labour force survey is in use since January 2003. The transition from the former sample to the new one was done gradually in the common localities, and realised by rotation. The survey on travelling habits of the population (THP) started in the second half of 2003, on a sample similar to that of the labour force. In the end, apart from size category 1, the localities of the sample of the THP are the same as those of the LFS sample, while in the aforementioned category new localities were selected for the THP.

In the statisticians' opinion the response rate in the THP survey could not be expected more than 60–70 percent, so the quarterly sample size was set to 18 thousand households. The expectations of the statistical experts have proven true, i.e. from the 18 thousand households there are usually 12–13 thousand respondents. As in the case of the LFS, the THP survey is also based on a divided panel sample. There is a 25 percent yearly exchange of the sample.

The year 2005 microcensus and its related surveys

Between two decennial population and housing censuses the HCSO carries out a so-called microcensus, usually on a 2 percent self-weighting sample of the dwellings and of the population. A new requirement with respect to the sample of the 2005 microcensus has been that for some aggregates it had to be representative for the housing stock, the population and the household and family structure of the 176 individual parliamentary constituencies. This needed the selection of a 2-percent representative sample in each parliamentary constituency. Given that, according to the number of inhabitants, the size of the constituencies is more or less equivalent, this sample design will expectedly result in good results for larger areas (counties, regions and the country as a whole), too.

Yet the structure of the constituencies is quite different. At the one extremity there are big localities or parts of cities constituting themselves separate constituencies. In these cases the sampling means the systematic random selection of a 2-percent dwelling sample within the given locality. At the other extreme one could find constituency no. 20 of Zala county, comprising 102 localities of different sizes. In such constituencies it is appropriate to design a one- and two-stage stratified sample. It should be established which are self-representing localities and which are not, within the electoral constituency. The selection of localities should be based on the probability proportional to their size in the case of non-self-representing ones, and on systematic random selection procedure in the case of self-representing localities. It turned out in the course of the sample selection procedure that one stratum should be represented by a single locality in the case of non-self-representing localities, too.

There are 26 localities in the country (including some districts of Budapest, too), that belong to more than one electoral constituencies. The total number of constituencies in these localities is 59. As a consequence of this fact and of the principle "one stratum = one representing locality", the sample of the microcensus contains 806 different localities (including the districts of Budapest) and 839 strata. Apart from some problems of rounding, the basic weight of the enumeration units of the microcensus (persons, households, housing units) is 50. Finally the sample of the microcensus has contained 83,132 addresses.

For the purpose of the microcensus a separate sample had to be selected from the population living in institutions. The total number, size, occupancy and type of the institutions had been established by a full-scope survey carried out in the framework of the year 2003 national statistical data collection programme. The institutions were then stratified according to their type and size. A 2-percent sub-sample was drawn from the very small institutions and all of their inhabitants were enumerated. The bigger ones all constituted part of the sample and 2 percent of their inhabitants were enumerated.

On the basis of the sample of the microcensus, the relevant sub-samples for three data collections investigating different characteristics of households and related to the microcensus had to be selected, namely for:

- „Income survey";
- „Survey on the use of informatics and telecommunication tools in households" (ITF);
- „Survey for statistics on income and living conditions" (SILC),.

As these are basically household surveys, their sub-samples have been based on the household sample of the microcensus. While designing the sub-samples of the respective surveys, it seemed relevant to maintain the basic feature of the original sample, i.e. that each of the strata of non-self-representing localities should be represented by one single locality. In certain cases this meant the aggregation of some strata of the microcensus, and the selection of the locality that could assure the best representation of that aggregated stratum. In the end the respective sample sizes of the surveys according to the number of selected addresses (following the above order) was the following: 22,561 – 10,000 – 13,625. In the case of the SILC, the sample consists of four nearly equalised panels, for different periods and duration.

It is to be noted that the final weights of the microcensus represent 2*19 groups by county, established on the basis of five-year age groups or cohorts, while the sampling procedure of household surveys followed that of the labour force survey. In the case of the microcensus, the external information needed for calibration was prepared at the Population, health and social statistics department of the HCSO, while for the household surveys the method of demographic components was used.

BUDGET, FINANCING

Compared to the previous census the organisation for managing preparation, execution, data capture and procession as well as the dissemination of the data of the full-scale population census has been changed. At the beginning of the 1990s the formerly independent budget organisation became a department of the Hungarian Central Statistical Office. The basic tasks defined by the organisational and functional regulation and the professional staff employed by the established Census Department practically was the same as that of the former organisation. Nevertheless the functional tasks necessary for the proper operation have been dedicated to the respective units of the HCSO. In the new structure the Census Department worked as the other professional departments of the HCSO. The microcensus realised in 1996 was already prepared and executed in the frame of the new organisational formation.

Due to the size of the budget estimate allocated to the population census and upon the item 120/a of the Law XXXVIII of 1992 the State Audit Office evaluated the implementation from the point of view of finances and administration. The most appropriate way for explaining the efficiency of the use of financial resources is to quote the Supplement No 2 of the report of the State Audit Office No. 0334 of September (the full text of the report had been published on the Internet page www.asz.hu of the State Audit Office, as follows:

PERFOMANCE OF CENSUS 2001

The population census gives a comprehensive picture on the number, demographic structure, educational attainment, employment, housing conditions household and family relations of the population. The former information – which can not be collected by other methods – is important for the decision-making on local, regional and country level.

Due to the limited information contained by and the difficulties in linking of the administrative registers as well as to the limits of the law on data protection the only way for conducting the census was the execution of a full-scale enumeration of the population and dwellings.

> As from 1870 in Hungary with 10 years prevalence on average – based on the administrative organs in the localities – a full scale population was held.

1. CRITERIA OF THE QUALIFICATION

In the process of the qualification the census was evaluated from the point of view of the efficiency. Due to the special characteristics of the subjects of the census it was impossible to make a direct comparison neither with the previous (13) Hungarian censuses nor with those conducted in other countries.

In the process of evaluation it had been investigated if

the professional requirements, rules and definitions of the Hungarian census were in conformity with those defined by the **legislation, the government decrees** and those were in accordance with the **international recommendations** regarding the population censuses;

in the preparatory phase have taken into account the **legal instructions**;

the professional and financial planning were as **prudent as required** (if all the relevant and available information was taken into consideration);

the **implementation** was in accordance with the final aims, the dead-lines were respected and the expenditures did not exceed the budget allocation;

the collected data were **utilised as required** and if there was not any unnecessary information collected.

From the angle of HCSO the utilisation means the publication, dissemination of the data. From this point of view for example the data on citizenship collected by the census 1960 have not been utilised as those have not been published directly.

2. THE FINANCIAL AND ADMINISTRATIVE FRAM OF THE CENSUS

The Government decree 2323/1999 (XII.7) allocated for the population census under the heading of the HCSO for the period 2000-2003 HUF 10.5 Billion budget estimate.

The annual estimate was HUF 1,5 Billion for 2000, HUF 9 Billion for 2001, HUF 71 million for 2002 and HUF 31 for 2003.

From the total of the estimate the HCSO was authorised to utilise directly HUF 4,9 billion, the remaining assets have been designed for use by the local governments.

The feasibility study and the costs of the tender of the data capture (HUF 2,3 Billion) have been financed from the budget directly allocated at HCSO in the frame of a public procurement tender.

The task of creating by the municipalities the registers containing the names and addresses of the population had been governed by Section 7 of the Law LXVI of 1992 and by Item 6 of the consecutive Government decree 146/1993 (x. 26).

The Act CVIII of 1999 on the modification of the Act on statistics and on the population census proclaimed on December 16, 1999 defined the scope of the population census, the date of the execution (the enumeration and post enumeration), the topics of the census and listed the questions which could be answered voluntarily (state of health, religion, mother tongue, ethnic affiliation).

The Law covered also the enumeration of the respective data of the *"institutions offering collective accommodation (i.e. dormitories, hospitals)"* by using a separate questionnaire for the institution and for the building(s) of the institution. Taking into account that the number of the questionnaires on the institutions (7 thousand) and of the buildings of the institutions (10 thousand) had been limited those had been processed by the HCSO within the normal course of the statistical data processing without any supplementary budget.

The **organisational-financial issues**, the tasks and authorities of the HCSO and the local municipalities respectively, had been defined by the Government decree 76/2000. (V. 31.

The Annex of the Decree defined in detail the tasks of the municipalities and the norms (for the material and personal disbursements respectively) for assuring the organisational, technical and human conditions required by the accomplishment of the population census. The HCSO was obliged to issue till December 31, 2000 the methodological guidelines regulating the preparation and execution of the census.

Between June and November 2000 the HCSO published in 4 volumes the guidelines for the scope of the practical tasks, the financial accounting and the timing of the census.

In the budget of HCSO for 1999 HUF 180 million **budget estimate** have been allocated for the census 2001, the estimated should have to cover the expenditures of the pilot census (HUF 41,757 million).

The budget 2000 of HCSO contained HUF 1,5043 Billion budget estimate. The latter contained HUF 40 million, the amount paid for the initial address data-base, delivered by the Office of the Ministry of Interior for Central Data Processing, Registration and Election.

In the 2001 budget of HCSO HUF 9,000 Billion budget estimate was allocated for the census. Despite the HIUF 102 million originally estimated for 2002 and 2003 the respective budgets of the HCSO did not contain already estimates for the census.

> After 2001 by the management of HCSO did not give a prime position to the population census, consequently the respective expenditures in 2002 and 2003 have not been clearly separated.

According to the original estimates for the years 2000–2003 HUF 10.6 Billion had been targeted of which 53.6 percent was designed to use by the municipalities. In reality the expenditures amounted to HUF 10,4 Billion (HUF 10.146 Million), the share of the municipalities was only 33.6 percent as some of the tasks of the municipalities (handling of the addresses, supply of maps) have been accomplished by the HCSO and the regional directorates respectively.

The HCSO was able to solve the coordination **of the professional, IT and financial tasks** of the preparation and execution of the census and it could also solve the harmonisation of the parallel censuses with special regard to the General Agricultural Census.

> Though the GAC preceded the population census – based upon the accumulated experiences of the population censuses – the latter contributed in a large extent to the execution of the former. The experts of the Census Department assisted in the organisation of the network of the enumerators, the geographic preparation, the shaping of the questionnaires, the elaboration of the different manuals of the GAC, while useful financial solutions for the population census have been proposed by the Agricultural Department of HCSO.

For the coordination of the territorial and data processing of the two large projects the Chairman of HCSO set up a **Census Committee** which has been in force between June 1999 and November 2001.

> The members of the Committee were the Deputies of the Chairman, the heads and representatives of the two professional departments (Department for Agricultural Statistics and Census Department), the IT Department, the Financial and Budget Department, the Department for Regional Coordination, several directors of the regional offices of HCSO in rotation as well as the Chairman of the Office. The Committee was chaired by the Vice Chairman of HCSO responsible for the coordination.

The professional committee of HCSO studied the traditional and modern technologies (OCR, optical character recognition) of the data capture. According to the investigation the unit costs of the data capture of the 15 million questionnaires of the census are similar (the OCR requires a paper of a better quality, e.g. more expensive paper, but due to the smaller quantity of paint needed, the printing is less expensive). Thanks to the better quality there are less technical deficiencies in case of the OCR technology and a better final quality by the more “intelligent” recognition can be reached. As a matter of fact at the time of the preparation of census 2001 the company (SZÜV) executing the data capture of the census 1990 did not have already the necessary software and hardware capacity for the data capture. For executing the job by applying the traditional methods of data capture it would be necessary to use the IT hardware capacity

of the regional directorates. By doing so the hardware of the directorates could not have been used for the realisation of the other important tasks connected to the census (administration and control of the questionnaires, coding, etc.).

The HCSO on March 16, 2000 – by taking into account the proposal of the expert's committee – issued a **public procurement tender** for *„Elaborating, realisation and functioning of a data capture system based on OCR technology"*. The Committee of the experts with members being the civil servants of the HCSO, Office of the Prime Minister and the Ministry of Finance announced as winner in the second round of evaluation a Hungarian venture of a foreign company. The contract for the job was signed on November 6, 2000.

> On August 25, 2000 two of the applicants initiated a legal appeal at the Arbitrary Committee on Public Procurements. According to their submission the HCSO as offering the bid violated several sections of the Law XL of 1995: it did not secure the parity of the bidders, committed mistakes in the legal processes, the judgement of the tenders did not comply the requirements. The latter was based on the statement that the winner of the tender was not the one presenting the most favourable offer. The Arbitrary Committee stated that the appeal was partly reasonable: it cancelled the former decision and obliged the HCSO to pay HUF 30.000 administrative service fee for each of the bidders. The winner company offended the decision at the Budapest court, which suspended the procedure. The singing of the contract was followed by the second evaluation of the bids, where the Hungarian affiliate of the foreign company was declared winner anew.

The contract signed with the company contained the processing of 15 Million questionnaires. The (gross) unit cost was HUF 66,12 per questionnaires, HUF 47,88 for the backup pictures and HUF 1,00 for pulping the questionnaires. The duration of the contract period lasted from the closure of the preparations until the end of the data capture.

> The preparation for the application of the OCR technology the experiments of the French 1999 census have been considered. Some of the experiences had technical nature (e.g. to ease the data capture to apply only a single colour on the questionnaire and to use standardised pens) while the others should have to be applied in the organisational frame (to ensure the possibility of correcting, coding, to finalise the programmes for the evaluation-reading as well as for the correcting-control before the start of the OCR procedure, to secure the continuous presence of the census experts on the site of the data capture).

On June 22, 2001 due to the standpoint of January 12 and February 20 of 2001 of the commissioner on data protection the original contract was modified. (The modification was as follows: it was not permitted the use of the addresses on the questionnaires, the scanned pictures should have to be archived without the identification numbers and the information on the sensitive data, the size of the representative sample was raised from 5 percent to 12 percent.) Scanning of higher number of the questionnaires have been required by the larger sample, consequently also the deadlines were modified. .

The partner limited liability company satisfied the contract.

The processing of the representative sample had been closed on the day defined by the contract while the final works have been resumed two weeks prior to the deadline. Between June 18 and November 13, 2001, based on the 22 invoices issued by the partner, HUF 1.691,2 Million (of which 57,5 percent for the scanning, 41,6 percent for the archives and the remaining for the destruction of the processed questionnaires) had been

paid. An additional sum of HUF 35 Million was paid for the tasks not specified in the modified contract. For the company providing the professional consultancy in regard to the OCR technology, the elaboration of the feasibility study, the preparation of the public procurement tender as well as the monitoring and the quality control a total of HUF 1.876,4 have been transferred. Worthy to note that the Government decree defined for the task HUF 2,3 Billion.

> Due to the fact that the execution of the IT tasks of the population census required the application of working stations other than connected to the IT network of the HCSO additional developments were needed (in an amount of HUF 930 Million) in the head office and in the regional directorates of HCSO.

The data capture have been executed– both sequentially and in timing - according to the **delivery plan** modified by the two competent departments (Census Department and IT Department) of HCSO. There have been three strictly fixed deadlines: according to the respective Law the enumeration should have to be executed between January 1-21 February (with a supplementary enumeration until February 28); upon the decision of the Chairman of HCSO the data processing should have to produce the data on the 176 individual parliamentary constituencies by February 2002 and the publication of the data by localities in September 2002.

> It was necessary (in July 2001) a modification due to the uneven workload of the regional directorates caused by the additional workload connected to the unreliable registers of the land offices.

The responsible persons of the county directorates regularly (with a frequency of 3-4 days on average) reported on the current stand of the data processing to the Census Department. The management of HCSO was regularly informed on the developments. As from the docking of the enumeration documents a **monitoring system** followed the route of the questionnaires of the 52,7 Thousand enumeration districts.

3. PREPARATION AND REALISATION OF THE CENSUS FROM THE PROFESSIONAL POINT OF VIEW

There is a significantly larger difference between the topics of census 2001 and those of 1990 than the variations detected between the previous consecutive censuses. The programme of census 2001 was broader than at the former censuses: the questionnaire contained 25 questions on the persons and 15 questions on to the dwellings and there were also a few supplementary questions too. The questions have been collected upon the international recommendations and series of consultations though by respecting the internal needs of HCSO. The requirements of the protection of personal data were observed; this resulted finally in higher costs.

> While defining the questions the following – sometimes overlapping – remarks have been taken into account:
>
> – the assurance of the comparability of the “traditional” questions, with special regard to the time series;
>
> – the new elements, characteristics of the social-economic developments as from the previous (1990) census;
>
> – the regional recommendations of the UN European Economic Commission and the EUROSTAT guidelines for community programme of the 2001 round population and

housing censuses (3/1999/E/N10). The former documents are important for ensuring the international comparability;

- the requirements, wishes of the end-users of data and
- the receptivity of the different questions by the population, the reliability of the answers received, the time requirement and costs of the enumeration (the enumerator's visit should not exceed 45 minutes at a particular address, otherwise the quality of the answers will deteriorate).

In forming the questionnaires the following requirements have been met. The decision on the final version of the questionnaire was the competence of the Chairman of HCSO.

The questionnaire contained the topics recommended by the EEC, accordingly some topics which have not been touched in several previous censuses were asked (i.e. the religion was not asked as from 1949, the citizenship (a core topic of the EUROSTAT recommendations) as from 1970.

Census 2001 is the first which interrogated the occasional second educational institution/specialisation completed/obtained, the number of employees at the workplace of the persons as well the incidental foreign ownership in the venture employing the persons.

The HCSO – by utilising the experiences of the pilot census – was ready with the clarification of the topics, the forming of the questionnaires of the census already at the time (October 1999) of the parliamentary debate. Nevertheless the questionnaire was not annexed to the proposal as not all the problems among the different organisations, groups of the HCSO were solved yet (i.e. the professional departments and the research institutes urged to put additional questions into the programme while some of the regional directorates wanted to shorten it. On April 11, 2000 to reconcile the contradictory opinions, approaches the agenda of the joint session of the Board of HCSO and of the Conference of the Regional Directors dealt with the questionnaires. The session decided on shortening the personal questionnaire with special regard to the questions related to education. The reason of shortening the questionnaire was to reduce the time requirement of the enumeration. The abandonment of some questions did not have a negative effect on the quality of the programme.

The t**est surveys** mentioned above resulted in the omission of some questions, some other questions have been curtailed, the format and shaping of the questionnaires also changed. Regarding the handling of the addresses a new method was introduced.

The pilot census – covering 50 Thousand interviews - had been executed between July and December 1999 in a town (Hajduszoboszló) having also a recreation area, in a part of an other town (Eger) and in 14 villages of county Heves. The full-scale census had a definite reference date, consequently the data of the pilot survey could not been utilised directly.

The **programme of the census** beyond the internal coordination was discussed by the respective committees of the Hungarian Academy of Sciences and by the State Statistical Council. The HCSO discussed the respective topics with the competent ministries, state organs (i.e. the Office for National and Ethnic Minorities).

The enumeration of the data has been realised – as usual – by the **local administrative authorities**. The local municipalities contracted the 40.000 enumerators and the 10.000 supervisors. The municipalities should perform their duties related to the census according to a contract signed with the regional directorates of HCSO. The persons par-

ticipating in the enumeration have been remunerated according to the quantity and quality of the work performed y a delayed payment.

According to the respective Law and based on the list of addresses, as a first step of the enumeration (between August 31 and July 1, e.g. in the summer recreation period) the preliminary census of the holiday houses (regarded as housing units and subject to the census) had been realised.

> The enumeration of the residential buildings – including the holiday houses – was subject to the housing census. The local municipalities have had the right to decide if they enumerated the buildings of the holiday houses prior to or parallel with the full-scale population and housing census in February 2001. Less than 300 local municipalities decided to realise the enumeration prior to February 2001.

The **totality and quality** of the census, including the quality of the technology in the data processing had been secured by the HCSO.

4. UTILISATION OF THE CENSUS DATA

The dissemination of the census the data – the types, the succession of the data, the exact timing of the dissemination – was in line with the previous practices and had been defined by the HCSO. Taking into account the current expectations of the social-political environment priority was given to the publication of the data on nationality, ethnic affiliation.

> The government decree dealing with the utilisation of the census data gave instruction or issuing a government order for issuance a register of addresses by localities. The order had not been published. It turned out at in phase of the geographic preparation that the municipalities either do not have registers of addresses at all or the available registers of addresses have not been reliable. The HCSO occasionally by using its own data-base upon request gave information to the municipalities. The HCSO supplied the information free of charge though this solution can not be regarded as an institutional solution.

The **results** of the prevailing census are **published** in numbered volumes. The first volume contains the preliminary data traditionally based on the data collection of the enumerators. Until the finalisation of the report of the State Audit Office 7 volumes had been published. According to the projections 15 volumes will be published in 2003, while the remaining 10 volumes will be issued in 2004.

> On the census 1980 36, on the 1990 census 27 numbered volumes were issued, the county data have been published with a separate numbering.

The HCSO published the data on the 2001 census within a shorter period and with a wider content of data than formerly. The volumes have been published via CD–ROM and Internet, almost all of them also in English translation.

> The preliminary data have been published at the 1990 census 8 months after the enumeration, while at the census 2001 – with double data content – after 6 months. (Furthermore the bilingual (Hungarian and English) information was simultaneously published in electronic form (CD-ROM and Internet) too.)
>
> The first summary information – based on a representative sample – have been published at the 1990 census 19 months after the enumeration, in case of the 2001 census – with a 70 percent higher content of data – the publication followed in the 10th subsequent month. The bilingual (Hungarian and English) CD-ROM had been published 12 months earlier than in case of the 1990 census.

The information on the ethic affiliation was published 41 months after the enumeration in 1990 was closed, the same interval at the 2001 census meant 18 months. The volume contained 70 percent more data than the previous one.

As regards the regional (and Budapest) data the approximately 20 percent larger mass of data have been published within 24 months, a half of a year earlier than in case of the 1990 census.

The publication based on a representative sample of the addresses, containing information on the individual parliamentary constituencies, was issued in December 2001, two months before the deadline defined by the Chairman of HCSO. Due to the difficulties in solving the IT problems caused by the large volume of data and due to the problems discovered in checking the data processing it was impossible to issue the volumes informing on the capital and on the individual localities until September 2002, the date of the local elections. (The respective volumes have been published in February 2003.) Meanwhile the data on ethnic minorities together with the information on the religions, denominations of the population have been issued earlier than anticipated, already in July 2002.

In 1990 the representative sample of 2 percent has undergone a double processing, while at the 2001 census the coding and data capture of the representative sample was the first step of the ordinary workflow., consequently the handling of the sample did not require any additional printing, copying, preparatory and capturing costs.

The 13 million pictures on the dwelling questionnaires, the 33 million pictures of the normal data and the 11 million pictures of the sensitive data of the personal questionnaires as well as the digital maps represent a data-stock constitute a valuable and sound base for performing different investigations either in the frame of the administrative division of activities in market-oriented form. The possible further **utilisation** of the census results are:

– establishing the register of the institutions providing collective accommodation and provision while collecting the data-base of the Hungarian Gazetteer;
– the revision of the statistical classifications (ISCED, ISCO as well as the corresponding Hungarian versions), the formation and finalisation of the national classification of the qualifications, a task pending for years already.

The 2001 census governed by the HCSO have been executed in a well defined - partly regulated by the legislation - division of labour; the professional and international requirements have been satisfied; the deadlines and the budget of the census have been respected. The tasks of the HCSO defined by the respective legislation have been fulfilled. The colleted data have been processed according to the methods and deadlines defined in advance. The topics, the preparation and execution of the data recording as well as the processing of the data secured the proper utilisation and dissemination of the collected data.

DISSEMINATION OF THE CENSUS DATA

As a result of the technical developments the dissemination of the census data including its preparation was in many respects different from that of the previous census. The aim of the respective activity was to publish the data within the shortest period and to convey the information to as wide circle of users as possible. There were three means of dissemination:

- Traditional paper-based publications;
- CD-ROM;
- Internet.

The planning, compilation of the printed volumes (including the design of the book-jacket of the series, the type-setting, the layout of the pages, the graphic illustrations, the production of the printable copy) and the entire programming, construction and graphic appearance of the CD-ROM and Internet publication had been prepared by the Census Department of HCSO. The volumes had been finished partly by the printing unit of HCSO and partly by a printing house contracted in the frame of a public procurement. The Marketing Department and the Service Section of the HCSO managed the distribution partly by filling the incoming orders, partly through the Statistical Bookshop of the HCSO.

The first publication containing the preliminary data had been issued in June 2001, followed by 28 numbered and 2 blank publications. Some of the publications had a version in English language, the bulk of the volumes is available on CD-ROM too. Until May 2005 – including the volumes containing the data on the counties – altogether 117 volumes (of which 3 in English language), covering 30 Thousand pages got into circulation.

Taking into account that today the personal computers are common working tools and the Internet is accessible for end-users of a constantly increasing number, it was inevitable to offer publications usable on the personal computers and accessible on the Internet as well. The data on four volumes have been issued on bilingual (Hungarian-English) CD-ROMs and another bilingual CD-ROM contains the data collected upon recommendations of EUROSTAT on the 2001 round censuses. The Census Department of HCSO successively publishes the paper based publications on the free bilingual Internet page www.nepszamlalas.hu. Some of the publications of the population census is disseminated exclusively on the Internet. The CD-ROMs and the Internet publications contain the information in easily accessible tables and format, the importation of the data is facilitated.

The processing units of the population census are as follows: the country, the types of localities, the region, the county and the localities. Besides as processing units the individual parliamentary constituencies and in some publications the groups of the municipalities of given population size are also applied. It has to be underlined that at present – unlike in the previous censuses – the smallest unit of the processing was the block of residential houses, which results in a more accurate demarcation of the units than n the formerly applied enumeration district. The smallest processing unit can be derived easily from the IT network of HCSO enabling any optional classification, grouping of the data.

The rapid development of the IT technology, within that the possibility of reproducing the maps digitally, facilitate the data users – upon request and for a defined fee – to get the desired information also on digitalised maps. The digitalised maps used for the interpretation have been produced by Cartographia Ltd. Co.

See the list of the publications of census 2001 in the corresponding chapter of this publication.

QUALITY ASSESSEMENT OF THE CENSUS DATA

The improvements of the statistical data collections – including the population census – at least partly is a result of the recognition errors committed in the past. It has to remind no faultless enumeration exists; the errors, the mistakes are constantly possible. As the data might contain random or accidental faults the dissemination should be followed by supplementary investigations regarding the probable accuracy, soundness of the data. The information is important for the users as well as for the staff preparing and executing the census

Aim of the control on the quality of the census

The faults might occur at every phase of the population census: during the enumeration it might be a result of the misinterpretation of the enumerator, misunderstanding by the data provider, the conscious or accidental failures, the coding and in the processing. A part of them are systematic errors are causing distortions not equalising each other while another part of the mistakes are rather incidental which by taking into account the large number of enumerators, coders, supervisors ideally might compensate each other.

The aim of disclosing and publishing the faults is to convey information to the data users on the correctness and on the limits in utilising the data. Theoretically it would be possible to correct the published data steadily though this would cause further insecurities, endless process of rectifications. The "professional" function, importance of the identification of the sources of the defaults is the contribution to a more accurate and economic execution of the next censuses. The answers should reflect to the following: the phase of the census when the failures occurred; the causes of the mistakes, such wrong lists, not properly formulated questions, insufficient training of the enumerators, subjective factors in coding, defective IT programs, the scope population/population group hit by the errors, etc. The control program certainly provides useful information for the organisation of the future censuses of a more accurate realisation.

The methods in evaluating the errors of the census

Several methods are used for controlling the errors of the census. By taking into account the technical solutions, data requirements and the final quality of the controlling processes the following categories can be mentioned:

a) methods applying in the control process single or several data-bases;
b) application of record comparisons in case of methods using several sources of data;
c) measurement of the totality or the quality of data, weighting the gross or net error?

In case the measurement of the reliability of the census data is based only upon the information derived form the census the following checks are possible: application of demographic analysis or investigations by using the procedures of the census, control tests usually by executing sample surveys with regard to the potential sources of the irregularities.

If two or more data-sources are compared distinction can be made between those investigations where there is a collation of the individual records and those where not this is the case. The first category covers the comparison based on linking the original data with those of a post enumeration as well as the collation of the records with the available population surveys. The second category refers to the comparisons with the results of the previous censuses, the administrative registers as well as the aggregates oft the different household data collections.

As far as the quality, with special regard to the accuracy of the recorded data is concerned, a post enumeration have been realised immediately after the 1970, 1980 and 1990 censuses. (A similar investigation, limited to the date of birth, have been realised after the1960 census.) The results of the former investigations were published in the final (methodological) volume of census 1970 and in two publications on the successive censuses.[12] Some characteristics of the completeness of the 1990 census have been compared with the respective data of the Popu-

[12] *Rózsa, Gábor:* The control of the reliability of the data of the population censuses, Demográfia, 1997/1.

lation Register Office.[13] Despite the fact that this type of control has been omitted from the enumeration programme of the last census one must not write off the information of the performance quality. Three different essays for gaining information on the quality have been carried out; the summary results are shown below.

Linking the statistical databases – experiences and possibilities[14]

In Hungary in April 2000, 10 month prior to the population census a general agricultural census (GAC) was realised. The Hungarian statistical service did not ever have such wealthy databases on the population collected within a relatively short lapse of time. The joint utilisation of the databases, the aggregated handling of the information allow of expanding the potential for analysing both of the censuses and by merging and matching the databases opens the door for further sophisticated inquiries. Though the population census provides basic data for social statistics, a part of the information collected is hardly needed by the statisticians collecting the industrial, economic statistics. While on the other hand the agricultural census is the most important survey in the statistics of economic activities it collects information which are significant for the better understanding of some social processes, i.e. for deeper analysis of the motives of the demographic developments.

Besides the practical aspects the joint utilisation of the surveys was supported by the fact that none of the independent programmes covered the areas, information which had been dealt in detail the other. It is important to mention that both censuses were full-scale operations, as a consequence discrete data are available. The latter facilitates the aggregation of the data according to any optional territorial unit, criteria. The former grouping, analysis requires the highly developed IT infrastructure of our days, permitting the aggregation of the data of the two surveys.[15]

By means of the databases of the two censuses the first opportunity arose for matching the discrete data of the surveys. This is a new development not only in the history of the Hungarian censuses but it has broken a new ground in the international practices too. Besides an impetus was given to commence the job by the access of the country into the European Community, e.g. an opportunity was given for the description of the demographic and housing characteristics of the population working in agricultural ventures. The results of this exercise, with special regard to the territorial presentation, serve as a proper platform for the future surveys.

It was clarified already at the beginning of the works that the precondition of the linkage of the data of the two censuses is the conformity of the respective (common) metadata of the two operations. The aim was to approximate the different concepts referring to similar groupings having been applied in the two censuses respectively. As a consequence for establishing a common meta-data base it was necessary to digest the similar or standing for. By investigating the issue it turned out that “venture” and the “household” are the categories practicable as the smallest unit for the matching. Consequently the experts decided to utilise the following categories: the private ventures (farms)[16] from the agricultural census and the households, more exactly the dwelling-households.[17] There was a general agreement that despite the two surveys cover different aggregations, the categories used more or the less refer to the same population groups. Moreover thanks to the high frequency of the categories in the two surveys there is a rather large common mass and only a limited circle is represented only on one of the censuses.

The precondition of creating a common data-base was the univocal matching of the elements of the two surveys following the separation of the data with the identifiers defined above. The further analysis of the common database

[13] *Kapitány, Gabriella:* Comparison of the data of the population census with the number of dwellings and persons registered by the State Population Register Office, Demográfia, 1997/1.

[14] *Jónás, István – dr. Novák, Zoltán:* Lecture held on the Conference of the Hungarian Statistical Society (Balatonfüred, October 2004 14–15.), edited version.

Based on the study of *Laczka, Sándorné –Czibulka, Zoltán:* Aggregated utilisation of the GAC and the population census (in: Population censuses at the millennium 3. Central Statistical Office, Budapest, 2000, pp. 251–259.

[15] Besides meeting the technological requirements the protection of personal data should have to secure. According to the respective law the joint handling of the data is allowed only for statistical purposes.

[16] The category „private venture (farm)” covers the families, communities of persons living in cousinhood or other than cousinhood, using a common dwelling, performing agricultural activities as private entrepreneurs, self-employed, family helpers.

[17] The category „dwelling-household” means the total number of people living in a dwelling. In this chapter the category „household” – unlike the category used in the Hungarian population censuses – refers to the ”dwelling-household”.

was based on the elements (private ventures and households respectively) marked with the same identifier. As a suitable tool for the matching of the former elements was the address of the enumeration.

The Law XLVI of 1993 serves as legal background of linking the two data-bases.

The analysis of the common database covered the agricultural ventures outside Budapest by regions and by statistical sub-regions.[18]

Linking the data of the GAC and the population census

The aim of linking the two databases was to study the relationship between the categories „private venture" and „household" used by the agricultural census and the population census respectively. The correspondences are partly overlapping of persons, partly the sameness of the real estates (addresses) of the given categories.

The units of observation were in case of the GAC the agricultural private ventures while in the case of the dwellings and persons. The GAC recorded some information (i.e. gender, age) on the persons other than employees working in the venture. Based on this record it was possible to estimate a link between the members of the venture and the inhabitants of the dwelling (see Figure *5*). The only common base of connecting the given real estates was the address (see Figure *6*). The links between the venture and the household can be based on the identity of the persons living in the dwelling.

Figure 5

Linkage based on the person

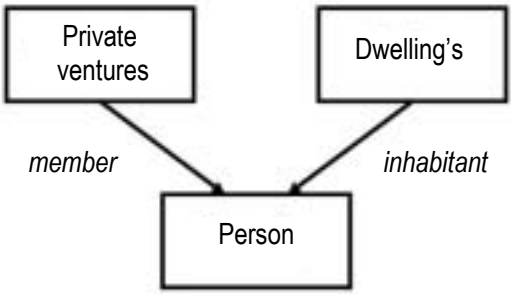
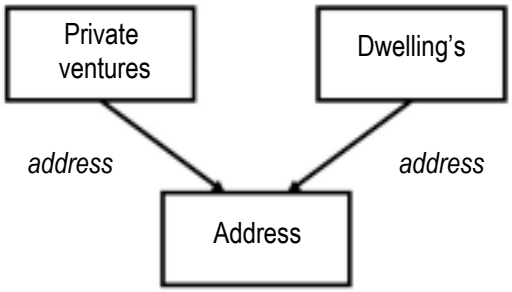


Figure 6

Linkage based on the common address



According to theory of the databases the linking of the data requires the use of the individual identity codes. The individual identity code is a (contingently complex) parameter which defines the elements (characteristics) of a mass univocally. The links are represented by the couples formed by the identical cods of the occurrences.

Both surveys used individually defined complex codes for the identification of the occurrences (where, as due to the protection of personal data the PIN code could not be used only the identity number of the locality could be the same). In defining the primary links the pairs of the individual identifiers of the members of the ventures and the inhabitants of the dwelling are used:

- *locality – GAC enumeration district– serial number of the venture – number of person in the venture*
- *locality- enumeration district– address number of the venture– number of person in the dwelling*

It has been anticipated that the persons belonging to the private ventures and the persons belonging to the population census might be identified on the basis of the common address and of some demographic characteristics.[19]

[18] „Private agricultural ventures and their population", published in printed version and on CD-ROM in March 2005

[19] It has to be taken into account that the changes occurred between the dates of GAC and the population census (migrations, deaths, changes in the house number, etc.) inevitably caused deviations furthermore applied method does not guarantee the identification of the members of the agricultural ventures living on a different address than that of the farm. The application of the personal identity numbers would help in defining the real situation.

The identification e.g. the matching process was as follows:

- nearly 90 percent of the 1 million agricultural ventures have been identified by using a special program for matching the elements of the to databases of the addresses;
- remaining 10 percent of GAC addresses were recognised with the help of an interactive program which resulted in identification of a further 7 percent of the addresses. The process required around 10 months of human investment;
- the identification of the persons have been performed by a different program, 78 percent of the members of the agricultural ventures could be "paired" with persons in the census.

Problems in identification of the addresses

All of the statistical data collections apply the addresses of the data source. Consequently the data gatherings of the HCSO are linked by this mean. Nevertheless the identification e.g. the matching of the addresses is hampered by different factors such ach i.e.: the variances in spelling the addresses, the incorrect indication (i.e. only the house number is marked), the modifications of the addresses (renaming, application of different house numbers, etc.) in the period elapsed within two different surveys.

In matching the databases a frequent problem is caused by the differences in applying the names of the public areas i.e. using the full name Sándor Petőfi, only S. Petőfi, or only Petőfi as denomination. A similar problem is that the buildings or dwellings are not marked in uniformly, those might be labelled in different forms i.e. 1/a, 1/A, 1a, 1A, etc. Important precondition of the successful recognition process is the availability of a register of addresses of aligned common content. The addresses of the GAC and the population census are constructed with a similar structure:

locality – name of public place –character of the public place – address number – building – staircase – floor – door

The process of recognition is rather difficult in case the real estates do not have proper physical identifiers, than further information, i.e. the information – if any - on a person living on the address.

Identification of the agricultural private ventures and the members of the ventures

In the process of the preliminary matching – as mentioned above – it was possible to identify 90 percent of the addresses with the help of a computer program. The high rate of coincidences is hiding rather high variances. The aim of the course of the interactive matching of the addresses was the verification of the barely defined areas. Finally 97 percent of the addresses of the GAC could be disclosed. The previous procedure was followed by clearing the persons; the identification of an address was regarded as successful provided the majority of the persons could be matched e.g. identified.

The GAC on the persons recorded only limited information on the persons other than employees taking part in the activity of the venture. Nevertheless the respective information could be used for matching with the identical data of the population census. The most suitable personal data for the identification are the gender, age and highest education of a person.

Some remarks in regard to the above identifiers are the following: in case of the gender only a perfect sameness can be accepted. The GAC recorded the age of the person while the population census enumerated the date of birth. Presumably the former is less correct. The age 60 recorded might refer the completed 60 years of age, or to a person aged over 59 years. Taking into account that the GAC has been executed 10 months prior to the population census some deviations in the age had been accepted. The level of education was registered in the GAC in a rather simplified way (without education, primary education attended, secondary education completed, higher education obtained) while the population census applied a detailed description convertible into the former categories. The deeper analysis has shown that due to the deficient data recording the information of the GAC are less appropriate for the recognition. This information was used only as supplementary criteria.

As mentioned above following 97 percent matching of the addresses only 78 percent of the agricultural ventures could be declared as identical, e.g. the same in the two censuses. The difference is caused by effective changes

(moving, decease, etc.) on the one hand and by using different identifiers of the addresses on the other. This doubtfulness is reflecting that the address of a person is not as strong attribute of a person than the gender and the age.

Main demographic characteristics of the population living in agricultural private ventures

The population census 2001 enumerated 3 Million 863 Thousand households, while in the course of the preceding GAC 2000 2.1 Million households have been visited. Only 4.400 of the 770 Thousand households in Budapest were subject to the GAC. Consequently in matching and analysing the two censuses the data on Budapest have not been taken into account. As the enumerators should have to visit in the downtown areas of the cities only the households engaged in significant agricultural ventures the evaluation covered only two third of the 3 Million 93 Thousand households living outside Budapest. 960 Thousand of the enumerated households proved as providing data on a sizeable agricultural venture, 835 Thousand families performed limited agricultural activity while 300 Thousand families did not have any occupational relations with the agriculture. 784 Thousand (82 percent) of the 960 Thousand agricultural private venture could be linked and compared with the households enumerated by the population census. Excellent possibility for conducting a detailed analysis was permitted by the fact that there have been only slight deviations regarding the former coincidences by counties, sub-regions. The further paragraphs describe some findings of the analysis.

In 2001 nearly one third of the total population outside Budapest was living in the 960 Thousand agricultural private ventures. The latter population group represented a higher share (higher than 30 percent) in the Great Plain and in South-Western Hungary, while county Pest shows the lowest number (15.9 percent). In Western and Northern Hungary a quarter of the population, in Central Transdanubia a fifth of the population was living in agricultural private ventures. The distribution of the sexes did not show differences between the two segments of the population. The differences are more significant in the age structure. The people living aged 60 years and over living in agricultural ventures have a 3 percent higher share than the average of the people living in the countryside, while the population aged 40 years and less is 5 percent lower47 percent) than the average of the other group (52 percent). Obviously this is connected to the fact, that the larger part of the population of the agricultural ventures lives in the villages, where the percentage share of the elderly people is high.

The educational level of the persons living in agricultural private ventures and the population living outside the capital is considerably different. Among the persons aged 7 years and older the percentage share of those completed the secondary school with general certificate has shown a 5 percent higher figure in favour to the entire population living outside Budapest, compared to the agrarian population, while the difference was 3 percent higher in comparing the respective share of those having completed a diploma obtained in the higher education. On the other end the share of those completed less the than 8th grade of the primary school was by 2 percent higher, the share of those completed only the 8th grade 6 percent higher in favour of the agrarian population. As far as the agrarian population is concerned, the differences in the educational attainment of the agrarian population were rather uneven by regions. The percentage share of the persons completed less than the 8th grade of the primary education was the highest in Northern Hungary, the lowest in Western Transdanubia. The former indices might be a result of the different age composition of the population living in the given area. The percentage share in the agrarian population having obtained the general certificate in the secondary school was the highest in county Pest, nearly the same rates represent the agrarian population in Western Transdanubia and in Northern Hungary.

The percentage share of the persons in employment was lower, that of the inactive earners was higher among the people living in agricultural private ventures than the respective index by taking the population outside the capital in total. By far interesting there was no difference between these groupings of the persons regarding the unemployment rate. The highest employment of the agrarian population was detected in Western Transdanubia, while the lowest rate is shown for Northern Great Plain.

In 2001 the percentage share of the persons in employment living in private agricultural ventures, working in agricultural occupations or in agriculture, forestry, exceeded the respective share among persons in employment living outside Budapest. Nevertheless this population was characterised by the dominance of those working in non-agricultural occupations and non-agricultural sectors of industry too.

Selection of the records on occupation-scope of activity of census 2001

While elaborating the 2001 census programme one of the objectives was to facilitate in the processing of the census to collect the possible categories, denominations of the occupations. Consequently besides questioning the 3 million 700 Thousand persons in employment on their occupation, position the same information was collected on the last or previous occupation of the pensioners, unemployed and persons being absent of work due to taking are of their children.

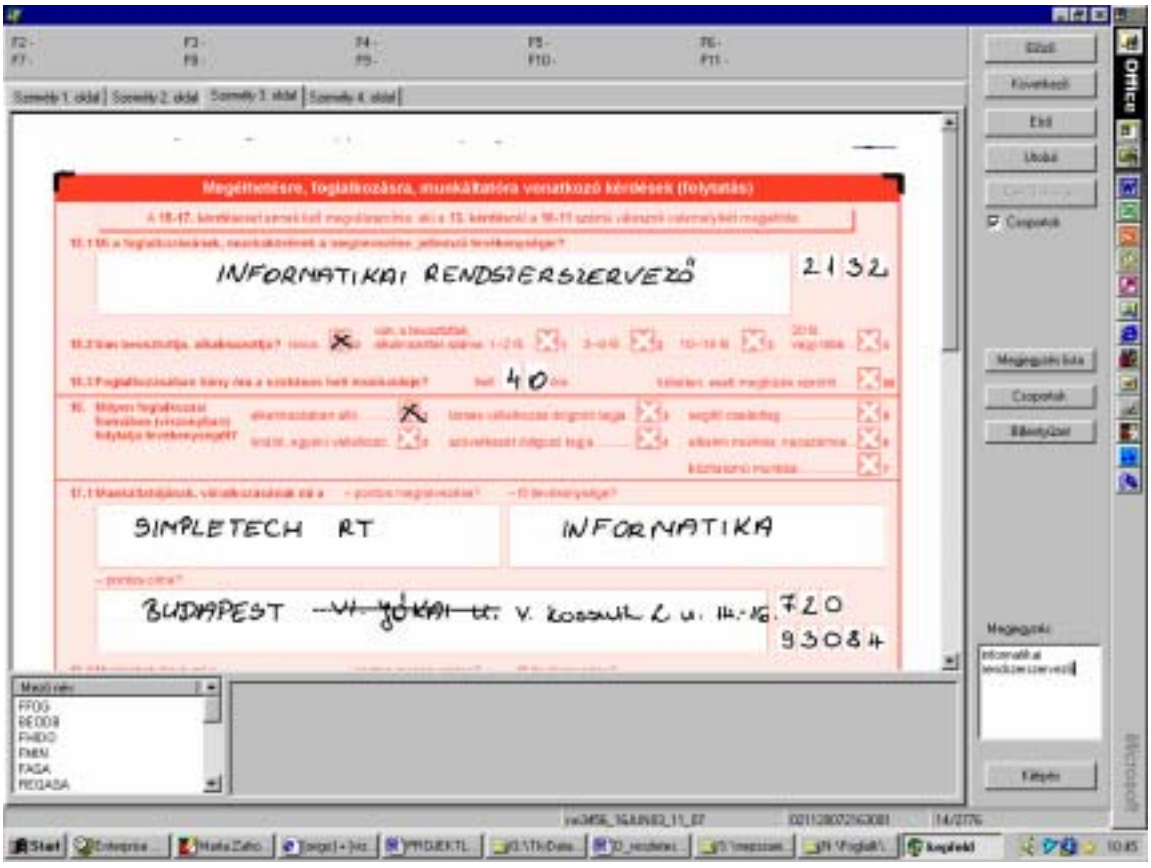
Presently the classification FEOR-93 lists around 5.000 occupations, positions. The denominations, categories are derived from the lists of the former censuses, compilations of experts. Consequently a large number of the occupations listed is obsolete or reflects to an outworn division of labour.

The technology of the data capture of census 2001, e.g. the scanning of the questionnaires allowed the saving of the pictures in digitalised form. By using specific software it was possible to inquire and to save the occupations registered on the questionnaires, but not listed in FEOR-93 though.

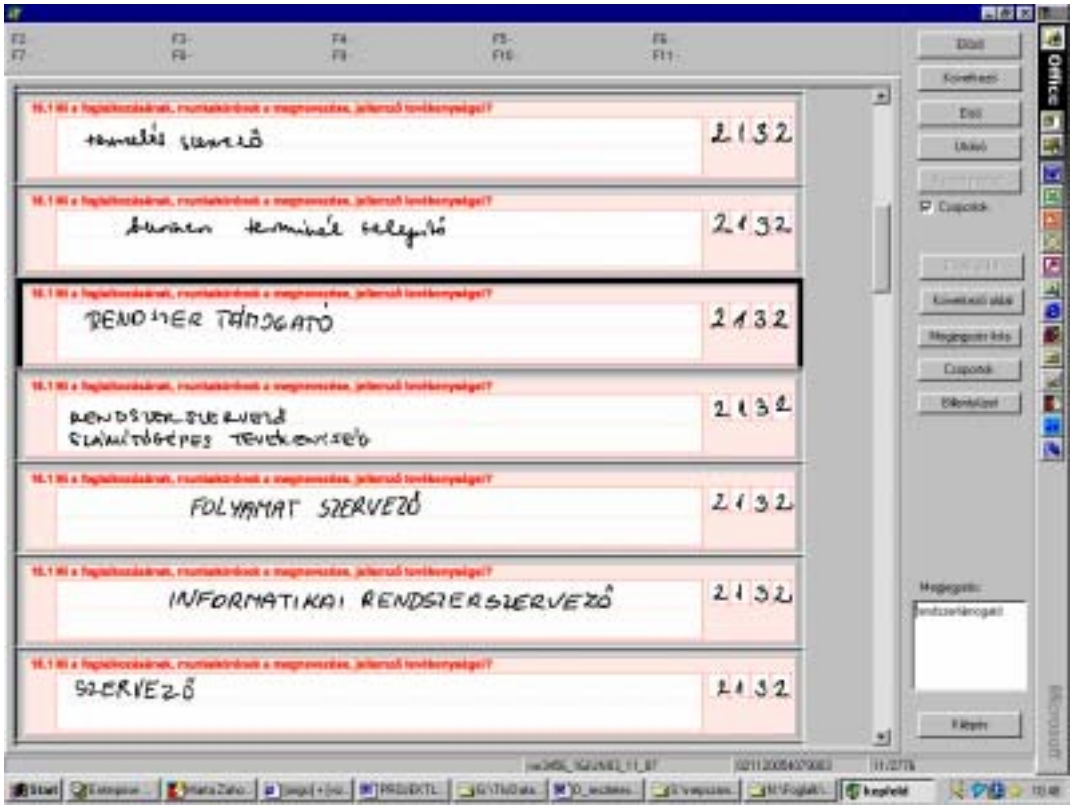
In principle it would be possible to check about 7 million occupations, positions registered on the questionnaires. Nevertheless the lack of the necessary financing and the shortage of labour permitted only to review around 1 million records. This resulted in the detection of 12.000 new denominations, categories of occupations, e.g. in the enlargement the FEOR-93 up to 5.112 categories.

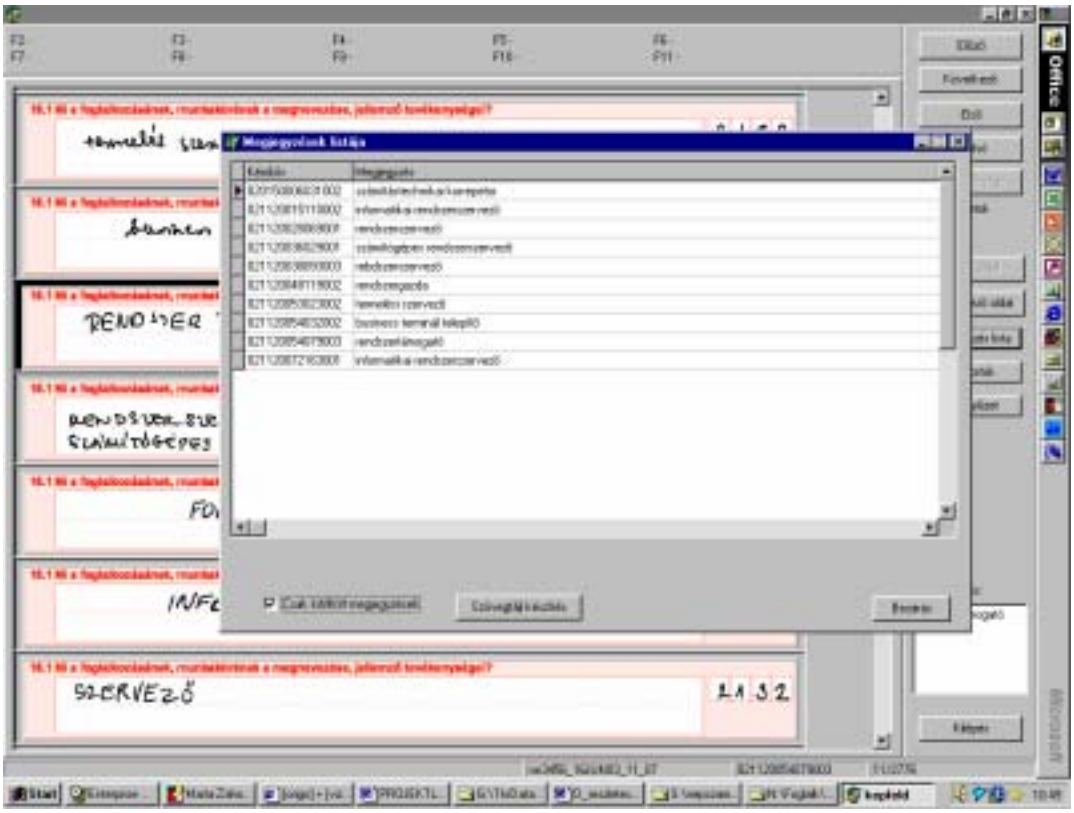
In the process of work a sample of the total number of questionnaires was checked. The full page of a given questionnaire or only the segment of the page containing the record for interest was shown on the screen of the monitor. The software enabled the user to inquire for the topic(s) in any arbitrary selection of the questionnaires.

With the help of the supporting software the questionnaire or the record – in this particular case the record on the occupation – could be visualised on the screen.

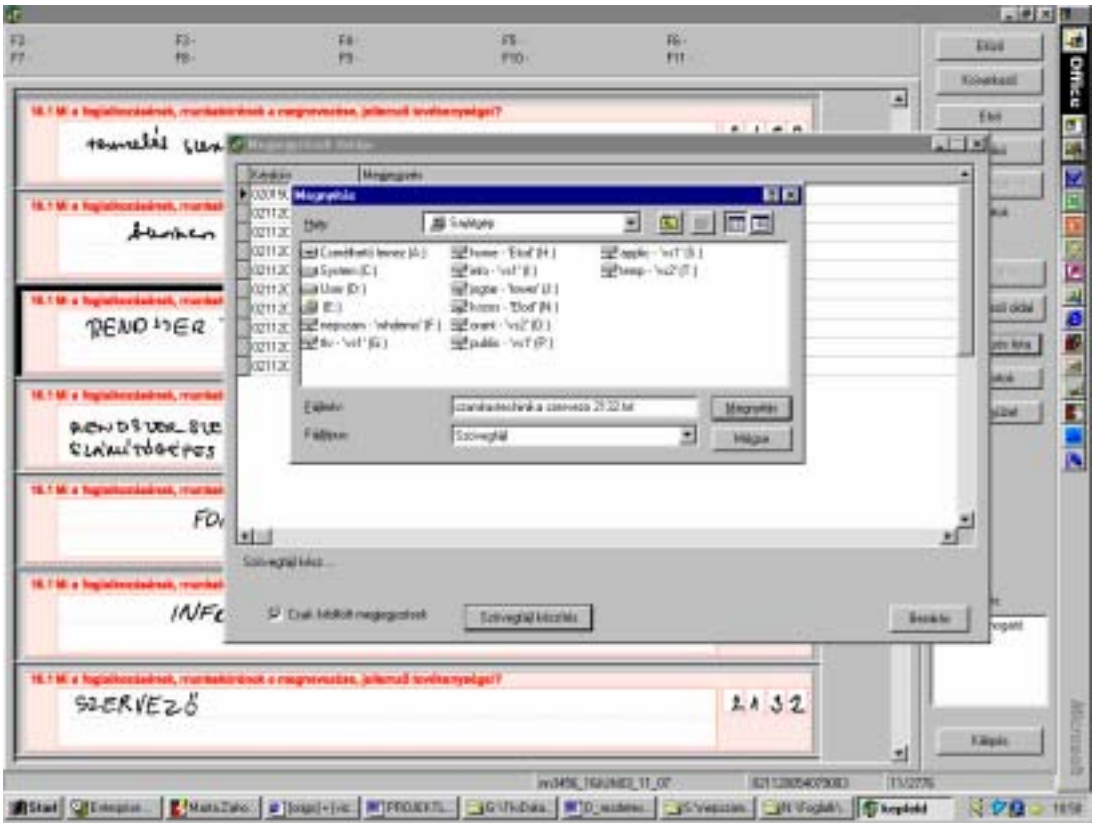


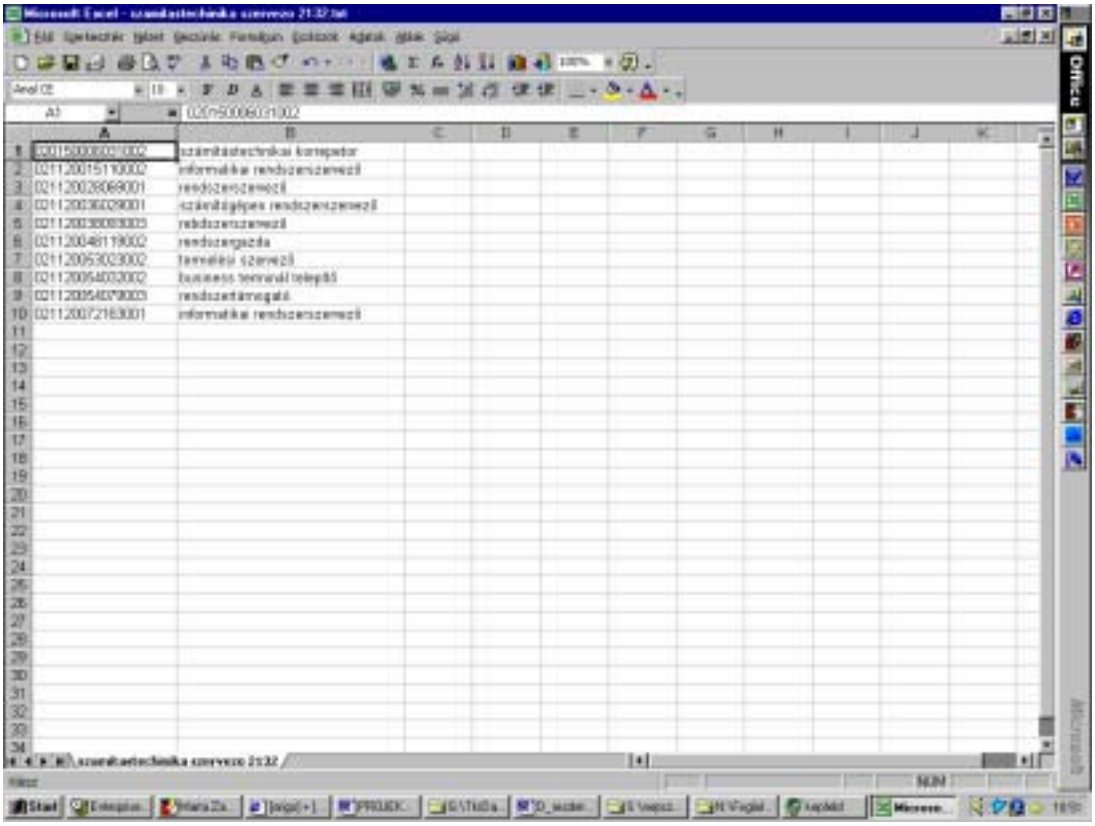
The software permits to enter the remarks into the „comment" window. After processing the given package of pictures it will be possible to collect the complete list of the remarks.





The lists of the remarks were saved as a Word-file, convertible into Excel worksheet.





The selected occupations - activities have been grouped according to FEOR-93.

The software besides the selection of the records permitted to investigate the educational, professional requirements for working in the individual occupations.

The processing of the data gave information if the available manuals on the occupations could meet the requirements of the coders of the population census. It was possible to disclose the deficiencies, inaccuracies, misunderstandings hampering the performance of the coding. The experiences will be useful in the revision of the classification of occupations.

Comparison of the data on employers used by the population census and that of the Register of Economic Units (REU)[20]

Preliminary activities

In the process of the development of the division of labour there is an ever widening gap between the activity (occupation) of the individual person and that of the economic unit (employer). As a consequence, the consecutive censuses gradually separated the questions regarding the activities of the employee and the employer respectively, and independent questions are being used in interrogating the activity of the persons and the economic activity of the employer. As such the grouping of the employees, working members of the cooperatives and joint undertakings is based on the economic activity of the employer (the economic unit), while in the case of the employers, private entrepreneurs and family helpers their individual occupation, or rather the characteristics of the factory, plant or shop serves as a base for their classification into sectors if industries.

At the latest censuses the grouping of the persons into the different sectors of industries have been based on the TEÁOR ((Hungarian) Unified Classification System of the Economic Activities), a system put in force in 1975. The grouping into the different categories is irrespective of the ownership form, or economic system of the given production unit as well as from the ways and methods of elaborating, selling the final products, etc. The above mentioned TEÁOR gradually became comparative with the international classifications. The first version of the International Standardised Industrial Classification of Economic Activities (ISIC) had been approved by the United Nations in 1948, since that time three revisions have been performed. (For the 2000 round censuses the ISIC Rev.3 – approved by the Statistical Committee of the UN in 1989 - have been recommended to use.) Based on the UN classification the EUROSTAT elaborated its more detailed classification, the NACE, which as from 1993 has to be used in the countries of the European Community. The Hungarian Statistical Office accepted the classification and as from 1997 the NACE Rev.1 is applied in Hungary on a for digit level.

Preparations for executing the 2001 census

At the data collections after 1990 (e.g. the 1994 test, the 1996 microcensus), the coding of the employer was no longer based on the list of the employers but on the information registered by the interviewer: the main activity of the employer was classified into two-digit categories of the TEÁOR. That means that the data provider gave information on the name of the employer and the main activity of the unit he/she had been working for.

The observations demonstrated that on national level there was no significant difference between the industrial structure of the employers registered by the 1996 microcensus and that collected from the regular statistics submitted by the companies. While in case of sample surveys it is not advised to present the information according to detailed categories (e.g. subgroups, special branches), the full-scale census should be able to satisfy the needs of the users requiring data classified according to three or even four digits.

The economic transformation, the process of privatisation of the 1990s resulted in the mass formation of firms, organisations with company names without any indication to the activity of the economic unit. Consequently in the enumeration programme of census 2001 it was necessary to collect information on “main activity” of the employer of the interviewed persons.

While evaluating the respective information obtained from the sample surveys it has been observed that the employees working for firms employing less than 20 people are aware of the main activity of the employing company

[20] *Kasza, Jánosné – dr. Lakatos, Miklós:* „Linkage of the census information and the register of economic units”

and generally the seat and the park of the venture is on the same address. Regarding the economic units employing more than 20 people the experiences are different. The employees of these ventures generally do not have a proper knowledge on the branch of economic activity of the company they are working for as a consequence they do not always give to the respective answer the one registered in the REO. One of the nerv-racking issues in the processing of census 2001 was the separation, e.g. recording of the branch of economic activity of the company as a whole and that of the plant of the company respectively. The former question affected the answer given to the size (number of staff) of the workplace of the given person too. In case of the larger industrial, commercial or service companies having several plants, parks, offices the main activity of the company as a whole and the branch of activity of the plant might differ from each other. According to the 1999 labour survey, 42 percent of the persons in employment worked on a plant having an address different from the address of the employing company. On the basis of the labour force survey mentioned above it was possible to assume that in case of nearly 1,6 million persons might be necessary to define the selected division of industry of the main activity of the employer. Consequently in the course of the population census it was expedient to inquire for the main activity both by the employer company and by the plant of the company where the given person worked. To achieve the capture of the reliable information it was necessary to collate the former information, to study their correlation and to exercise a continuous control of the procedure. It was obvious that the negligence of either the employer's or the plant's activity would result in distortions in the soundness of data; it would not allow the processing of the employment data by 2-3 digits of the classification, one should have to restrict the processing to a one-digit (section of industry) tabulation.

Due to the large number and very common fluctuations there are not available detailed registers (containing the description of the economic activity and the respective codes) on the so called micro-organisations, employing less than 10 persons (including the private and collective ventures). The former employers as well as – for practical reasons – those employing 10-19 persons have been classified according to the main activity of the employed indicated by the interrogated person. The detailed list of the employers used in coding of the activities of the employers economic activity contained only the companies employing more than 20 persons. The about 20 thousand companies of the list represent a modest share of the employers though the bulk of the persons on national level. Regarding the occupation, place of work the questionnaire interrogated the following: occupation, exact definition of duties, name and address of the employer, the locality of the working place (plant, factory, shop, etc.), the number of persons employed by the employer. The manual of the enumerators contained instructions for investigating and recording the name and address of the employer as properly as possible.

Among the manuals of the coding of the 2001 census was „The systematic and alphabetic list of the employers in the country (respectively county)", which listed the employers employing 20 persons or more. The manual was an excellent tool in coding. There was a continuous cooperation between the Population Department and the unit handling the Registry of the Economic Units (further REU). The smooth collaboration between the statisticians and the IT experts handling the data of the REU facilitated the availability of the proper information on the actual status of the company stock. By the application of an identification number it was possible to compare the data of the REU and those obtained by the population census, to test the utility of the REU in the population future population censuses.

Experiences of the enumeration and processing of census 2001

The coding manual contained also the incidental deficiencies of the REU. It happened several times that companies enumerated by the census have been working already for several years have not been listed in REU, or their denomination was different than the registered one. Nevertheless the majority of the problems arose from the inappropriate manner, approach of the coder. As in several cases the information have been provided by a member of the household/family, who was not fully aware of the employer's address or name, the registrations on the questionnaires were commonly (locally) used, abbreviated, etc. denominations of the employer. This situation required from the coder the knowledge of the local circumstances and very often approximations, empathy. The management of the population census have authorised the coders to judge the recordings of the enumerators iin case an obvious misinformation should have to be corrected. This type of corrections of course was subject to the approval of the given directorate of HCSO. (Practically the solution is not in conformity with the principles of the census, e.g. the answers given to the questions should not be judged.)

The experiments of enumeration and coding verified the usability of the coding and other manuals related to the employer, place of work. The latter have given valuable support in capturing, processing the respective data. The final data on the processing of census 2001 do support the previous statement.

While preparing the census it has been anticipated that the data on the employers of the persons in employment will not significantly deviate from those captured by the labour force survey studied as from 1992 by HCSO on a regular base. The respective information of the census has been confronted with the data captured by the LFS in the quarter of the year preceding the reference date of the census. Despite the LFS contain information on the population aged 15-74 years and the population census covers the entire population the indexes are similar not only on national but also in regional level. Obviously there are some differences: the percentage share of the so called material industries (agriculture, industry, construction) is somewhat lower than in the LFS statistics, while in case of the service industries there is a reciprocal situation. The deviations, differences – among them the highest value barley exceeds 1 percent - are almost negligible, meaning the information of the two surveys are in line with each-other.

Persons in employment by industry, number of persons employed and identification of the employer

Industry	Total	Number of employees of the employer				The employer		The employer	
		Less than 10	10–19	20 or more	did not know	registered	not registered	registered	not registered
		as a percentage of the total				In the data processing		as a percentage of the total	
Agriculture, hunting, forestry and fishing	203 106	36.6	5.9	49.4	8.1	97 884	105 222	48.2	51.8
Mining, quarrying	7 992	7.4	7.3	81.0	4.3	5 775	2 217	72.3	27.7
Manufacturing	896 869	12.3	6.9	76.9	3.9	644 770	252 099	71.9	28.1
Electricity, gas and water supply	71 374	3.7	3.7	91.2	1.4	65 935	5 439	92.4	7.6
Construction	236 380	40.8	12.4	34.1	12.7	63 905	172 475	27.0	73.0
Wholesale and retail trade, repair of goods	520 677	48.8	10.5	33.4	7.3	153 272	367 405	29.4	70.6
Hotels and restaurants	133 953	50.5	13.4	27.4	8.7	23 641	110 312	17.6	82.4
Transport, storage and communication	288 938	19.9	5.8	68.5	5.7	193 986	94 952	67.1	32.9
Financial intermediation	69 678	14.9	7.9	73.2	4.0	52 374	17 304	75.2	24.8
Real estate, renting and business activities	279 138	36.9	8.4	37.8	16.8	77 952	201 186	27.9	72.1
Public administration and defence; compulsory social insurance	279 789	6.6	6.3	78.5	8.7	–	279 789	–	100.0
Education	309 512	7.0	11.9	75.0	6.1	33 522	275 990	10.8	89.2
Health and social work	241 636	13.9	6.3	70.6	9.1	20 607	221 029	8.5	91.5
Other community, social and personal service activities	151 227	38.1	8.5	42.9	10.5	47 758	103 469	31.6	68.4
	3 690					1 481	2 208		
Total	269	24.6	8.3	59.5	7.6	381	888	40.1	59.9
	3 690	908	307	2 194	279	1 481	2 208	1 481	2 208
	269	857	449	661	302	381	888	381	888

It can be stated that by taking into account that the performance of the job was rather complex and a proper coordination of work was needed the results are satisfactory: the employer of 1 million 481 thousand employee (40 percent of the total) have been identified. In the course of the 2001 census the bulk of the Hungarian employers could be registered. The latter contributed in a large extent to the publication of the high quality level of the structural data, e.g. the data by sections of industries, selected divisions of industries.

As the identification of the firms employing less than 20 persons was not required, a crucial element of the coding procedure was to find the number of persons employed by the employer. (Of course, in many cases the person answering the respective question did not have proper information on the number of persons employed by the employer. Therefore it might have happened that an answer containing less than 20 persons employed in a firm referred to a company employing larger number of persons, thus the given company had been listed in the company register. According to the preliminary data, despite the fact that in the answer given to question 17.4 contained less than 20 persons employed by the employer, the identification of the employers of 80 thousand persons was efficient. In the former cases the automatic correction coded the answer as "more than 20 employees".) The final figure shows that 1 million 216 thousand persons were working for employers having employed less than 19 persons. (In these cases the employer was not to be identified by its name.) Furthermore – in line with the preliminary agreement – in "Public administration and defence; compulsory social insurance" the employers of 280 thousand persons have not been to be identified either. (E.g. it would have been a nonsense to verify individually the names of the 3 200 local governments.) The same procedure was applied in case of a large number of employers in education, health, social and cultural services mostly financed from central or local budget. (This group of employers contains primary, secondary schools, hospitals, theatres.) According to the census 2001 the number of persons employed in education accounted to 310 thousand, in health and social services 242 thousand, while in cultural and other services 109 thousand people. In these three divisions altogether 444 thousand persons worked for employers with more than 19 people; about 90 percent of the given number worked for employers not to be identified by name. (The company register contained the names of some larger universities, nevertheless only a small fragment of the former figure have been working for these establishments.) To sum up the individual identification of the employers have not been required in case:

the employer employed less than 20 people		1 216 306 persons
of the employees working for public administration		279 789 persons
of 90 percent of those working in educational, health, cultural and other services employing more than 20 persons		399 674 persons
		1 895 769 persons
Persons in employment working for employers		
individually identified		1 481 381 persons
	Together	3 377 150 persons
Total persons in employment		3 690 269 persons
	Difference	313 119 persons

Of course for some of the 313 thousand persons working for theoretically identifiable employers there could be units not to be identified (e.g. some research institutes of the Hungarian Academy of Sciences), nevertheless the major problem occurred from the fact that in the course of the enumeration, respondents (or their responding family members) could not give the proper name and/or address of the employer or, due to the improper enumeration it was not possible to identify the employer in the company register. It was a further obstacle that the respondent did not know or did not want to give information on the actual number of employees at the employer. Consequently the figure might contain persons working for employers employing less than 20 people and obviously the latter companies have not been listed in the company register.

Finally it can be stated that the results of the enumeration are satisfactory, nevertheless modifications, corrections and additional work are needed. The data of the REU must not be applied automatically but should be adapted to the requirements of the census. As such the strict alphabetic order of the companies can be broken, the companies being in the same business group should be grouped and the commonly used names of the companies should be disclosed. At the same time, a more accurate updating of the register is also necessary. These modifications might result in a double use of such registers from the census point of view: both as means for checking the validity of the data and as sources of the data.

CONCEPTS AND DEFINITIONS OF THE CENSUS

In line with the enumeration principles of Hungarian censuses, enumerators (census interviewers) filled in the questionnaires by direct interviews without obligation of respondents to verify their answers by the presentation of documents. Therefore the data might slightly differ from hose based on official documentation.

The processing and presentation of the data has been conducted according to the administrative territorial division and in line with the definitions of the statistical system valid on February 1, 2001. The data of the previous censuses (retrospective data) have been adjusted accordingly. The adjustment could result in some divergence from the formerly published figures.

This chapter does not describe every concept of census 2001, only the most important definitions are shown, which are essential for the understanding of the publications on the censuses in general. Besides the censuses are using several definitions, concepts related to the different topics; those are given in methodological parts of the publication of on the respective topic.

REFERENCE DATE

The reference date of the census was 0 o'clock on February 1, 2001; the reference dates of earlier population censuses were 0 o'clock on January 1 in 1870; December 31 in 1880, 1890, 1900, 1910, 1920, and 1930; midnight on January 31 in 1941; 0 o'clock on January 1 in 1949, 1960, 1970, 1980 and 1990.

LOCALITY

The concept of locality used in this volume refers to the settlement constituting an administrative unit (such as the capital, towns of county rank, towns (urban areas), villages (rural areas).

Part of locality is either the central inner area, the other inner area with a definite name, or the outskirts (outer) area.

Central inner area is the part of the locality where the local government bodies and, in general, most service institutions can be found. Each locality has a central inner area.

Other inner area is a part of the town or village which is not connected with the central inner area, but its development has been taking place according to the regulations valid for inner areas. There are localities with no other inner area, but there are others with several other inner areas.

Outskirts are the areas outside the inner area, determined in the development plan of the locality and usually are agricultural or forestry zones. From the population census point of view, an area of outskirts should contain at least one inhabitant enumerated or at least a vacant but usable dwelling.

REGION

The regions represent intertwining statistical territorial units emebodying several counties (or the capital), separated by the administrative boundaries of the counties concerned. According to the Law on regional development, the Hungarian Parliament defined seven planning-statistical regions.

The data on the regions are shown in chapter „4 Data by counties". The code preceding the name of the region – identifying the capital or the county belonging to the given region – is used for allocating the counties (or the capital) belonging to the same statistical region.:

Central Hungary	Budapest and Pest county
Central Transdanubia	Fejér, Komárom-Esztergom and Veszprém county
Western Transdanubia	Győr-Moson-Sopron, Vas and Zala county
Southern Transdanubia	Baranya, Somogy and Tolna county
Northern Hungary	Borsod-Abaúj-Zemplén, Heves and Nógrád county
Northern Great Plain	Hajdú-Bihar, Jász-Nagykun-Szolnok and Szabolcs-Szatmár-Bereg county
Southern Great Plain	Bács-Kiskun, Békés and Csongrád county

AREA SIZE

Data with regard to area size have been expressed – in conformity with the register of the Land and Cartographic Department of the Ministry of Agriculture – as of February 1, 2001, in hectares.

POPULATION

Population data refer with regard to the 1870–1960 censuses to present population, with regard to 1970–1996 to permanent and resident population, respectively. 1870–1890 data cover civilian population only, while data for 1900–2001 include total population.

Present population is the population at the place of the enumeration at the reference date of the census.

Registered permanent population is the group of persons having a registered permanent address (dwelling, residence) in the given area, independently whether they do or not have a registered temporary address elsewhere. To this group also belong those persons, who were abroad for some reason (employment, learning, fulfilment of diplomatic, commercial, scientific mission) at the reference date of the census, but had a registered permanent dwelling in the given area.

Permanent population of the census comprises every person enumerated considering the place of the enumeration as his/her permanent residence, not willing to give it up for changing it with another accommodation; this is the dwelling he/she regularly comes home, where the members of his/her family – if any – are living. To this group also belong persons who were abroad for some reason (employment, learning, fulfilment of diplomatic, commercial, scientific mission) at the reference date of the census, but had their permanent residence in the given area. Thus, permanent population of the census might contain persons who had their registered permanent residence or their registered temporary residence, or even their not registered residence at the place of enumeration.

Registered resident population consists of two groups:

- population having a registered permanent dwelling in the respective area and having no temporary registered dwelling elsewhere, and

the persons having a registered temporary dwelling in the given area, regardless to whether they were or not present on the reference date of the census. Registered resident population also contains the group of persons having no registered permanent address, but whose temporary residence on the reference date of the census was in the given area (e.g. part of the inhabitants of charitable institutions, temporary asylums, alms-houses).

A Resident population of the census means the group of persons staying in fact on the place of the enumeration, those who live their everyday's life there, can be contacted on the given address, spend most of their night-rests on that place, go to work or to school from that place. As such, the place of the enumeration can be the person's registered permanent address, or his/her registered staying (temporary) address, or his/her not registered address, too. This grouping is basically in line with the concept of resident population of the 1990 census, where the intent for the official registration had been regarded as a matter of fact of a valid official registration.

The data collection and processing of the 2001 census have allowed for the compilation of two types of resident population in compliance with the requirements of international recommendations and with the needs of the regular national statistical reporting system, respectively.

The data collection and processing of the 2001 census have allowed for the compilation of two types of resident population in compliance with the requirements of international recommendations and with the needs of the regular national statistical reporting system.

1. Registered resident population: based on the tenure of dwelling as documented in the official registry, irrespective of the actual use of dwelling. This is the basic category of the regular statistical reporting (i.e. vital statistics). The 1970 census was the first one allowing for the compilation of registered resident population.
2. Resident population of the census: grouping of the population, closely in line with the usual resident population concept of international recommendations where, disregarding the official registration, the actual use of dwelling is taken into account. This is a static population category: as the base of the grouping in some cases might differ from the fact and/or the tenure documented by the official registry, neither the changes in migration (modifications in the official registry regarding the fact of moving or tenure status) nor the reports of vital events (birth, death)

can modify it. It was the 2001 census, when resident population of the census was compiled for the first time; this is the group of „de facto population ", a category used by the international statistics.

At the 1980 census, the resident population of 1970 was adjusted manually to the concept of present population, and these data have been published later on. The retrospective data of the 2001 census publications have been adjusted by computerized processing, that is instead of the aforementioned manual adjustment, it has gone back to the resident population enumerated of the 1970 census. Therefore these data differ from those published in the previous two decades.

As compared to previous censuses, two new categories of population have been introduced: the night population and the day population.

Night population of a locality or of a geographic area (subregion, county) is equal to its resident population. Day population means the sum of the resident population and persons commuting daily into the given locality (area) to work or to school, minus the number of persons commuting out daily from this locality (area) for work or studies.

The 1970, 1980 and 1990 data refer to the registered resident population, while the 2001 data relate to the resident population of the census. The retrospective data of earlier censuses refer to present population.

POPULATION DENSITY

Number of population on 1 km² of the respective area

POPULATION GROWTH

Actual increase and decrease, respectively, mean the difference between the population sizes enumerated in an area at two consecutive population censuses; in the 1870–1960 period this value was calculated according to present population at the reference date of the census, while in the 1970–2001 censuses this index was calculated on the basis of resident population.

Natural increase or decrease mean the balance of live births and deaths in the population of a given area. Until 1941 births and deaths had been registered at the locality of the event, while from that time in the locality of residence of the newborn child's mother or of the deceased person.

Live-birth is the coming into the world of the foetus giving some sign of life (e.g. breathing, heart function, decisive motion of the volitional muscles, pulsation of the umbilical cord), regardless to how long he/she was in the mother's uterus and how long he/she lived.

Death is the final cessation of all signs of life at any time after live birth (i.e. cessation of the functions of life after coming into the world without the capability of revival).

Migration is the difference between the actual and natural increase/decrease of the population.

Average yearly increase or decrease are counted on the basis of the hypothesis that between two population censuses the population increases or decreases occurs according to a geometrical progression, i.e. the rate of change (r) is constant. The calculation formula is

$$P_n = P_0(1+r)^n$$

from which

$$r = \sqrt[n]{\frac{P_n}{P_0}} - 1$$

P_o = population size at the date of the population census taken at the beginning of the period;

P_n = population size at the date of the population census taken at the end of the period;

n = number of years (fractions of years) elapsed between the two population censuses.

AGE GROUPS

The data of the age structure of the population were detailed by age groups on the basis of the age completed till the reference date of the population censuses. In tables on age distribution and marital status, five-year and ag-

gregated (major) age groups have been used. In the data processing of the 2001 census, the individual age groups cover the following birth cohorts:

Five-year age groups

Age group (years)	Date of birth	Age group (years)	Date of birth
0– 4	January 31, 2001–February 1,1996	45–49	January 31, 1956– February 1,1951.
5– 9	January 31, 1996.– February 1,1991	50–54	January 31, 1951– February 1,1946.
10–14	January 31, 1991– February 1,1986.	55–59	January 31, 1946– February 1,1941.
15–19	January 31, 1986– February 1,1981	60–64	January 31, 1941– February 1,1936.
20–24	January 31, 1981– February 1,1976	65–69	January 31, 1936– February 1,1931.
25–29	January 31, 1976– February 1,1971	70–74	January 31, 1931– February 1,1926.
30–34	January 31, 1971– February 1,1966	75–79	January 31, 1926– February 1,1921
35–39	January 31, 1966– February 1,1961	80– X	January 31, 1921 or earlier
40–44	January 31, 1961– February 1,1956		

Aggregated (major) age-groups

Years of age, category		Period of birth
0–14	child	January 31, 2001– February 1, 1986
15–39	young(er) adult	January 31, 1986– February 1, 1961
40–59	old(er) adult	January 31, 1961– February 1, 1941
60– X	elderly	January 31 or earlier

Number of woman in propagative ages refers to those of being 15–49 years old.

The occupants of dwellings and the members of the households /families are classified as follows:

Years of age, category		Period of birth
0–29	young	January 2001 31.– February 1, 1971.
30–59	middle-aged	January 31 1971.– February 1, 1941.
60– X	elderly	January 31,1941. or earlier

MEAN AGE

Mean age of the population is the weighted arithmetical average of the age of enumerated persons at the reference date of the census.

CITIZENSHIP

Legislation on citizenship determines who is regarded as citizen of the given country. In the 2001 census, besides Hungarian, a second citizenship could be marked in case of dual citizens; however, foreigners not having Hungarian citizenship were limited to mark one citizenship only.

FACTORS DETERMINING THE NATIONAL/ETHNIC AFFILIATION OF THE POPULATION

In relation to the subject „nationality", the program of the 2001 census contained four questions, as follows: what is the persons nationality; to which nationalities' cultural values and traditions did the person feel affinity with; what is the mother tongue of the enumerated person; what is the language spoken by the person with family members or friends. The respective Act of this country, besides the Hungarian majority, the Armenian, Bulgarian, Croatian, German, Gipsy (Roma), Greek, Polish, Rumanian, Ruthenian, Serbian, Slovenian, Slovakian and Ukrainian ethnic minorities are regarded as officially registered.

Every interviewed person was allowed to give three answers to the questions at most. From the ethnic groups not listed above, only one could be marked, provided the number of alternative (multiple) answers given to each of the questions – including Hungarian, if marked – was not more than three. Consequently, a given person had been as many times counted, as many answers in relation to the question belonging to values, traditions of a nationality, to the mother tongue and to the language spoken with family members and friends he/she marked. Taking into account that regarding the nationality the possibility of multiple answers was given two ways of processing was possible: the one based on the total number of answers, the other reflecting to the number of persons. (E.g. based on the answers the person speaking both to the Romany and the Bea language is counted twice, while based on the persons itself only once, as a Gipsy.)

The tables contain the declarations of the smaller groupings in an aggregated form: like the German, where at the processing Low German, Swabian, Bavarian etc. were taken into account, a similar aggregation has been used in the case of the Croatians, Catholic Serbians, „Socács"; the category Russian includes Great Russian, White Russian; Ruthenian also covers Little Russian and Russniak. The African ethnic/linguistic groups (West-Atlantic, Mende, Songo, Kru, Kwa, Gur, Niger-Kordofonian, Chadic, Nilo-Saharan, Bantu, Khoisan), the Arabians (with the exemption of the Hebrew-Arabians and the Maltese), the Modern Hebrew, Yiddish (Sephardic Hebrew, Yiddish, Hebrew, Ivrit, Judeo-Arabic) are classified into common groups, too. The English spoken in the UK, the USA, Australia, New Zealand and Canada are put together, while the Baltic language group covers Latvian and Lithuanian languages. Celtic language group comprises the Goidelic (Irish Gaelic, Gaelic, Scotch Gaelic), the Britannic (Welsh, Breton) and the Cornish languages. The Mongolic group is composed of the Old Mongolian, Inner Mongolian, East Mongolian, Oirat, Buyrat, Daur, Kansu, Kinghai and the Mogol idioms. The group „Scandinavian languages" comprises North-Western German (Icelandic, Norwegian) and North-Eastern German (Danish, Swedish) languages. The category of the Spanish language – besides the one spoken in Spain – covers the idioms used in Bolivia, Chile, Cuba and also those spoken in the USA. Turkish language group involves the Turkish itself, Khalaj, Gagauz etc. and the Turkish idioms used in Southern Siberia.

Persons defining themselves as Székely, are regarded as Hungarians. Regarding the Gipsy minority, the summary tables show to the aggregate of the Gipsy, Romany and Bea population, though the data regarding the affinity with ethnic cultural values, traditions differentiate the Gipsy and Romany population, while the answers given to mother tongue and to language spoken with family members, friends besides the former language idioms, already contain the Bea language, too.

The cells „declared belonging to a minority" and „belonging to a national/ethnic minority together" show the number of persons who marked belonging/affiliation to the given minority based on the answer related to nationality, mother tongue, language spoken with family members, friends, or affinity with cultural values, traditions. In this respect, besides Hungarian and the nationalities listed in the Act on national/ethnic minorities native in Hungary, persons having declared attachment to the African, Arabic, Chinese, Modern Hebrew, Jewish etc. nationalities' values, have also been regarded as minorities. Of course, ethnic minorities native in Hungary are only those listed in the respective Act (i.e. 13 national/ethnic groups).

NATIONALITY

From the point of view of national group belonging in Hungarian population censuses, every person is counted as belonging to the national group to which he/she declared to belong, free of all influences and without regard to his/her mother tongue.

AFFINITY WITH NATIONALITIES' CULTURAL VALUES AND TRADITIONS

The answer regarding affinity with nationalities' cultural values and traditions does not depend on the nationality, mother tongue or knowledge of languages of the enumerated person. (For some more detailed explanation, see „Factors determining the national/ethnic affiliation of the population".)

MOTHER TONGUE

Mother tongue is the living language which one learns in one's childhood (as one's first language) and in which the person generally speaks with the members of his/her family and which one, free of all influences and true reality, declares to be his/her mother tongue. The mother tongue of the dumb and the infants unable to speak is the lan-

guage in which their next of kin regularly speak. (For some more detailed explanation, see „Factors determining the national/ethnic affiliation of the population".)

LANGUGAE SPOKEN WITH FAMILY MEMBERS, FRIENDS

As to this specific question, family circle – contrary to the family (nucleus) concept used in the census – means the group of persons with closer or weaker kin, also including those living elsewhere, even in a foreign country, who had been regarded by the enumerated person as members of is/her family. (For some more detailed explanation, see „Factors determining the national/ethnic affiliation of the population".)

LANGUAGE SPOKEN BESIDES MOTHER TONGUE

The living language besides mother tongue is the one in which the person is capable to understand and to make him/herself understood by others. Hungarian censuses generally allowed to indicate, besides mother tongue, the knowledge of further languages, too. Accordingly, in the tables showing the knowledge of languages, the person enumerated figures as many times as the number of the languages he/she indicated.

The censuses applied different methods regarding the number of languages spoken besides mother tongue. As to the 2001 census, besides the answers given to the questions on mother tongue and languages spoken with family members or friends, further languages (three at most) could be taken into account.

Subtracting from the number of persons speaking a given language the number of those speaking it as a language besides their mother tongue, we obtain the number of persons whose mother tongue is that language. Exceptions are languages shown together, by groups.

The relevant tables also contain dead and synthetic (artificial) languages.

RELIGION, DENOMINATION

The data show the religion or denomination – without any parental or other influence – of the respondent he/she feels to belong to. The answer given does not automatically mean the practice of a religion, taking part on services, having administrative ties to it. As the answer was not compulsory, the enumerated person could ask for marking the „do not wish to answer" box, or to live the respective box blank.

Census 2001 enabled to investigate the religion, denomination of the persons living in the same family. The respective tables show the religious groups the married/consensual couples, the mothers/fathers, the children the lone persons belong to. Married or consensual couples are shown in the same group in case their declared religions are the same or sub-groups of a definite religion (e.g. Roman, Greek or other Catholic religions are grouped into the Catholic religion).

Another approach in studying the religious issue within the families is whether how the children follow the religious behaviour of the parents. In the investigation of this aspect the subgroups of the religions have been taken into account. i.e. the Roman, Greek, etc. Catholic religions as well as those not belonging to any church, denomination, or persons not willing to answer have been dealt separately.

MARITAL STATUS

The categories of the population by marital status have been established according to the legal status having existed at the reference date of the census. Accordingly:

- never married (single) is the person who has not yet married;
- married is the person whose legal marriage has not been dissolved by a final judgement, whose spouse is alive, without regard to whether he/she does or does not live together with his/her spouse);
- widowed is the person who didn't remarry after the death of his/her legal spouse;
- divorced is the person whose marriage was dissolved by a final judgement and who did not remarry.

The data of persons living separately without a judgement are included in the data of the married. The marital status of persons cohabiting without legal marital relation (in consensual union) was also established on the basis of the legal status.

FERTILITY

Fertility means the frequency of childbirths of females aged 15 years and over and, respectively, the number of their live born children, inclusive of the children deceased in the meantime, but without the number of adopted or foster children. The population census establishes the fertility of females on the basis of the total number of their children born alive till the reference date of the census.

The data of the 1960 and former population censuses include the total number of children ever born (whether live or still).

EDUCATIONAL ATTAINMENT

Educational attainment of the population was established on the basis of the highest grade completed within the most advanced level attended in the school system.

At present – besides kindergarten – the following educational institutions belong to the school system:

- general (primary, elementary) school,
- secondary school (grammar school, secondary specialized school),
- university, postgraduate education.

The grades of the institutions for the education of handicapped children are of the same value as the corresponding grades of general school.

The presentation of the data on educational attainment does not follow the changes in the level of the educational institutions: each person's educational attainment data correspond to the level the respective institution had when the qualification was obtained.

The institutions of the earlier educational systems as well as the secondary educational institutions with six or eight grades are grouped according the following:

- 1–8th grade of the elementary (public) school is the same as the 1–8th grade of the primary school;
- 1–4th grade of the higher elementary school is equal to the 5–8th grade of the primary school;
- 1–6th grade of the secondary school with six grades corresponds to the 7–12th grade or the general certificate;
- 1–8th grade of the secondary school with eight grades corresponds to the 5–12th grades or the general certificate.

As from 1960 at the censuses instead of the literacy the highest education of the population had been interrogated. The group of population „not even the first grade of general (primary) school completed", irrespective of illiteracy, include every person who does not have a certificate on resuming the first year of general (primary) school or it's equivalent. The data on the censuses prior to 1960 include also the persons with unknown educational attainment.

When establishing highest educational attainment, among the qualifications obtained at an apprentice school, only those obtained in 1961 or later, while among the qualifications received at a sanitary vocational school as well as at a school for shorthand-typing, only those obtained in 1976 or later at day schools have been taken into consideration. The educational attainment obtained as from 1961 in vocational training schools as well as from 1976 in technical schools are shown in the appropriate level of the 9–11th grades of the school system. The same practice was followed in the case of the former special schools too. The former secondary schools which provided the students with a certificate with profession are shown in the category „secondary education with certificate of profession, without final examination". Those who obtained the professional training though did not get the professional certificate are regarded as graduates from the 8th grade of the primary education.

The category „11–12th grade of secondary education, with general certificate" include those attending the 13–14th grade or completed the 13-14th grade.

All the highest completed qualifications based on general (primary) school education, preparation for a secondary school's final examination (G.C.E.), for obtaining a qualification for the continuation of studies at a third-level educational institution and entitle to occupy posts requiring second-level education, are shown as qualifications of a secondary school (e. g. completed grammar school, specialized secondary school, technical school, commercial or

industrial high school, secondary school for teachers' or kindergarten teachers' training, high school for girls etc.). Attainment of secondary school had some restrictions in acknowledging the secondary school attainment.

The category „secondary school with general certificate" refers to persons completed the secondary school with general certificate, those attending or completed the 13–14th grade as well as persons conducting studies at a third level educational institution or who completed the latter without diploma. The category contains persons having obtained a certificate of final examination, or a school-leaving certificate in a grammar school, high school of modern languages and sciences, as well as those who obtained a final certificate of the secondary school between 1974–1986.

To the group third-level education (university, college etc.) belong all the institutions that could be attended after having completed a secondary school's final examination (examination aimed at qualification), provide high-level special knowledge and a general culture, where successful completion of studies entitles the graduate to pass a state examination and to receive a diploma.

At census 1930 also those persons had been regarded as third-level graduates who resumed their studies at institutions (theology, military academy) without diploma, though on the base of the latter it was possible to obtain a diploma. Census 1980 regarded as third-level graduates the students who have received a university leaving certificate (absolutorium).

The data on qualifications obtained within the framework of school education don't include the qualifications obtained

- within the framework of vocational training at courses;
- the studies at the Evening Course of the University of Marx and Lenin closed without final examination as well as
- qualifications at extension schools based on general school and providing basic industrial or agricultural special knowledge.

ECONOMIC ACTIVITY

According to activity on the week prior to the reference date of the census, the population consists of two categories: economically active and economically non-active population.

Economically active population consists of persons in employment and the unemployed. According to international recommendations, every person performing at least one hour activity ensuring income or having only temporarily been absent from his/her usual activity (e.g. due to sickness) on the week preceding the reference date of the census, has been qualified as person in employment. Activity ensuring income is – regardless of its legal background – any type of action, which results in an earning in cash or kind. Consequently, everybody, actively engaged, having a status of civil servant, public functionary, acting as a judge or attorney, being member in a joint undertaking with the obligation of contribution by work, having a working contract with an employer, possessing an entrepreneur's licence, has been regarded as person in employment. This category covers the regular activity of contributing family workers in a farm or undertaking, the odd jobs, as well as the work for public interest. The category of persons in employment include conscripts, drafted standby military personnel, pensioners, beneficiaries of different maternity (i.e. child-care) allowances pursuing gainful activity, as well as prisoners, temporarily detained persons, provided they work in the penitentiary institution. Students aged 15 years and over having performed at least one hour income ensuring activity on the week preceding the reference date of the census, were also enumerated as persons in employment.

The category persons in employment consists of the following group of people:

- active earners,
- working while receiving child-care allowance,
- working, while receiving pension, rent.

The previous censuses did not count as persons in employment (formerly called active earners) those persons who worked while receiving a pension, childcare- or other allowance. Similarly, only those students of full-time (daily) educational institutions, conscripts, drafted standby military personnel, prisoners, temporarily detained persons

were enumerated as active earners, who had worked before joining the army, entering the penitentiary institution, having been taken into custody, respectively. Persons working in odd jobs or seasonally, were regarded as persons in employment, even if they had not actually been working on the week preceding the census date.

Tables showing the number and structure of persons in employment, always refer to the population aged 15 years and over, whereas on the tables showing economic activity of the population, the data of previous censuses on active earners include 14 years old persons, too.

The unemployed comprises persons who

- on the week preceding the reference date of the census were not in paid employment or self-employment,
- during the four weeks preceding the date of the census had been looking actively for a job (made a job inquiry at the Labour Office, at a public or private employment office, contacted employers in person or in written form, placed/answered job advertisements, made related inquiries at relatives, friends etc., or took specific steps to launch their own enterprise), and, moreover
- declared readiness to work as an immediate step or at least within the next two weeks.

Obtaining the unemployment benefit was not a precondition of being qualified as unemployed.

Since 1949, the 1990 census was the first one in Hungary to collect information on unemployment. Nevertheless, the concept of unemployed persons of that census did not cover persons having a pension, or those receiving child-care or other allowance, though seeking for a job at the same time. For being qualified as unemployed, the readiness to accept/start a job within two weeks of time was not a criterion either.

Population economically non-active consists of inactive earners and dependents.

The group of inactive earners covers persons pursuing no gainful activity, though realising an earning, income, as

- pensioners, rentiers on own right,
- pensioners, rentiers on relative's (derivative) right,
- beneficiaries of child-care and similar allowances,
- persons receiving unemployment benefit, though not qualified as unemployed (because they are not actively looking for job, are not ready to start a job within the two weeks),
- persons living on their wealth or some other not work-related income (e.g. by leasing their land, letting out their seasonal housing unit, capital income recipients, having a subtenant).

Dependents are persons not belonging to any of the former categories, because in general they have no own incomes or revenues, and a private person or an institution ensures their livelihood, such as

- children under 15 years of age not attending school;
- (full-time) pupils and students of day schools (general schools, secondary schools, secondary vocational schools, students of colleges, universities even if they receive scholarships and apprentices even if they receive wages of skilled workers);
- other dependents (15 years and over, not studying in day schools, e.g. housewives, homemakers).

INDUSTRY, BRANCH OF ECONOMY

Population censuses (microcensuses) assign persons in employment to the corresponding section of industry and within that, to the corresponding subsection, group and class, on the basis of their employers (in some cases on the basis of their workplaces) according to the standard industrial classification in force at the time of the census.

The 2001 census has classified employers or economic activities according to the Hungarian Standard Industrial Classification (TEÁOR) of 1998. Economic units have been classified according to their main activity, irrespective of their type of ownership or management system.

The TEÁOR grouping of economic units with more than 20 employees – provided there was a possibility of identification – has been carried out by using the Business Register maintained by the Statistical Office, while smaller economic units have been classified on the basis of the declaration of the person enumerated.

Employees and members of co-operatives representing the majority of persons in employment have been included – irrespective of their individual occupations – in the section, division to which the employing enterprise, co-operative, institution, venture etc. belonged to, according to TEÁOR.

In some cases, e.g. in case of those employed in public administration, health, educational etc. institutions, the grouping has not been done on the basis of the employer but according to the workplace. (E.g. if the physician's employer was the municipality, and his/her workplace was a hospital or an out-patient clinic, he/she has been included in the respective industry on the basis of the latter.)

Own-account workers and persons of liberal professions were assigned on the basis of their individual occupation. Unpaid helping family members were included in the same group as the person whom they helped.

Agricultural day-workers were grouped into the industry „Agriculture, hunting, forestry and fishing".

Non-agricultural day-workers and seasonal workers were classified into the corresponding group of their employers if the work had been performed at a specific employer; otherwise they were assigned into the group „Other community, personal services".

STATUS IN EMPLOYMENT

Persons in employment (employed persons) are grouped by status in employment on the basis of their legally determined relationship to their employer. Census 2001 applied the following categories:

- employee,
- own-account worker, private entrepreneur,
- working member of partnerships (joint undertaking),
- working member of co-operative,
- family helper,
- odd job performer, day worker,
- worker for public interest.

Employee is the person who is in labour relation – usually based on a working contract – with an employer.

This category includes civil servants, public functionaries, persons acting as judges or attorneys, as well as professional and contracted members of armed forces and public defence (their legal status being civil servant or public services worker).

An own-account worker is a person working alone or with some employees – generally on the basis of a licence of activity – as sole proprietor (like artisans, retailers, farmers, free-lancers etc.), not as member of a joint undertaking.

Working member of partnership is the person, who parallel to his/her partnership in possessing a non co-operative venture, is obliged to contribute to the activity of the venture by personal activity, work.

Working member of a co-operative is the person, who as a member of a co-operative (e.g. consumers' co-operative, agricultural co-operative), has a working contract with the same co-operative too.

Contributing family worker (unpaid family helper) is a person, who, as member of the family, regularly contributes, without pay, to the job performance of own-account workers, the working members of joint undertakings or co-operatives, respectively.

Odd job performer, day-worker is the person, who neither has a stable working contract, nor is an entrepreneur, though – with, or without a special document – is working, usually lasting for a short period of time (e.g. agricultural day-work, shovelling the snow, unskilled work in construction). The day-worker, based on an agreement with the employer, is working either for a negotiated period of time (one day, week etc.), or is performing a given job (digging of a piece of land, painting the fence etc.). Odd job performers are also the persons, who on the basis of an individual contract, not as entrepreneurs, perform an intellectual job (e.g. translation of a text, holding a lecture etc.).

Worker for public interest is the person, who in the program on the public jobs, is engaged, i.e. employed by the local municipality.

NUMBER OF PERSONS (STAFF) EMPLOYED BY THE EMPLOYER

The number of persons employed by the employer was a tool for segregating the (general) managers of the small enterprises. The number of persons employed by the employer is equal to the number of staff at the reference date of the census

FAJOR GROUPS OF OCCUPATIONS

The grouping system of the occupations at the census 2001 is based on the nomenclature of the Hungarian Standard Classification of Occupations (further FEOR-93), being in force as from 1997. As to basic principles and structure, it follows the international classification of occupations, ISCO-88 (Rev.3.), and groups the occupations into the same 10 major groups, as follows:

1 Legislators, senior government officials, leaders of interest groups and managers of firms
2 Professionals
3 Technicians and associate professionals
4 Office and management (customer service) clerks
5 Services workers
6 Skilled agricultural and forestry workers
7 Craft and related trades workers
8 Plant and machine operators and assemblers, vehicle drivers
9 Elementary workers
0 Armed forces

Grouping into the categories is based on the actual occupation.

According to the principles of ISCO-88, the concept „occupation" takes as a basis the activity pursued, regarding as a further important criterion the level of expertise, knowledge, experience necessary for the relevant activity.

Major groups 1–4 basically refer to non-manual, while major groups 5–9 to manual occupations. From this point of view, major group „0" – the armed forces – is a mixed category, though on the basis of the groups within this major group the former distinction is possible.

One of the conditions of being classified into the category of managers within major group 1 has been that the person had been heading an organisation, division with more than two employees.

The status in employment was not taken into account in the classification by occupation, i.e. irrespective of whether the person carried out his/her activity as employee, member of co-operative, member of partnership, own-account worker etc. As to proprietors or co-proprietors of undertakings or business companies, only those were to be classified into the categories of occupation who actually had participated in the production or other activity.

The census results contain both aggregated and detailed major groups of occupation. Part „2. Detailed data" contains even more detailed categories, too; the respective codes are shown in the „Supplement".

Data regarding occupations of active earners of the 1980 and 1990 censuses had been revised according to FEOR-93..

AGRICULTURAL ACTIVITY

Person performing agricultural activity is the one, aged 15 years or over, who in the year preceding the population census had worked in the agriculture. The tables show the time (counted on the basis of a10 hours working day) spent on agricultural work, performing it as a primary job, a secondary activity (by having a main job), or a subsidiary activity of an unemployed person. This kind of definition and estimate of the agricultural work is in conformity with practice of the previous censuses.

Regarding the agricultural work a full year is equal to at least 180 working days (1 800 hours).

From the point of view of the work performance it is indifferent whether in what capacity - employee, member of partnership, agricultural farmer or odd job worker – the activity was exercised.

Agricultural activity covers the activities resulting material benefits, requiring either heavy or light efforts, as well as regardless of its place, the work performed in the horticulture, the animal husbandry, the forestry, the plant protection and the land amelioration.

LAST OCCUPATION, STATUS IN EMPLOYMENT OF PENSIONERS, UNEMPLOYED

The occupation and the status in employment of old age and disability pensioners on own right and of the unemployed had been defined by taking into account their last occupation, status in employment before becoming pensioners or unemployed. The classification used in their case was the same as that used for the persons in employment.

The time elapsed from the retirement has been defined by the year of termination of the last working contract.

TIME WEEKLY WORKED

In the case of persons working on the basis of a work contract (employees), weekly working hours are defined in the contract. In case of own-account workers, freelance workers the weekly working load equals to the time requirement (in hours) of the usual everyday (business) activity, including the procurement of working materials, maintenance of the machinery, equipment.

The person is working according to working hours not defined or on the basis of an occasional assignment, provided his/her average weekly working hours couldn't be estimated..

DAILY TRAVEL

The topic refers to the daily travel of the population to work or to school.

Information has been given on the way, means of transport to reach the workplace/school (and return) by the enumerated person.

In case the person used several ways, means of transport (e.g. bike in a nice weather, public transport in rainy weather) the most common practice had to be taken into account.

Marking of several – at most three – means of transport was possible.

In case of persons working in different localities, the means of transport was enumerated only in case they always travelled in the same way (always by car or motorbike etc.)

Respondents were also obliged to report the duration (length of time) of the daily travel to and from their homes and workplaces or schools, respectively. The time requirement of the journey itself has only been taken into account, without the time spent on shopping, using services etc. connected to the journey. The question relates to the daily travel in connection of going to work or school.

DAILY COMMUTING OF PERSONS IN EMPLOYMENT

To define whether a person in employment is regarded as daily commuter is based on the identity of the locality of the person's actual place of residence with the locality of his/her workplace.

The person is daily commuter provided he/she is not working in the locality of his/her place of residence (i.e. he/she does not belong to the resident population of the census in the locality of workplace). Daily commuters are defined as out-going persons from the angle of their place of residence, and are classified as in-coming persons from the workplace point of view.

As to daily commuting, Budapest has been regarded a unique locality (administrative unit), consequently, daily travel for work or study between capital districts has not been regarded as commuting.

Population working in the locality of residence is the group of persons in employment, who work in the same settlement where they actually live (i.e. where they belong to the resident population).

Persons in employment on site – either in a settlement, or in any of the administrative territorial units, are persons having their workplace in the given locality (or territorial unit), irrespective of their locality of residence (where they belong to the resident population).

Persons working in different localities (e.g. travelling agents/representatives, moving hucksters etc.) – as their working activity is regularly characterised by a presence in different localities –, as well as those travelling to work abroad, are not counted as persons in employment on site in any of the localities.

DISABILITY

The subject of disability belongs to the so-called sensitive issues; therefore, answering this question was optional.

A person with disability is defined as a person who is limited in the normal, usual, or traditionally accepted life because of a final or long-term physical, mental or sensual deficiency.

The census questionnaire contained a detailed list of the most common disabilities. In case it was not possible to classify the given person's disability to one of the printed deficiencies, „other" had to be ticked.

It was possible to mark three different disabilities at most. Persons with several disabilities were asked to define the most serious one. The tables contain the information relating to this one.

Information was also collected on cause of disability (the most serious disability) of the person (congenital/prenatal, accident, disease, unknown). Disabilities caused by working conditions, environment – if not resulted by an accident – are regarded as disability related to a disease.

HOUSEHOLD

A (private) household is a group of persons living together in a common housing unit or in a part of it, bearing together, at least partly, the costs of living (i.e. daily expenses, meals). Persons living in the same dwelling but on the basis of independent tenure status, are not considered as persons living in the same household even if the above conditions are fulfilled. Consequently, owners or tenants (partner tenants) do not form a common household with their subtenant, night-lodger, the former persons (the members of a family, if so) always are grouped as an independent family.

If the household consists of one family, the family and the household are practically identical, i.e. a one-family household. The one-family household differs from the family insofar as the number of family members does not include relatives and/or non-relatives (including children under state-care) living together with the family, while the number of household members does. If several families manage a common household, this is a two-, three or multi-family household. In case of households consisting of two or more families, the number of household members contains, besides the number of the members of families forming the household, the number of relatives and/or non-relatives living with the families but forming no separate family, too. One- and multi-family households make up the category of family-households.

Non-family household is the one in which no family relations exist. The following types can be specified:

- one-person household, i.e. household of a lone person;
- household of other compositions in which relatives and/or non-relatives constituting no family live, such as
  a) relatives (e.g. brothers and sisters, a father or mother living alone with his/her married or formerly married child, one grandparent with his/her grandchild of any marital status);
  b) household of non-relatives (e.g. friends);
  c) household consisting of relatives forming no family and of non-relative(s) living with them (e.g. two siblings with their friend).

FAMILY

Family is the smallest circle of persons living together as spouses or cohabiting/consensual unions or kin. The family may be:

- of couple-type, i.e.
  - a married couple without child or with never-married child(ren);
  - a consensual union without child or with never-married child(ren) and
- a lone parent (father or mother) with never-married child(ren).

In case of the 1949 and 1960 data, the number of children living in families includes the married, divorced and widowed children living with parent(s) and the grandchild(ren) without parent(s), living with grandparent(s), while the number of families also includes grandchildren living with grand-parent(s).

POPULATION LIVING IN HOUSEHOLDS, FAMILIES

The data on households and families refer to resident population of the census; as a consequence, the population living in households and families, respectively, does not include persons not belonging to the resident population of the census. (An example: provided a family consists of a married couple with a never married child, who is studying and actually residing in a different locality, the child is not included into the resident population of the census in the locality of residence of the parents, but into that of the other locality. Consequently: in the locality of residence of the parents he/she is not included into the population of the households/families either.)

INSTITUTIONAL HOUSEHOLD

An institutional household is a group of persons belonging to the resident population of the census, living in an institute accommodated collectively and, possibly, receiving some kind of board. (See the concept of institution under the heading of „Institutional housing units".)

FAMILY STATUS

Family status expresses the family or other (e.g. economic) relations between persons living in a household.

Husband, wife: a man and woman living in lawful marriage and keeping a common household.

Consensual (cohabiting) partner: two persons living together in marriage-type cohabitation, irrespective of their legal marital status.

Father or mother: the lone parent living with his/her child(ren).

In the processing of the data referring to the households and families the persons with a family status of father or mother form a family with the cohabiting child(ren) provided at least one of the latter has a "never married" family status. In this case the household and family publications show the father or mother respectively among those living in family households while he/she is grouped into the category of persons living in non-family households provided he/she is living in a household with ever married (widowed, divorced or separated) child(ren) (and there is no cohabiting child with a family status "never married").

Child: the child of a person with the family status of husband, wife, consensual partner, father or mother, irrespective of his/her own age, marital status, source of income, provided he/she has no independent, own family. This category includes adopted and foster children as well, as children born out of wedlock while it does not include children under state care placed at families.

In the analysis on households and families, respectively, only never married children living without a spouse should be regarded as having the family status of child. The married, widowed and divorced children in these tables are classified as other relatives. Nevertheless in case the former persons are living in a lone-parent with child(ren) type family (e.g. with father/mother and brother/sister) they are shown among persons living in families, while in case no brother/sister but the father or mother is the cohabiting partner they are grouped into the category "persons not living in family households". The never married children without a spouse living with the parents are shown as persons living in families (even if ever married child lives with the parents).

The child in state care placed (temporarily or on the long-run) with a family for a cash allowance to cover the expenses of his studies, clothing, etc. is not grouped into this category.

Ascending relative: the parent, grandparent, great-grandparent, father-in-law and mother-in-law of the husband, wife or consensual partner, respectively, provided he/she is living in the household without spouse (consensual partner) or without child (e.g. one of the parents of the spouses, lone grandparent living with the young married couple).

In general the ascending relative is regarded as person living in family household. The ascending relative is shown among the persons not living in family households in case he/she is living in the household with a father/mother with

ever married child(ren). In the latter case none of the members of the household are regarded as living in family households.

Other relative: the relative (i.e. brother or sister, uncle, aunt, cousin of one of the spouses, lone grandparent with a grandchild) living in the household, who does not form an independent family and does not correspond to the characteristics of the above categories. This category also includes persons having family ties, living together in a household with no family nucleus (e.g. brothers, sisters, cousins, uncles, aunts), too.

Child in state care living with the family: not adopted child placed temporarily or for a longer period, by the Children's Protection Agency at a family, the latter receiving some cash compensation for the upbringing, clothing and schooling, etc. of the child.

Non-relative: persons living with the family, but with no actual family ties (e.g. domestics, persons supported on a contract base, child under state care within the family). This category also includes persons who, without having any family ties, live together in a household with no family nucleus (e.g. friends).

Lone person: person living alone in an independent household.

The above categories of family status are also applied *for persons living in institutional households or living as homeless.* Nevertheless, the following categories must not be applied: „child in state care living with the family" (due to the lack of legal conditions); while the categories „ascending relative", „other relative", „non-relative" could only be applied provided the given person is living together with other persons constituting a family. The detailed list of the categories of the family status is usually applied in the publications for those living in private households, in case of those living in institutions or being homeless the categories are aggregated.

Persons living in institutional household: living in an institution providing collective accommodation, and offering collective provisions. Homeless persons staying in temporary boarding houses, rehabilitation institutes and the like are also grouped into this category.

Homeless: persons not living in dwellings, occupied holiday houses, other occupied housing units as well as in institutional households, not even staying in temporary boarding houses, rehabilitation institutes and the like.

ECONOMIC ACTIVITY STRUCTURE OF THE HOUSEHOLDS, FAMILIES

In evaluating economic activity data of households/families and the number of household/family members in employment, respectively, the following considerations should be taken into account

- data published on the number of persons in employment contain households in which the given number of persons in employment has been found, irrespective of whether the household also includes unemployed, inactive or dependent persons;
- the category „without persons in employment, with unemployed" covers households in which there are unemployed, but no person in employment, while inactive earners and/or dependents might belong to the household;
- column „without persons in employment, with inactive earner" contains households in which there are neither persons in employment nor unemployed, but there are inactive earners with or without dependents;
- column „without persons in employment, with dependents only" covers households where only dependents live.

TENURE STATUS OF THE HOUSEHOLD (FAMILY) IN THE DWELLING

Households having a member with the tenure as owner (full or partial) or beneficial owner (full or partial) of dwelling, live by owner's or his/her relative's tenure.

The right of tenure „relative of the owner" includes dwellings where the owner or the beneficial owner do not live in the household but at least one member of the household is a (close) relative (e.g. child, uncle, brother or sister, parent) and no rent for the use of dwelling is paid.

By tenant's tenure lives the household if one of its members is renting the whole dwelling with all its premises from a local government, undertaking, institution, co-operative or private person for exclusive use by paying a rental fee. The

same category covers co-tenants who are using with an exclusive right a part of the dwelling only, while another part of the same dwelling – e.g. kitchen, bathroom – is used jointly with other household(s). This category also includes in some tables also the households living in „service dwellings".)

The right of tenure „relative of the tenant" includes dwellings where the tenant of the dwelling do not live in the household but at least one member of the household is a (close) relative (e.g. child, uncle, brother or sister, parent) and rent for the use of dwelling is paid to the municipality, a co-operative o other business company.

User of service dwelling is the household if one of its members is usiong the dwellig on the basis of a working or service contract and as such no rent for the dwelling is paid.

By sub-tenant's, night-lodger's tenure live households which rent a part – at least one room –exclusively in the owner's, tenant's etc. dwelling (sub-tenant), or uses no separate premise, but only a bed, exclusively in the dwelling (night-lodger, bed-tenant).

By other tenure live those households whose tenure of dwelling cannot be assigned to any of the above definitions (e.g. user of dwelling by favour, without legal tenure, supporter for dwelling).

HOUSING UNIT

The housing unit is a room or suite of rooms and its accessories built or converted for a permanent or temporary human habitation, irrespective of occupancy, as well as a room or group of rooms initially intended for other purposes but actually used as human habitation at the reference date of the census.

The concept of housing unit includes:

- the dwelling,
- the holiday house,
- the other occupied housing unit and,
- the institutional housing unit (institution).

DWELLING, HOLIDAY HOUSE

The dwelling is a unit of places and rooms with specific functions (living rooms, cooking places, sanitary places etc.), generally technically (architecturally) connected to each other, intended for human accommodation, stay (home) or converted into dwelling and also suitable for living at present, which has a separate entrance from a public place, courtyard or from a collectively used place inside the building (staircase, corridor etc.).

Besides, the strict concept of dwelling requires the possibility of assigning the respective group of places to a comfort level. Consequently, so-called temporary accommodations and other lodgings (see the levels of comfort in detail) that cannot be assigned to any category of comfort, don't belong to the dwelling stock in the strict sense. As this reservation had not been taken into account in the publications of earlier population censuses, in order to assure comparability, all housing data in this publication refer to the total number of dwellings, emergency accommodations and other lodgings. The data of the emergency accommodations and other lodgings can be shown separately in the tables containing a detailed distribution by comfort levels only.

The housing units of home-houses (pensioners, room-tenants', young married couples' houses) are considered as dwellings if their occupants are living there with their separate private household.

The group of technically (architecturally) adjoining places, connected with inner passages, were considered at the enumeration as one dwelling also in cases when the passages of one or several places were blocked temporarily but not walled (e.g. in the case of co-tenancy). A mostly separate place, building – e.g. the summer kitchen of detached family house – built as a part of the dwelling was considered as part of the dwelling if it was used by the household living in the main building. However, a summer kitchen let to a subtenant, i.e. used by an outside household, forms a separate housing unit. If the originally connected places were separated (partitioned) technically in order to establish a separate dwelling, the formerly one dwelling had to be enumerated as dwellings in a number corresponding to the state of affairs after the partition. On the other hand, two or more formerly separated dwellings, which are nowadays technically connected (e.g. with inner doors), form only one dwelling.

The seasonal/holiday housing unit basically meets the requirements of a dwelling, nevertheless it is generally not suitable for a year-round use, and is built and mostly used for recreation, resting purposes, i.e. for temporary stay. The census enumerated only seasonal/holiday housing units as housing units corresponding to the following requirements:

- at least 12 m^2 total floor space;
- walls and roof made of solid, long-lasting, weather-resistant material;
- floor covered with a solid (concrete, wooden etc.) material,
- at least one room over 6 m^2;
- at least one window giving direct natural light;
- washing facility and toilet available.

Accordingly, based on the above requirements, the following structures were enumerated:

- holiday houses and seasonal/holiday housing units constructed on the basis of a relevant licence (holiday homes, summer-houses, week-end houses, units of the collective rest-houses),
- residential buildings and dwellings reassigned to holiday homes,
- dwellings not reassigned to, though practically utilised only for, recreation/holidays (e.g. small farm or country-side houses used for recreation),
- other structures intended for other than recreation purposes, but meeting the requirements of those being used for recreation, rest („converted" storage units of hobby gardens, furnished wine press-houses, other farm buildings etc.).

In line with the traditions of population censuses, the data of occupied seasonal/holiday housing units are included into those of occupied conventional dwellings, i.e. the tables showing the data on *occupied dwellings* contain the data on occupied seasonal/holiday housing units, too.

OCCUPIED OTHER HOUSING UNITS (NON-CONVENTIONAL DWELLINGS)

Occupied other housing nits are the following:

- structures such as storage room, wine press-house, stable and the like, as well as workshops, wash-houses, premises etc., without being converted technically into a dwelling, though on the reference date of the census it was inhabited at least by one person;
- occupied parts of temporary, mobile or other facilities (hut, hovel, cabin, shack, caravan, tow-boat, car body, carriage etc.).

Non-conventional dwellings have been subject to the census provided at least one person living in them had been enumerated.

INSTITUTIONAL HOUSING UNITS

An institutional housing unit (with a context of institutional household) is a separate and independent set of premises intended for providing collective accommodation and some kind of board for five or more persons, irrespective of whether or not there were persons to be enumerated there at the reference date of the census. This category includes infants' and children's homes, students' residences, workers' homes, monasteries, old people's homes, hotels, recreation houses of enterprises, hospitals etc.

OCCUPANCY, USE OF THE HOUSING UNIT

Occupied is the dwelling, seasonal/holiday housing unit provided at least one person was enumerated there. Dwellings, seasonal/holiday housing units, occupied by persons not belonging to the scope of enumeration (e.g. foreign diplomats and their families), were enumerated as occupied dwellings, too.

As to occupancy, the classification of dwellings, seasonal/holiday housing units used as secondary or seasonal lodgings depended on whether there was or not at least one person to be enumerated in them at the census date.

At the date of the census unoccupied dwellings, seasonal/holiday housing units had neither been used as permanent, nor as temporary residence, not even as address without official registration. This category might include technically

ready, but not yet occupied flats, dwellings not yet rented, temporarily vacant flats, dwellings used for other than habitation purposes, dwellings, seasonal/holiday housing units used seasonally (e.g. in summer only). The category of unoccupied (vacant) dwellings can be divided into further categories: de facto vacant, unoccupied dwellings complying with all criteria (not being refurbished, not used for other purposes), but at the date of the census no occupants were enumerated in them; dwellings, seasonal/holiday housing units used for other purposes (not as dwellings) had been used for different destination, such as offices, physician's offices, workshops etc., though at any time they could have been suitable – without any alteration - for use as dwellings; the category of housing units used for recreation includes vacant seasonal/holiday housing units and dwellings used exclusively for recreation, rest.

PREMISES OF DWELLINGS

Rooms are premises provided with direct natural light and ventilation (with doors, windows), with a floor space of at least 4 m^2, serving for sleeping or staying during the day (bedroom, children's room, dining-room etc.). The hall and the eating-place having also a window, as well as the premises of room-like character used as consultation rooms, waiting rooms, offices etc. also figure among the rooms. The census classified the rooms by total surface of the dwellings as follows:

- rooms with a surface exceeding 12 m^2,
- half rooms and small rooms with a surface of 4–12 m^2.

Kitchens are spaces established and used for cooking (maybe, also for eating), of a floor space of at least 4 m^2, in general provided with direct, natural light and ventilation (with window, door).

Kitchenettes are premises of a floor space under 4 m^2, built and used for cooking. (To this group belong also tea-kitchenettes and cooking cupboards.)

When assigning the rooms and premises for cooking by floor space, the floor space of the adjoining alcove or eating place was included into that of the respective room or kitchen.

Bathrooms (shower-stall, wash-basin alcove) are premises used for washing in the dwelling. The enumeration recorded separately the bathrooms with or without a fixed bath or shower.

SIZE OF DWELLING

According to the number of rooms

The classification by number of rooms has been based on the total number of rooms, irrespective of their size. E. g. a dwelling with a living room and two small rooms was regarded as a three-room dwelling.

Dwellings consisting of a single premise are included in the category of one-room dwellings.

According to the floor space

The classification by floor space of the dwelling has been based on the sum of the floor spaces of rooms and all the premises belonging to the dwelling, expressed in m^2.

The classification by floor space of rooms has been based on the sum of the floor spaces of rooms only, also expressed in m^2.

Floor spaces don't include that of walls and other structural elements, while the floor space of built-in furniture and other facilities, e.g. in kitchens or bathrooms, are included in the floor space of the given places

TYPE OF OWNERSHIP OF DWELLING

Type of ownership refers to the dwelling as a whole, independently of the title of tenure of its occupants.

The dwelling is in ownership of natural persons provided the owner is a private person (not a legal entity); no distinction between individually or jointly owned dwellings has been made. The form of maintenance or functioning of the dwellings, buildings (i.e. condominium, housing co-operative etc.) do not affect the type of ownership.

A dwelling as a property of legal entities and other organizations can be

- local government's tenement dwelling i.e. the property of the local municipality aimed at letting in general;
- property of church, religious organisation;
- property of an undertaking, business organisation or institution: dwelling owned by any other organisation (union, association, company, community, non-profit organization, foundation etc.)

Former censuses enumerated, classified and published the ownership of dwellings in a different way, therefore in some tables the cell of the 1980 data on municipality tenement dwellings include dwellings owned by other institutional organisations (companies, co-operatives, public organisations, associations etc.). The 1980 data on the dwellings owned by business and other companies include only dwellings of churches, other religious organisations and of foreign legal entities; the 1990 data on the dwellings of business and other companies include also dwellings owned by churches, religious organisations and foreign legal entities, too.

TITLE OF USE OF DWELLING

Owners use dwellings if the owner or his/her relatives are living there without paying rent. This category also includes dwellings used by beneficial owners.

A dwelling used by tenants is rented from the local government, an institution, a co-operative or a private person for exclusive use. Dwellings used exclusively by subtenants, have been included in the category of tenement dwellings. (Title as subtenant is used only for renting a single room or a part of the dwelling.) In the preceding 10 years, co-tenancies were practically abolished by local municipalities, therefore even if some co-tenancies had been recorded, at the census they have been grouped into the category of dwellings used by tenants.

The dwelling is classified as service dwelling in case its use is connected to a job or service contract, whether or not a rental fee is paid for.

The title of use as other user is applied if it doesn't figure among the above definitions, e.g. if the whole dwelling is used by a so-called occupant by favour without paying any rent, or by an occupant without any legal title of use.

The title of use of the dwelling is the same as the title of use of dwelling of the household living in it. As the ranking of the right of use of the dwellings corresponds to the above order, in case there are several households in the same dwelling, the title of use of the household having the highest rank will determine the title of use of the dwelling. (For clarification, in this context use by owners is the highest, while other user has the lowest rank.)

EQUIPMENT

Data always refer to facilities available inside the dwelling only.

A dwelling supplied with piped water from community scheme is one in which water supply is obtained through a tap (installed in one of the premises of the dwelling) connected to a community water-conduit.

A dwelling is supplied with piped water from a private source if the water pipe leads the water of the well, which is generally on the ground-plot, courtyard belonging to the building, to the tap in the dwelling.

A dwelling is supplied with hot water if it receives the hot running water necessary for washing and other household uses from a long-distance transmission pipe, a central boiler or from any individual (local) water heater, including low-capacity water heaters in kitchens.

A dwelling is supplied with flush toilet, if – either in a separate space or in the bathroom – it has a flush toilet connected to the community or domestic canal.

A dwelling is supplied with sewage connected to community sewage disposal plant if it is connected to the sewage system of public utility, respectively, of public utility type.

A dwelling is supplied with sewage connected to private sewage disposal plant if the wastewater is led through an underground drainpipe to a closed sewage storage tank, to a dessicator (drain tank) on the ground plot of the building or to some other place.

The dwelling is supplied with piped gas if it is provided with gas from the municipal gas system, natural gas piper or from a local (e.g. factory) system of gas pipes.

A dwelling is supplied with cylinder (bottle) gas if its occupants use propane-butane gas (PB) filled in cylinder for the household. (This form of gas supply has been put together with that through container and domestic pipe.)

HEATING, HEATING MATERIAL

Dwellings may be provided either with central heating or separate heating of premises.

The different types of central heating are:

- district-, block heating (long distance): dwellings of several buildings receive the heat necessary for heating from a thermal station, heating works or from a natural thermal spring;
- separate boiler (oven) heating of the building (i.e. for several dwellings): the dwellings of the building receive the heat from a boiler which is situated in the building or is in connection with the building;
- separate central heating (oven) for one dwelling: the supply of heat for the premises of one dwelling (one floor) or only of a building with one dwelling (detached family house) from one heating place.

Separate heating of premises means the heating of the places of the dwelling by stoves, convectors etc.

Some tables do not contain the category of dwellings „without possibility of heating". In these cases the number of dwellings with separate heating of places includes dwellings without possibility of heating, too, as according to the 100 percent availability of electric supply, at least electric heating can be supposed. On the other hand, as regards seasonal/holiday housing units without individual heating, a similar assumption has not been applied, given the rather seasonal character of their use.

Besides type of heating, the publication also contains information on material of heating, which are electricity, gas, fuel oil (mazout), coal (coke, lignite, peat etc.) wood (brushwood, sawdust etc.) and other (e.g. sun collector)..

LEVEL OF COMFORT

The categories of the level of comfort used in the census differ from those provided by housing and public construction authorities only in leaving out of consideration the thickness of outer walls (the census questionnaire did not contain any question in this regard) and the possible underground level situation of the dwelling. From the point of view of the level of comfort, only bathrooms with fixed bath or shower were taken into account. The categories of level of comfort are as follows:

Dwellings and seasonal/holiday housing units with all amenities have at least

- a living-room of a floor space over 12 m^2, a place for cooking, a bathroom and a flush toilet (in the bathroom or separately;
- electricity and water-conduit, sewage disposal;
- hot water (district-, block- or separate central hot water supply or from electric or gas boiler or bath-stove), and
- central heating (district, block, individual central or separate central heating for one dwelling).

While classifying the dwellings into the further levels of comfort – in order to be able to include seasonal (recreation, holiday) housing units into the subsequent comfort categories – the lack of heating facility has been disregarded. Nevertheless, in analyses of the housing stock, it should be taken into account that dwellings with principal amenities and the lower categories always include dwellings and holiday units without heating facilities as well.

Dwellings and seasonal/holiday housing units with principal amenities have at least

- a living-room of a floor space over 12 m^2, a place for cooking, a bathroom and a flush toilet (in the bathroom or separately;
- electricity and water-conduit, sewage disposal AND
- individual heating (gas heating, stove heating with solid fuel or oil, electric heater.

Dwellings and seasonal/holiday housing units **with part of amenities (half-comfort)** have at least

- a living-room of a floor space over 12 m^2, a place for cooking, a bathroom or a flush toilet;
- electricity, water conduit and
- individual heating, or no heating.

Dwellings and seasonal/holiday housing units **without comforts** have at least

- a living-room of a floor space over 12 m^2, a place for cooking and a flush toilet (latrine) outside the dwelling and
- have individual heating or no heating at all and
- access to water.

Dwellings and seasonal/holiday housing units not suiting the above criteria have been classified as **emergency or other lodgings and other seasonal/holiday housing units**, respectively.

YEAR OF CONSTRUCTION OF DWELLING

The year of construction of dwellings in newly built or totally reconstructed buildings is the date of the official permit for occupation; if several dwellings are in the same building, the dates of the permits for occupation might be different. In case of houses built earlier or occupied without permit, the year of the first occupancy is regarded as year of construction. (The year of renovation or of a larger maintenance work on the house cannot be regarded as the year of construction.)

WALLS OF THE BUILDINGS

According to the technology and the materials used in the construction of external walls, the following categories have been used:

Traditional:

- brick, stone, manual building element;
- adobe, clay, stamped earth;
- wood
- other material, like sheet iron, roofing iron etc.

In case of walls of adobe, clay and wood, a distinction between walls with or without solid basement has been made.

The data with the label „wood without solid basement" show the respective dwellings and seasonal/holiday housing units together.

Modern building technologies:

- **medium or large block:** prefabricated elements with a size of a half or full floor, that cannot be placed manually. The material used is lightweight concrete, concrete, armoured concrete, ceramic etc.;
- **cast concrete:** cast concrete filled on site, into formworks;
- **panel:** highly elaborated, prefabricated, structured wall, usually placed with an elevating machine, the walls are fixed to each other at the edges.

CHARACTERISTICS OF THE SURROUNDING OF THE DWELLINGS

This topic does not refer to the dwelling itself, but to its the environment, to the part of the locality, where the dwelling is situated. The residential zones are as follows:

Traditional urban zone: generally a locality's central part, and its adjoining area, usually with closed rows of streets, with buildings of medium height (1–6 floors). The majority of buildings are designed for human accommodation, a part for public use (block of flats, built with traditional technologies, suite the parameters of the zone).

Building blocks, housing estates zone: group of high or medium high residential buildings, built in the last decades, with modern construction technologies, for habitation.

Suburb of villas: low and medium high residential buildings, villas, or holiday houses (in some cases colonies) with a garden, generally with ordered lines of streets.

Family houses zone: low (1–2 storey) residential buildings, generally to a larger distance from the centre of the settlement. These zones are typical in towns, though recently a trend for establishing this type of zones started in rural areas, too.

Rural zone: houses built generally at the front of the streets, traditional residential parts of villages; external parts of villages and former rural areas attached to towns also belong to this category.

Recreation district: area built-in mainly with holiday houses, weekend-houses and/or collective buildings for recreation.

Industrial zone: colonies, barracks, formerly built as auxiliary residential buildings of agricultural, industrial undertakings, and houses surrounded by industrial plants etc.

Sparsely built outskirts: houses built mostly in outskirts generally used by employees of the agriculture, forestry (e.g. single cottage house, watch-house, forester's lodge).

Grouped built outskirts: residential area of groups of buildings generally separated from each other by a cultivated agricultural land (e.g. group of cottage houses, farms).

Socially unsatisfactory zone: residential buildings of very poor condition, houses designed for demolition, buildings built for temporary use, hovels, line of gipsy hovels, caves etc.

Other zones: areas not belonging to the above categories.

OCCUPANTS OF DWELLINGS (NUMBER OF OCCUPANTS)

The data of occupants of occupied dwellings refer to the resident population of the census. A dwelling is regarded as occupied in case at least one person – whether or not belonging to the resident population of the census – was enumerated there. Therefore the data on occupied dwellings contain cells with the label „Without resident population" or „0 occupant". These dwellings are defined as occupied, though they occupants have not been regarded as belonging to the resident population of the census (See the concept of resident population of the census!)

BUILDING

The concept of building includes residential houses and also such other buildings in which, although initially not designed for dwelling purposes, there was at least one dwelling or one occupied other housing unit.

The building having an independent architectural structure, firewall and separate entrance is regarded as one building, even if its other firewall is not visible from the outside.

The section of multi-sectional, row houses (houses with several entrances, staircases) in case it is not connected to the others by internal passages, is regarded as an independent house. These are usually staircases of row houses, usually having an independent alphanumeric number. Despite the integrated construction, the separate entrances of the twin-houses, as well as all the other houses, where a firewall separates the buildings, were enumerated separately.

Types of buildings are the following:

Residential building: building, where the majority of spaces are used exclusively or mostly as a dwelling. The category covers the collective houses, which accommodate private households too.

Holiday house (recreation building): a building with one or more units suitable for recreation, rest rehabilitation, but sometimes even for habitation.

Occupied other building: any kind of building, where there is at least one dwelling or occupied other housing unit besides premises, rooms used for other than habitation purposes. This building might be a school, office-house,

shopping-house, industrial plant; at the same time, dormitories, workers' accommodation houses, social homes, children's homes, day nurseries, hotels, hospitals do not belong to this category.

Building for institutional household(s) (collective housing unit): building intended for the use by persons belonging to an institutional household (dormitories, workers' accommodation houses, social homes, children's homes, day nurseries, hotels etc.).

Occupied other structure is the one where no dwellings or seasonal holiday housing units, only one or more occupied other housing units were enumerated.

SIZE OF BUILDING (NUMBER OF DWELLINGS)

This classification is based on the total number of (occupied or vacant) dwellings and seasonal/holiday housing units.

HEIGHT OF BUILDING

Height (number of storeys) of the building refers to the dwelling being on the highest level of the building.

YEAR OF CONSTRUCTION OF BUILDING

Year of construction of the new or completely refurbished buildings is the year of issuance of the certificate of occupancy of the dwellings (seasonal or holiday housing units) within that building. In case the units had not been constructed in the same period, the year of construction of the majority of the units had to be taken into account. In case of equal numbers, the year of construction of the building is that of the oldest housing units.

CENSUS 2001 IN INTERNATIONAL PERSPECTIVE[21]

The beginning and frequency of the European censuses

The first modern censuses in Europe have been conducted by the beginning of the 18th century in Iceland, Denmark, Finland, Sweden, Norway, Spain and in the United States, while the time of the censuses was mid of the century in Germany and Italy. As from the beginning of the 19th century the other – smaller – countries have launched the series of population censuses. As far as the number of censuses in Europe is concerned the following order was set: Luxembourg (27), Denmark and France (26), Finland (22), Ireland (21) and Sweden (20), though Hungary (14) is also well positioned. At the very beginning the frequency of the censuses was irregular and as from the mid of the 19th century more and more countries introduced the decennial, later the quinquennial censuses.

International recommendations

In the past four-five decades the population and household censuses have been co-ordinated worldwide and regionally (according to continents) too by the United Nations Organisation. In conformity with the endeavour to harmonise the respective activities a series of experts' meetings are held and recommendations issued prior to the census "round". As from 1960 the population censuses of all of the regions are conducted on the base of the UN recommendations.

The Statistical Bureau of the European Economic Commission – together with the EUROSTAT, the statistical office of the European Community – issued several publications, manuals, recommendations, etc. dealing with the programme of the population censuses held between 1995 and 2004 worldwide. The specialised agencies of the UN (FAO, UNESCO, ILO, etc.) actively participated in the elaboration of the respective issues of the documents. As from 1970 the EUROSTAT also publishes recommendations for the community census programmes. The European Union in 1973 and in 1987 respectively approved decisions on the population censuses with the following aims:

- harmonisation of the reference date of the census to be conducted in the different countries and
- establishing a common, comparable tabulation programme, which describes the main demographic, economic and social characteristics of the population, the households and the families by using standard definitions and the internationally approved classifications.

The 2001 round census programme have been elaborated on the basis of the same principles though – for being able to cover the other European countries too – had been approved not as a common decision but as a "gentlemen's agreement".

Reference dates of the 2000 round censuses

The EUROSTAT recommended that the reference date of the 2000 round censuses should fall in the different countries into the period between January 1, 2001 and May 1, 2001. The recommendation was accepted by 13 countries, including Hungary. (See the table "Timing of the 2000 round census in the European countries" of this volume.)

Census methods

As from the 1970 censuses intensive efforts are made for the possible cuts in the costs of the enumeration and processing of the census, for reducing the burden on the respondents. Nevertheless due to the high short-run expenditures of the reshuffling the introduction of the new solutions is a rather slow process.

[21] The chapter is based on the publication *B. Kotzamanis, G. Cantisani, A. Dekker, M-N. Duquenne:* Documentation of the 2000 round of population and housing censuses in the EU, EFTA and Candidate Countries. Luxembourg, ed. EUROSTAT, 2004., 362 p.

Taking into account the different alternative methods applied in the last decades the following classification is possible (see by countries in the table *„ Methods applied at the previous censuses in Europe"*):

- traditional census,
- combination of traditional census and administrative registers,
- population census based on registers,
- other method (a combination of different methods with or based on sample surveys).

Methods used in the 2000 round censuses

The methods of the enumeration and processing of the data should have to be aligned with the new circumstances. As a result of the differences in the traditions and the availability of means there are variances even among those 25 countries where the census have been conducted partly or wholly by using the traditional method. Only in Greece from the member countries of the (not enlarged) EU realised the data collection by enumerators' field interviews. The census in the other (EU) countries the questionnaires have been filled in by the respondents, while the answered questions have been collected generally by trained enumerators. In some of the cases it was possible to answer by mail, or electronically. Personal contact had been established between the respondent and the collecting person i.e. in Austria in the smaller localities, in Belgium and the UK in case of refusal or improper answering. In some countries of the region (Norway, Spain, Switzerland) efforts have been made for using the Internet as mean of the data collection. The majority of the accession countries have selected the classical method some countries (i.e. Hungary, Poland, Malta) facilitated the self-responding (filling in the questionnaires) too. Among the accession countries only the Czech Republic and Slovakia have not chosen the traditional method; human staff was employed only for delivering the questionnaires to and from the respondents, the filling in the documents was not their duty.

The enumeration period ranged one single day (Greece and Turkey) to days (Belgium), the late-enumeration e.g. the enumeration of those not reached within the enumeration period lasted in some cases for several months (Italy). The enumeration in the countries applying combined methods (i.e. Belgium, Switzerland) the collection of the questionnaires lasted for several months.

In the countries were the continuously updated administrative registers are in use as from decades a register based census has been produced. In Denmark, Finland around 30 administrative registers (population, buildings and dwellings, wages, education, etc.) are maintained, the situation is alike in Norway. In the former countries the EUROSTAT table programme could be produced within a rather short period. An alternative method was applied in the Netherlands where the data of the administrative registers on population, households and dwellings have been combined e.g. matched with the results of some representative surveys.

Controlling the reliability of the census

The reliability of the census data - by conducting comparisons with the results of different statistics - have been checked in almost every country. The census data and the respective information of the population register have been matched in several countries, moreover in Italy and in Spain – based on the census data and facilitated by the census law – even the population registers have been modified.

The majority of the countries applying the traditional method conducted post-enumeration as well. The sample size ranged from 0,01 percent in Bulgaria to 2 percent in Bulgaria. The post-enumerations in general aimed against the correction of the data at measuring the accuracy of the census.

Census results from the angle of the international recommendations

The international recommendations of the 2000 round population and housing censuses have been elaborated and approved in 1995-1996 on the joint meetings of UN/ECE and EUROSTAT. The joint recommendation focused on two issues, the topics of the data collection and the common tabulation programme. Regarding the topics the following two categories are distinguished:

- the eminent aim is collection of information on the *core topics*, required by every country and suitable for the international comparisons and

– the *non-core topics*, which are collected according to the national priorities thus not easily comparable internationally.

Data capture, processing, new methods applied in informatics

The entire process of the population and housing census depends largely on the IT technology. The continuous developments of the methods applied are important to overcome the difficulties caused by the high labour-costs of the traditional census as well as the processing of the extremely large volume of data. Moreover the application of the new solutions largely contributes to the improvement of the efficiency and quality of the work performance. While the computer technology was used in the past exclusively in the phase of the tabulation today it is applied in the following steps of the census too:

– planning and supporting the preparatory phase, mapping, project-management;
– data capture;
– coding;
– tabulation, data security;
– demographic analysis, development of the data-bases;
– publication, dissemination.

Presently you will find PC-s in front of every experts of the census team, palmtops are used by the enumerators in the field work, etc. IT network and the Internet is also used for the communication between the actors of the census.

Data capture

Growing number of the countries have used in the data capture OCR technology. Until 1990 despite the technology of the optical number- and sign recognition was already known in some countries of Europe (Belgium Federal Republic of Germany, Austria, Norway, Switzerland, Slovenia) the manual data capture was applied in general.

Dissemination of the data

The process of publication consists of three phases:

– preliminary publication of data;
– dissemination of the table programme;
– volumes by different topics and other publications.

It has to be taken into account that regulations regarding the handling of the data – with special regard to the personal data - are mot the same in the different countries. This should be considered even if the UN/EUROSTAT recommendations suggest the dispersion of the information free of charge to the possible wide public. Nevertheless it is worth to note that according to the EUROSTAT recommendations not only the individuals but also some small areas, groups of population are subject to the data protection.

It was anticipated that the 42 tables of the tabulation program of the 2000 round censuses will be submitted to the EUROSTAT by the end of June 2003. The deadline was accepted only by 5 countries: Cyprus, Greece, Hungary, Portugal and Spain. Finally all of the countries have submitted – at least a part of the tables – to the EUROSTAT; the collected data could be disseminated till the end of 2005.

Each country – and the EUROSTAT too – have made efforts to adjust the scope and timing of the publication to the requirements of the end users as well as to the financial capabilities. Besides the publication of the data in printed variants the Internet pages of the statistical organisations of the majority of the countries contain the data of the census. The publications of the 2001 census in Hungary are available free of charge on the Internet page of HCSO in Hungarian and English version, in electronically transferable form too.

Timing of the 2000 round census in the European countries
(Summary table)

Census date	Country			
November 1995	Malta			
March 1999	France			
March 2000	Estonia	Latvia		
October 2000	Turkey			
December 2000	Liechtenstein	Switzerland		
January 2001	Denmark			
February 2001	Hungary	Luxemburg		
March 2001	Bulgaria	Czech Republic	Portugal	Greece
April 2001	Lithuania	United Kingdom		
May 2001	Austria	Slovakia		
May 2001	Belgium	Cyprus	Italy	
November 2001	Spain			
March 2002	Rumania	Slovenia		
April 2002	Ireland			
May 2002	Poland			
November 2002	Macedonia			
October 2004	Republic of Moldova			

Date of the previous censuses in the world by continents

Continent, country	1990	2000
	round censuses	
	1985–1994	1995–2004
	AFRICA	
Algeria	March 20, 1987	June 25, 1998
Angola	–	–
Benin	February 15, 1992	February 11, 2002
Bissau-Guinea	December 1, 1991	–
Botswana	August 21, 1991	August 17-26, 2001
Burkina Faso	December10-20, 1985 (P)	December10, 1996
Burundi	August 16-30, 1990	–
Comoros	September 15, 1991	September 2003
Chad	April 8, 1993	–
South Africa	March 5, 1985	October 10, 1996
	March 7, 1991	October 10, 2001
Djibouti	–	–
Equatorial Guinea	July 4, 1994 (P)	February 2002
Egypt	November 17-18, 1986	November 19, 1996
Cote d'Ivoire	March 1, 1988	November 21-December 20, 1998
Eritrea	–	–
Ethiopia	October 11, 1994	–
Gabon	July 1-31, 1993 (P)	December 2003
Gambia	April 15, 1993 (P)	April 15, 2003
Ghana	–	March 26, 2000
Guinea	–	December 1-15, 1996
Cameroon	April 10, 1987	–
Kenya	August 24, 1989 (P)	August 24, 1989
Congo, the Republic of the	November 20-December 5, 1994 (1)	June 6-July 30, 1996
Congo, the Democratic Republic of the	–	–
Central African Republic	December 8, 1988	December 8, 2003
Lesotho	April 12, 1986 (P)	April 14, 1996
		May 13-31, 2001 (13)
Liberia	–	–
Libyan Arab Jamahiriya	–	August 11, 1995
Madagascar	August 1, 1993	–
Malawi	September 1-21, 1987	September 1-21, 1998
Mali	April 1-30, 1987	April 1-14, 1998
Morocco	September 2, 1994	September 1-20, 2004
Mauritania	April 5-20, 1988	November1-15, 2000
Mauritius	July 1, 1990 (P)	July 2, 2000 (P)
	February 5-June 17, 1990 (H)	February 7-June 18, 2000 (H)
Mozambique	–	August 1-15, 1997 (P)
Namibia	October 21, 1991	August 27-28, 2001
Niger	May 20-June 3, 1988	May 20, 2001
Nigeria	November 26, 1991 (P)	–
Western Sahara	–	–
Réunion	March 15, 1990	March 8, 1999
Rwanda	August 15, 1991	August 16-30, 2002

Continent, country	1990	2000
	round censuses	
	1985–1994	1995–2004
São Tome and Principe	August 4, 1991	August 25, 2001
Seychelles	August 17, 1987 (P)	August 29, 1997
	August 26, 1994	August 22-26, 2002
Sierra Leone	December 15, 1985	December 4, 2004
St Helena	February 2, 1987	March 8, 1998
Senegal	May 27, 1988	December 8-22, 2002
Somalia	February 15, 1987 (2)	–
Sudan	April 15, 1993 (P)	–
Swaziland	August 25, 1986	May 11-12, 1997
Tanzania	August 28, 1988	August 24-25, 2002
Togo	–	–
Tunisia	April 20, 1994	April 28, 2004
Uganda	January 12-19, 1991	September 12, 2002
Zambia	August 20, 1990	October 25, 2000
Zimbabwe	August 18, 1992	August 17-27, 2002
Cape Verde	June 23, 1990	June 16-30, 2000
	AUSTRALIA AND OCEANIA	
Samoa	April 1, 1990	April 1, 2000
Australia	June 30, 1986	August 6, 1996
	June 30, 1991	August 7, 2001
Cook Islands	December 1, 1986	December 1, 1996
	December 1, 1991	December 1, 2001
Northern Marianas	April 1, 1990	September 9, 1995
		April 1, 2000
Fiji Islands	August 31, 1986	August 25, 1996
French Polynesia	September 6, 1988	September 3, 1996
		November 7, 2002
Guam	April 1, 1990	April 1, 2000
Kiribati	May 10, 1985	November 7,1995
	November 7, 1990	November 7, 2000
Marshall Islands	November 13, 1988	June 1, 1999
Micronesia	1985–1989	April 1, 2000
	September 18, 1994	
Nauru	April 17, 1992	September 23, 2002
Niue	September 29, 1986	August 17, 1997 (11)
	November 3, 1991	September 7, 2001
Norfolk Islands	June 30, 1986	August 6, 1996
	August 6, 1991.	August 7, 2001
Palau	January-March 1986	September 9, 1995
	April 1, 1990	April 15, 2000
Papua New Guinea	June 11, 1990	July 9, 2000
Pitcairn Islands	December 31, 1991 (12)(P)	–
Solomon Islands	November 23, 1986	November 21, 1999
Samoa	November 3-4, 1986	November 5, 2001
	November 5, 1991	
Tokelau Islands	November1986	October 11, 2001
	December 11, 1991	

Continent, country	1990	2000
	round censuses	
	1985–1994	1995–2004
Tonga	November 28, 1986	November 30, 1996
Tuvalu	June 1, 1985 (P)	November1, 2002
	November 17, 1991	
New Caledonia	April 4, 1989	April 16, 1996
New Zealand	March 4, 1986	March 5, 1996
	March 5, 1991	March 6, 2001
Vanuatu	January 20, 1986 (P)	November 16-30, 1999
	May 16, 1989	
Wallis and Futuna	December 11, 1990 (P)	October 3, 1996
		July 22, 2003
	ASIA	
Afghanistan	–	–
United Arab Emirates	December 17-23, 1985	December 17, 1995
Azerbaijan	January 12, 1989	January 27, 1999
Bahrain	November 16, 1991	April 7, 2001
Bangladesh	March 11, 1991	January 22, 2001
Bhutan	–	–
Brunei	August 17, 1991	August 21, 2001
Cyprus	October 1, 1992	October 1, 2001
Philippines	May 1, 1990	September 1, 1995
		May 1, 2000
Georgia	January 12, 1989	January 17, 2002
Hong Kong	March 11, 1986 (6)	March 16, 1996 (6)
	March 15, 1991	March 14, 2001
India	March 1, 1991	March 1, 2001
Indonesia	October 31, 1990	June 30, 2000
Iraq	October 17, 1987	October 16, 1997
Iran	September 22, 1986	October 23- Nov. 16, 1996
	December 11, 1991	
Israel	–	October 4, 1995
Japan	October 1, 1985 (P)	October 1, 1995 (P)
	October 1, 1988 (H)	October 1998 (H)
		October 1, 2000 (P)
		[2003] (H)
Yemen	February 1-18, 1986 (7)	December16-19, 2004
	March 29-30, 1988 (8)	
	December 16-17, 1994	
Jordan	December 10, 1994	October 1, 2004
Cambodia	–	March 3, 1998 (P)
Qatar	March 16, 1986	March 1, 1997
		March 16, 2004
Kazakhstan	January 12, 1989	February 26, 1999
East Timor	October 31, 1990	July 11, 2004
China	July 1, 1990	November 1, 2000
Kyrgyzstan	January 12, 1989	March 24, 1999
Korea, Republic of	November 1, 1985	November 1, 1995
	November 1, 1990	November 1, 2000

Continent, country	1990	2000
	round censuses	
	1985–1994	1995–2004
Korea, Democratic People's Republic of	December 31, 1993 (P)	–
Kuwait	April 20, 1985	April 20, 1995
Laos	March 1985 1. (P)	March 1, 1995
Lebanon	–	–
Macao	August 30, 1991	August 23, 2001
Malaysia	August 14, 1991	July 5, 2000
Maldives	March 25-28, 1985	March 25, 1995
	March 8, 1990	March 21-April 7, 2000
Mianmar (former Burma)	–	(2004)
Mongolia	January 5, 1989	January 5-11, 2000
Nepal	June 22, 1991	June 22, 2001
Oman	December 1, 1993	December 7, 2003 (P)
Armenia	January 12, 1989	October 10-19, 2001
Pakistan	–	March 2-18, 1998
Palestine National Authority	–	December 9, 1997
Sri Lanka	–	July 17, 2001
Saudi Arabia	September 27, 1992	September 15, 2004
Singapore	June 30, 1990	June 31, 2000
Syria	September 3-9, 1994	September 22, 2004
Tajikistan	January 12, 1989	January 20, 2000
Thailand	April 1, 1990	April 1, 2000
Turkey	October 20, 1985	October 30, 1997 (H)
	October 21, 1990	October 21, 2000 (P)
Turkmenistan	January 12, 1989	January 10, 1995
Uzbekistan	January 12, 1989	–
Vietnam	April 1, 1988	April 1, 1999
	SOUTH AMERICA	
Argentina	May 15, 1991	November 18, 2001
Bolivia	June 3, 1992	September 5, 2001
Brazil	September 1, 1991	August 1, 1996
		August 1, 2000
Chile	April 22, 1992	April 24, 2002
Ecuador	November 25, 1990	November 25, 2001
Falkland (Malvin) Isles	November 16, 1986	April 24, 1996
	March 5, 1991	April 8, 2001
French Guyana	March 15, 1990	March 8, 1999
Guyana	May 12, 1991	September 15, 2002
Colombia	October 15, 1985	–
	October 24, 1993	
Paraguay	August 26, 1992	August 28, 2002
Peru	July 11, 1993	–
Suriname	–	March 31, 2003
	–	August 2, 2004 (15)
Uruguay	October 23, 1985	May 22, 1996
Venezuela	October 20, 1990	October 22, 2001

Continent, country	1990	2000
	round censuses	
	1985–1994	1995–2004
NORTH AND CENTRAL AMERICA		
American Virgin Islands	April 1, 1990	April 1, 2000
Anguilla	April 13, 1992	May 9, 2001
Antigua and Barbuda	May 28, 1991 (P)	May 28, 2001
Aruba	October 6, 1991	October 14, 2000
Bahamas	May 1, 1990	May 1, 2000
Barbados	May 2, 1990	May 1, 2000
Belize	May 12, 1991	May 12, 2000
Bermuda	May 20, 1991	May 20, 2000
British Virgin Islands	May 12, 1991	May 21, 2001
Costa Rica	–	June 26, 2000
Dominican Community	May 12, 1991	May 12, 2001
Dominican Republic	September 24-25, 1993	October 18-20, 2002
United States	April 1, 1990	April 1, 2000
Grenada	May 12, 1991	May 25, 2001
Greenland	(R)	(R)
Guadeloupe	March 15, 1990	March 8, 1999
Guatemala	April 17-30, 1994	November 24, 2002
Haiti	–	January 11, 2003
Netherlands Antilles	January 27, 1992	January 29, 2001
Honduras	May 29, 1988	July 28, 2001
Jamaica	April 7, 1991	September 10, 2001
Caiman Islands	October 15, 1989	October 10, 1999
Canada	June 3, 1986	May 14, 1996
	June 4, 1991	May 15, 2001
Cuba	–	September 6, 2002
Martinique	March 15, 1990	March 8, 1999
Mexico	March 12-16, 1990	February 14, 2000
Montserrat	May 12, 1991	May 12, 2001
Nicaragua	–	April 25, 1995
Panama	May 13, 1990	May 14, 2000
Puerto Rico	April 1, 1990	April 1, 2000
Saint Kitts and Nevis	May 12, 1991	May 14, 2001
Saint Lucia	May 12, 1991	May 22, 2001
Saint-Pierre and Miquelon	March 5, 1990	March 8, 1999
Saint Vincent	March 12, 1991	May 14, 2001
Salvador	Sept. 27- October 6, 1992	–
Trinidad and Tobago	May 2, 1990	May15, 2000
Turks and Caicos Islands	May 31, 1990	August 20, 2001
EUROPE		
Albania	April 12, 1989	Aprilé1, 2001
Andorra	(R)	(R)
Austria	May 15, 1991 (5)	May 15, 2001 (5)
Belgium	March 1, 1991 (5)	October 1, 2001 (5)
Bosnia-Herzegovina	March 31, 1991	–
Bulgaria	December 4, 1985	March 1, 2001
	December 4, 1992	

Continent, country	1990	2000
	round censuses	
	1985–1994	1995–2004
Channel Islands –- Guernsey	March 23, 1986 (P)	March 31, 1996
	April 21, 1991	April 29, 2001
Channel Islands – Jersey	March 23, 1986 (P)	Marc 10, 1996
	March 10, 1991	March 11, 2001
Czech Republic	March 3, 1991	March 1, 2001
Denmark	January 1, 1991 (4)	January 1, 2001 (4)
United Kingdom	April 21, 1991	April 29, 2001
Estonia	January 12, 1989	March 31, 2000
Belarus	January 12, 1989	February 16, 1999
Faroe Islands	(R)	(R)
Finland	November 17, 1985 (4)	December 31, 1995 (4)
	December 31, 1990	December 31, 2000
France	March 5, 1990	March 8, 1999
Gibraltar	October 14, 1991	November 12, 2001
Greece	March 17, 1991	March 18, 2001
Netherlands	January 1, 1991 (4)	January 1, 2002 (4)
Croatia	March 31, 1991	March 31, 2001
Ireland	April 13, 1986 (P)	April 28, 1996
	April 21, 1991	April 28, 2002
Iceland	(R)	(R)
Poland	December 6, 1988	May 20, 2002
Latvia	January 12, 1989 (5)	March 31, 2000 (5)
Liechtenstein	December 4, 1990 (5)	December 5, 2000 (5)
Lithuania	January 12, 1989	April 6, 2001
Luxemburg	March 1, 1991	February 15, 2001
Macedonia	March 31, 1991	November 1, 2002
Hungary	January 1, 1990	February 1, 2001
Malta	November16, 1985	November 26, 1995
Isle of Man	April 6-7, 1986	April 14, 1996
	April 14, 1991	April29, 2001
Moldova	January 12, 1989	October 5-12, 2004
Monaco	January 213, 1990 (4)	2000 (4)
Federal Republic of Germany	May 25, 1987 (9)(10)	September 30, 1995 (9)(H) (R)(14)
Norway	November 3, 1990 (4)	November 3, 2001 (4)
Portugal	April 15, 1991	March 12, 2001
Rumania	January 7, 1992	March 18, 2002
Italy	October 20, 1991	October 21, 2001
Russia	January 12, 1989	October 9, 2002
San Marino	(R)	(R)
Spain	March 1, 1991	November 1, 2001
Switzerland	December 4, 1990 (5)	December 5, 2000 (5)
Svalbard	–	–
Sweden	November 1, 1985	(R)
	November 1, 1990	–
Serbia and Montenegro	March 31, 1991	March 31, 2002
Slovakia	March 3, 1991	May 25, 2001
Slovenia	March 31, 1991 (5)	March 31, 2002 (5)
	June 20, 1994	

Continent, country	1990	2000
	round censuses	
	1985–1994	1995–2004
Ukraine	January 12, 1989	December 5, 2001
Vatican	–	–

Comments:

In some cases country indicates a region or an area.

[…] Census foreseen, but no information received by the UN Statistical Department on t he implementation.
(...) Census expected within the next 10 years.
– Census not planned, not held.
(P) Only population census.
(H) Only housing census.
(R) Source of the detailed statistics on the population is the population register.
(1) Only urban areas.
(2) Census of the settled population in November, that of the moving population in February 1987.
(3) Based on administrative registers.
(4) Population data from population register.
(5) Data on population in combination from traditional census and population register.
(6) Census on 1/7th sample of the population.
(7) Census of the former Arab Republic of Yemen.
(8) Data on thee former People's Republic of Yemen.
(9) As from the unification of the German Democratic Republic and the Federal Republic of Germany (October 3, 1990) there is one independent country, named as Federal Republic of Germany.
(10) Data on the former Federal Republic of Germany.
(11) In combination with an agricultural census.
(12) There has not been a traditional census. On the 30th, or 31st of December of every year a base survey is conducted by covering each family and the name, sex and age of the family members is registered with an indication if it refers to a permanent resident or migrant.
(13) 2001 demographic survey in Lesotho.
(14) Register based pilot survey on a 1,2%sample of the population.
(15) Due to the circumstances the census has been repeated in 2004.

Source: United Nations Expert Group Meeting on the 2010 World Programme on Population and Housing Censuses, 22–26 August 2005, New York

Methods applied at the previous censuses in Europe

Country	1970	1980	1990	2000
	round censuses			
Belgium	H	H	H	HR
Denmark	HR	R	R	R
Federal Republic of Germany	H	–	H	–
Greece	H	H	H	H
Spain	H	H	H	H
France	H	H	H	H
Ireland	H	H	H	H
Italy	H	H	H	H
Luxemburg	H	H	H	H
Netherlands	H	–	M	M
Austria	H	H	H	HR
Portugal	H	H	H	H
Finland	HR	HR	R	R
Sweden	H	HR	HR	–
United Kingdom	H	H	H	H
Iceland	H	H	H	–
Liechtenstein	H	H	H	HR
Norway	H	H	M	R
Switzerland	H	H	H	HR
Bulgaria	H	H	H	H
Czech Republic	H	H	H	H
Estonia	H	H	H	H
Hungary	H	H	H	H
Latvia	H	H	H	HR
Lithuania	H	H	H	H
Poland	H	H	H	H
Rumania	H	H	H	H
Slovakia	H	H	H	H
Slovenia	H	H	H	HR
Cyprus	H	H	H	H
Malta	H	H	H	H
Turkey	H	H	H	H

H Traditional census
HR Traditional census and registers combined
R Mostly or fully register based
M Other method (other mixed census or microcensus)
– No census at all

Comparison of the topics proposed by the international organisations and those of the 2001 Hungarian census[22]

Topics	UN/EUROSTAT recommendations		2001 Hungarian census
	core	non core	
Territorial characteristics of the persons			
Usual place of residence	X	–	X
Place of residence one year prior to the census	X	–	X
Place of stay at the reference date of the census	–	X	X
Characteristics of the place of residence: farm or other	–	X	–
Urban and rural areas	–	X	X
Total population	X	–	X
Locality	X	–	X
Since when living on the site	–	X	X
Previous place of residence	–	X	X
Year of immigration into the country	–	X	–
Demographic characteristics of the persons			
Sex	X	–	X
Age	X	–	X
Marital status (legal)	X	–	X
Country or place of birth	X	–	X
Citizenship	X	–	X
Marital status (in fact)	–	X	X[23]
Place of birth of the parents	–	X	–
Year of acquisition of citizenship	–	X	–
Ethnic and/or national group	–	X	X[24]
Mother tongue, language spoken, knowledge of languages	–	X	X[23]
Religion, denomination	–	X	X[23]
Number of live-born children	–	X	X
Year of the first and actual marriage	–	X	X[25]
Disability (type, caused by)	–	–	X[23]
Economic characteristics of persons			
Present economic activity	X	–	X
Time usually worked	X	–	X
Occupation	X	–	X
Sector of industry	X	–	X
Employment status	X	–	X
Locality of the workplace	X	–	X
Usual economic activity	–	X	–
Persons rendering voluntary (unpaid) social and personal services	–	X	–

[22] *Italic letters* indicate the so called *derived data,* which are not based on answers to direct questions.

[23] Derived data, based on the answer referring to consensual partnership.

[24] Answering the question was optional.

[25] Both sexes.

Topics	UN/EUROSTAT recommendations		2001 Hungarian census
	core	non core	
Economic characteristics of persons (continued)			
Length of unemployment	–	X	X
Second job, occupation	–	X	X
Section of economic activity	–	X	X
Number of persons employed on workplace	–	X	X
Main source of income	–	X	X
Dependency	–	X	X
Source of income	–	X	–
Social-economic group (strata)	–	X	X
Place of educational institution	–	X	X
Ways and means of going to work (school)	–	X	X
Length of going to work (school)	–	X	X
Agricultural activity	–	–	X
Educational characteristics of persons			
Educational attainment	X	–	X
Qualifications, diplomas	–	X	X
Field of profession obtained	–	X	X
Going/not going to school	–	X	X
Illiteracy	–	X	–
Household and family characteristics of persons			
Relation to the reference person in the private household	X	–	X
Type of the institutional household accommodating the person	–	X	X
Living/not living in institutional household	–	X	X
Household status	X	–	X
Family status	X	–	X
Family status in broader sense	–	X	X
Characteristics of the family nucleus			
Type of the family nucleus	X	–	X
Size of the family nucleus	X	–	X
Number of children under a certain age	X	–	X
Number of inactive family members	X	–	X
Type of the family in a broader sense	–	X	X
Number of children in certain age groups	–	X	X
Number of family members with main source of income as economic activity	–	X	X
Number of dependent family members	–	X	X
Characteristics of the private households			
Type of the private household	X	–	X
Size of the private household	X	–	X
Number of economically active members	X	–	X
Number of children under a certain age	X	–	X
Number of household members in pension	X	–	X
Age composition of the household	–	X	X

Topics	UN/EUROSTAT recommendations		2001 Hungarian census
	core	non core	
Characteristics of the private households (continued)			
Number of household members with main source of income as economic activity	–	X	X
Number of dependents	–	X	X
Title of use of dwelling of the household	X	–	X
Shared or exclusive use of dwelling	–	X	X
Rental fee	–	X	–
Consumer durables possessed by the household	–	X	–
Number of passenger cars in the household	–	X	–
Telephone	–	X	–
Characteristics of dwellings and other housing units			
Type of housing unit	X	–	X
Type of ownership	X	–	X
Surrounding of the housing unit	X	–	X
Occupancy	X	–	X
Number of inhabitants	X	–	X
Number of rooms	X	–	X
Kitchen	X	–	X
Type of water supply	X	–	X
Toilet facility	X	–	X
Bathing facility	X	–	X
Type of heating	X	–	X
Type of vacancy	–	X	X
Number of families living in the dwelling	–	X	X
Useful surface/living area of dwelling	–	X	X
Cooking facility	–	X	X
Hot water	–	X	X
Sewage facility	–	X	X
Type of heating material	–	X	X
Electricity	–	X	–
Gas supply	–	X	X
Position of dwelling within the building	–	X	X
Characteristics of the residential houses			
Type of building	X	–	X
Number of levels	–	X	X
Number of dwellings in the building	–	X	X
Is the dwelling cottage type or not	–	X	–
Elevator	–	X	–
Period of construction of the building	X	–	X
Building material of the building	–	X	X
Repair/reconstruction needed	–	X	–

Core and non core questions by countries

Country	UN/EUROSTAT recommendations			Not asked	
	core	none core	not asked	core	non core
	questions in number				
Questions relating to persons					
Belgium	22	37	1	–	–
Denmark	22	37	–	–	–
Greece	21	17	–	1	20
Spain	18	19	–	4	18
France	19	12	–	3	25
Ireland	22	37	3	–	–
Italy	20	16	–	2	21
Luxemburg	20	14	–	2	23
Austria	20	14	–	2	23
Portugal	20	17	–	2	20
Finland	19	18	1	3	19
United Kingdom	15	12	–	7	25
Norway	22	37	7	–	–
Switzerland	22	19	4	–	18
Bulgaria	21	21	1	1	16
Czech Republic	20	18	–	2	19
Estonia	18	15	6	4	22
Hungary	*20*	*23*	*2*	*2*	*14*
Latvia	20	10	–	2	27
Lithuania	22	37	–	–	–
Poland	22	37	3	–	–
Slovakia	17	16	–	5	21
Slovenia	19	20	8	3	17
Cyprus	20	12	–	2	25
Malta	22	37	–	–	–
Turkey	18	4	1	4	33
Questions relating to dwellings, households					
Belgium	14	14	–	–	–
Denmark	14	14	–	–	–
Greece	13	9	1	1	5
Spain	11	8	–	3	6
France	12	5	1	2	9
Ireland	14	14	3	–	–
Italy	14	8	12	–	6
Luxemburg	10	5	–	4	9
Austria	13	3	1	1	11
Portugal	14	10	–	–	4
Finland	13	9	1	1	5
United Kingdom	6	2	–	8	12
Norway	14	14	4	–	–
Switzerland	10	6	–	4	8
Bulgaria	13	12	–	1	2
Czech Republic	14	11	–	–	3
Estonia	13	6	–	1	8
Hungary	*14*	*9*	–		*5*
Latvia	13	6	–	1	8
Lithuania	14	8	–	–	6
Poland	14	14	–	–	–
Slovakia	12	11	1	2	3
Slovenia	14	9	8	–	5
Cyprus	13	2	–	1	12
Malta	14	14	–	–	–
Turkey	8	–	–	6	14

Source: Questionnnaire of the comparative program of the EUROSTAT.

SUPPLEMENT

Description of records

Records on buildings

Records on dwellings

Records on persons

Records on households

Records on families

Records on children

Description of the record on the institution

The instructions, manuals and blanks of the enumeration and processing

Instructions, manuals, Forms	Number of copies	Format	Size (pages)
Printed documents, sheets			
Forms of the geographic preparation			
Guidelines for the execution of the tasks related to the 2001 population census, Vol. 1.	4 000	A/4	25
Guidelines for the execution of the tasks related to the 2001 population census, Vol. 2	4 000	A/4	13
Guidelines for the execution of the tasks related to the 2001 population census, Vol. 3.	4 000	A/4	19
Guidelines for the execution of the tasks related to the 2001 population census, Vol. 4.	4 000	A/4	14
Guidelines for the local control, updating the addresses, for the corrections of the maps	4 000	A/4	15
Appeal (announcement)	180 000	A/2	1
Forms for the preliminary census of the holiday houses			
Instructions for the preliminary census of the holiday houses and that of the seasonally used institutional housing units		A/4	19
Questionnaire for the census of the holiday houses		A/4	2
Guidelines for the enumerators performing the checking of the addresses and the census of the holiday houses		A/4	8
List of addresses to check		A/4	1
Identity card for the enumerators		Individual	2
Invitation letter to the managers of the institutional households		A/4	1
Appeal (announcement)		A/2	
Forms of the population census			
Instructions manual for enumerators and supervisors	70 000	A/4	81
Most important rules and definitions (Abridged manual for enumerators)	70 000	A/4	22
Glossary for using the „Instructions manual for enumerators and supervisors”	70 000	A/4	2
Supplementary instruction manual for the enumeration of the institutions, institutional households	15 000	A/4	28
Tasks of the enumerators performing the census of the persons „without addresses”, i.e. the homeless	5 500	A/4	2
Supplementary instructions for summing up the persons enumerated in enumeration districts „without addresses”	5 500	A/4	2
Manual for handling the answers to question 12.1 of the personal questionnaire	70 000	A/4	2
Dwelling questionnaire	7 000 000	A/4	4
Dwelling questionnaire (in 16 foreign languages)	(Average)5000	A/3	2

Instructions, manuals, Forms	Number of copies	Format	Size (pages)
Personal questionnaire	18 000 000	A/4	4
Personal questionnaire (in 16 foreign languages)	(Average) 5000	A/3	2
Institutional questionnaire	17 000	A/4	2
Building questionnaire for institutions	26 500	A/4	2
Invitation letter to the manager of the institutional household	15 000	A/4	1
Dwelling questionnaire (Sample)	70 000	A/3	2
Personal questionnaire (Sample)	70 000	A/3	2
Bordereau for persons enumerated in institutional households as well as in enumeration districts without addresses	30 000	A/3	2
Auxiliary table	200 000	A/5	1
Accompanying sheet for enumeration districts	100 000	A/3	1
List of addresses and bordereau for the enumeration districts	70 000	A/4	2
List of addresses and bordereau for the enumeration districts (sample)	70 000	A/4	2
Identity card for enumerators	70 000	Individual	2
Identity card for supervisors	15 000	Individual	2
Plastic holder for the identity card	85 000	Individual	–
Appeal on the timing of the census (to be placed at communal buildings, open areas)	185 000	A/5	1
Announcement on the date of the census (to leave at the dwelling)	2 000 000	A/6	1
Invitation letter of the Chairman of HCSO to the enumerators	70 000	A/5	1
Information on the census (leaflet)	4 000 000	B/5	4
Information on the census (in 8 languages)		A/4	2
Folders (closed) for the enumeration districts	50 000	A/4	1
Folders ((simple) for the enumeration districts	50 000	A/4	1
Etiquettes for the enumeration districts	40 000	A/6	1
Forms of the coding, data capture			
Instructions for encoders and supervisors of coding	4 000	A/4	32
Alphabetic list of villages, towns and countries	15 000	A/4	40
Manual for coding the citizenship and the countries	15 000	A/4	4
List of languages	15 000	A/4	51
Most common languages spoken in Hungary	15 000	A/4	1
List of religions, denominations	15 000	A/4	16
Alphabetic list of educational attainment and qualifications	4 000	A/4	121
List of occupations	4 000	A/4	202
List of most common occupations	4 000	A/4	2
List of economic activities	4 000	A/4	107
Alphabetic list of the employers in Hungary	4 000	A/4	546
Supplement to the „Alphabetic list of the employers in Hungary”	4 000	A/4	10
Systematic list of the employers in Hungary	4 000	A/4	556
Supplement to the „Systematic list of the employers in Hungary”		A/4	14
Alphabetic list of the employers in county Bács-Kiskun	210	A/4	51
Alphabetic list of the employers in county Baranya	90	A/4	41

Instructions, manuals, Forms	Number of copies	Format	Size (pages)
Alphabetic list of the employers in county Békés	90	A/4	41
Alphabetic list of the employers in county Borsod-Abaúj-Zemplén	260	A/4	49
Alphabetic list of the employers in Budapest	1310	A/4	180
Alphabetic list of the employers in county Csongrád	200	A/4	42
Alphabetic list of the employers in county Fejér	80	A/4	41
Alphabetic list of the employers in county Győr-Moson-Sopron	110	A/4	44
Alphabetic list of the employers in county Hajdú-Bihar	160	A/4	45
Alphabetic list of the employers in county Heves	160	A/4	36
Alphabetic list of the employers in county Jász-Nagykun-Szolnok	130	A/4	40
Alphabetic list of the employers in county Komárom-Esztergom	90	A/4	36
Alphabetic list of the employers in county Nógrád	60	A/4	31
Alphabetic list of the employers in county Pest	1310	A/4	65
Alphabetic list of the employers in county Somogy	130	A/4	35
Szabolcs-Szatmár-Bereg Alphabetic list of the employers in county Szabolcs-Szatmár-Bereg	100	A/4	41
Alphabetic list of the employers in county Tolna	60	A/4	33
Alphabetic list of the employers in county Vas	70	A/4	35
Alphabetic list of the employers in county Veszprém	110	A/4	39
Alphabetic list of the employers in county Zala	110	A/4	36
List of the non-coded fields	100 000	A/4	2
Evaluation on the enumeration districts controlled	20 000	A/4	1

Only in electronic form

Forms of the census enumeration

Supplementary instructions for enumerating of the conscripts and reservists enumerated in military barracks (institutions)

Supplementary instructions for enumerating the persons staying at refugee stations

Guidelines for enumerating the foreign citizens staying at places of collective accommodation

Supplementary instructions for enumerating the persons staying in penal institutions

Forms of the coding, data capture

Instructions for census offices

Instructions for preparing the census material for electronic processing

Instructions for the experts controlling the data capture n the OCR environment

Instructions for capturing the data on dwellings and persons

Supplement No. 1 to „Instructions for encoders and supervisors of coding”

Systematic list of educational attainment and qualifications

Systematic list of the employers in county Bács-Kiskun

Systematic list of the employers in county Baranya

Systematic list of the employers in county Békés

Systematic list of the employers in county Borsod-Abaúj-Zemplén

Systematic list of the employers in Budapest

Systematic list of the employers in county Csongrád

Systematic list of the employers in county Fejér

Instructions, manuals, Forms	Number of copies	Format	Size (pages)
Systematic list of the employers in county Győr-Moson-Sopron			
Systematic list of the employers in county Hajdú-Bihar			
Systematic list of the employers in county Heves			
Systematic list of the employers in county Jász-Nagykun-Szolnok			
Systematic list of the employers in county Komárom-Esztergom			
Systematic list of the employers in county Nógrád			
Systematic list of the employers in county Pest			
Systematic list of the employers in county Somogy			
Systematic list of the employers in county Szabolcs-Szatmár-Bereg			
Systematic list of the employers in county Tolna			
Systematic list of the employers in county Vas			
Systematic list of the employers in county Veszprém			
Systematic list of the employers in county Zala			
List of institutions captured with an address other than in the list of addreses			
Assignment for the moderators			
Assignment for the enumerators			
Assignment for the supervisors			
Assignment for encoders			
Assignment for supervisors of encoders			
Financial accounting sheet for supervisors			
Financial accounting sheet for encoders			
Financial accounting sheet for supervisors of encoders			
Certificate on attending the training and accounting sheet for transportation costs			

angol

KÖZPONTI STATISZTIKAI HIVATAL

2001

NÉPSZÁMLÁLÁS

Dwelling Questionnaire

Filling the questionnaire is compulsory under the Census Law CVIII. of 1999.
The data can be used exclusively for statistical purposes.

For the questions regarding dates months must be indicated by Arabic numerals. The numerals must be adjusted to the right, one numeral in one box. The numerals should not touch the frame of the box. If not specified elsewhere please mark one box only for preprinted responses, with an X-mark preceding the response. When writing numerals use the following format if possible, while for the X-marks it can be placed as below:

0 1 2 3 4 5 6 7 8 9 X

The white, empty boxes are for texts. Please do not write outside the boxes. The answer should be readable, like this:

Budapest XIII. ker

The boxes with outlines of broken lines must be left empty, these are for processing purposes only.

Place of enumeration

city or locality | district

part of locality

street, road, square, etc.

house no | building | staircase | ground floor, floor | door

Area

Enumeration district

Address no

Code of destination

Position of the dwelling

Total no. of persons enumerated

What is the character of the environment of the building?

traditional urban 1 | recreation district 6
building blocks, housing estate 2 | industrial zone 7
suburb of villas 3 | sparsely built outskirt 8
family houses 4 | grouped built outskirt 9
rural 5 | unsatisfactory from social point of view 10
other 11

The data of the building involving the dwelling

1. Type of the building

residential building 1 | collective living quarters (i.e. college, workers' hostel, social welfare home, hotel, pension) 4
recreation building 2 | occupied other premises 5
occupied other building (i.e school, office, business premises, factory) 3

2. When was the building built?

before 1900 800 | 1945–1959 859 | 1980–1989 889 | in 2000 806
1900–1919 819 | 1960–1969 869 | in 199 | in 2001 801
1920–1944 844 | 1970–1979 879

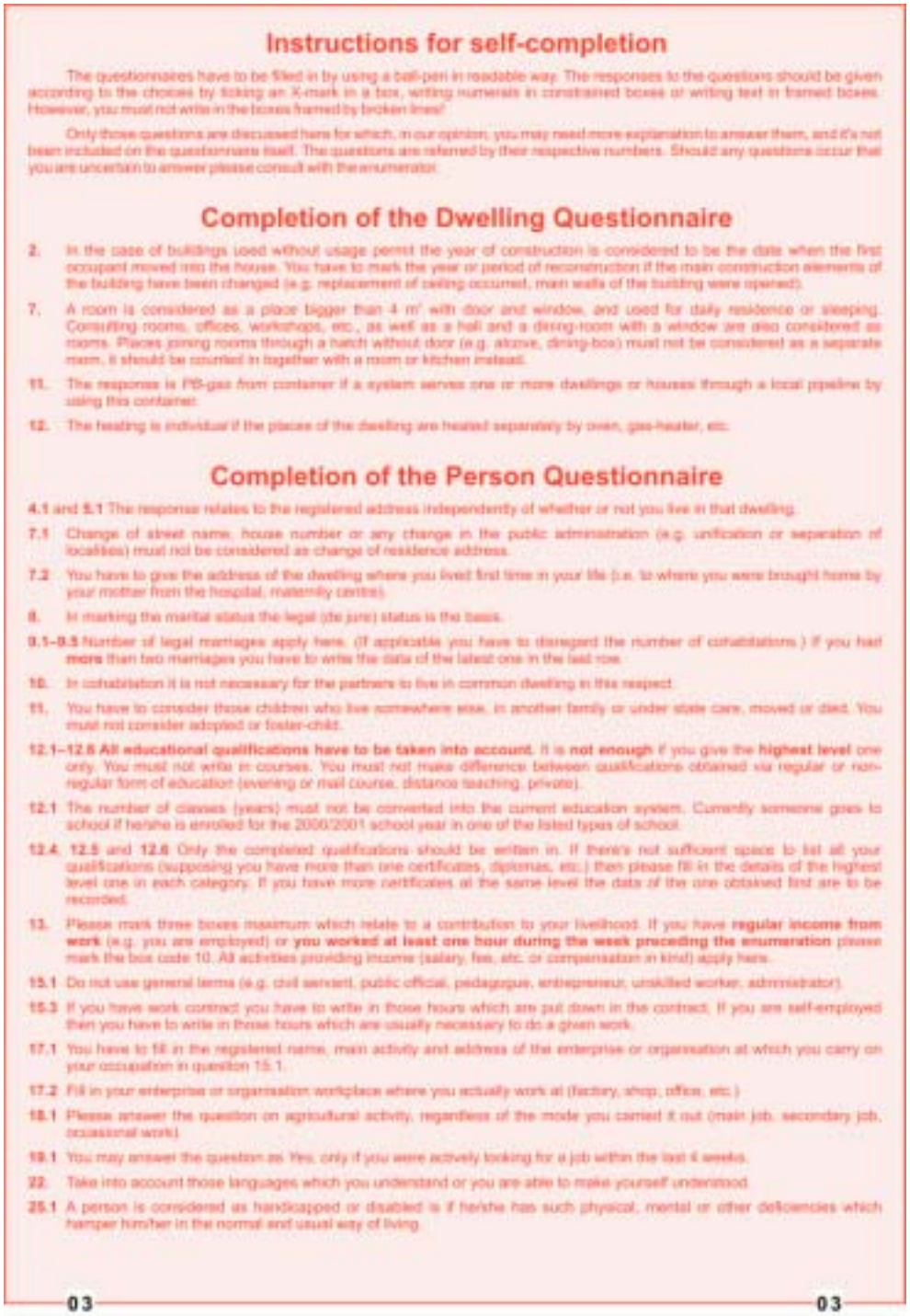
3. What was the building made of?

brick, stone 1 | adobe, mud, tamped clay with foundation 4 | wood with foundation 6
big brick, concrete 2 | adobe, mud, tamped clay without foundation 5 | wood without foundation 7
panel 3 | other 8

01 01

Dwelling questionnaire, first page

Dwelling questionnaire, second page



Instructions for self-completion

The questionnaires have to be filled in by using a ball-pen in readable way. The responses to the questions should be given according to the choices by ticking an X-mark in a box, writing numerals in constrained boxes or writing text in framed boxes. However, you must not write in the boxes framed by broken lines!

Only those questions are discussed here for which, in our opinion, you may need more explanation to answer them, and it's not been included on the questionnaire itself. The questions are referred by their respective numbers. Should any questions occur that you are uncertain to answer please consult with the enumerator.

Completion of the Dwelling Questionnaire

2. In the case of buildings used without usage permit the year of construction is considered to be the date when the first occupant moved into the house. You have to mark the year or period of reconstruction if the main construction elements of the building have been changed (e.g. replacement of ceiling occurred, main walls of the building were opened).

7. A room is considered as a place bigger than 4 m² with door and window, and used for daily residence or sleeping. Consulting rooms, offices, workshops, etc., as well as a hall and a dining-room with a window are also considered as rooms. Places joining rooms through a hatch without door (e.g. alcove, dining-box) must not be considered as a separate room, it should be counted in together with a room or kitchen instead.

11. The response is *PB-gas from container* if a system serves one or more dwellings or houses through a local pipeline by using this container.

12. The heating is *individual* if the places of the dwelling are heated separately by oven, gas-heater, etc.

Completion of the Person Questionnaire

4.1 and **5.1** The response relates to the registered address independently of whether or not you live in that dwelling.

7.1 Change of street name, house number or any change in the public administration (e.g. unification or separation of localities) must not be considered as change of residence address.

7.2 You have to give the address of the dwelling where you lived first time in your life (i.e. to where you were brought home by your mother from the hospital, maternity centre).

8. In marking the marital status the legal (*de jure*) status is the basis.

9.1–9.5 Number of legal marriages apply here. (If applicable you have to disregard the number of cohabitations.) If you had **more** than two marriages you have to write the data of the latest one in the last row.

10. In cohabitation it is not necessary for the partners to live in common dwelling in this respect.

11. You have to consider those children who live somewhere else, in another family or under state care, moved or died. You must not consider adopted or foster-child.

12.1–12.6 All educational qualifications have to be taken into account. It is **not enough** if you give the **highest level** one only. You must not write in courses. You must not make difference between qualifications obtained via regular or non-regular form of education (evening or mail course, distance teaching, private).

12.1 The number of classes (years) must not be converted into the current education system. Currently someone goes to school if he/she is enrolled for the 2000/2001 school year in one of the listed types of school.

12.4, **12.5** and **12.6** Only the completed qualifications should be written in. If there's not sufficient space to list all your qualifications (supposing you have more than one certificates, diplomas, etc.) then please fill in the details of the highest level one in each category. If you have more certificates at the same level the data of the one obtained first are to be recorded.

13. Please mark three boxes maximum which relate to a contribution to your livelihood. If you have **regular income from work** (e.g. you are employed) or **you worked at least one hour during the week preceding the enumeration** please mark the box code 10. All activities providing income (salary, fee, etc. or compensation in kind) apply here.

15.1 Do not use general terms (e.g. civil servant, public official, pedagogue, entrepreneur, unskilled worker, administrator).

15.3 If you have work contract you have to write in those hours which are put down in the contract. If you are self-employed then you have to write in those hours which are usually necessary to do a given work.

17.1 You have to fill in the registered name, main activity and address of the enterprise or organisation at which you carry on your occupation in question 15.1.

17.2 Fill in your enterprise or organisation workplace where you actually work at (factory, shop, office, etc.)

18.1 Please answer the question on agricultural activity, regardless of the mode you carried it out (main job, secondary job, occasional work).

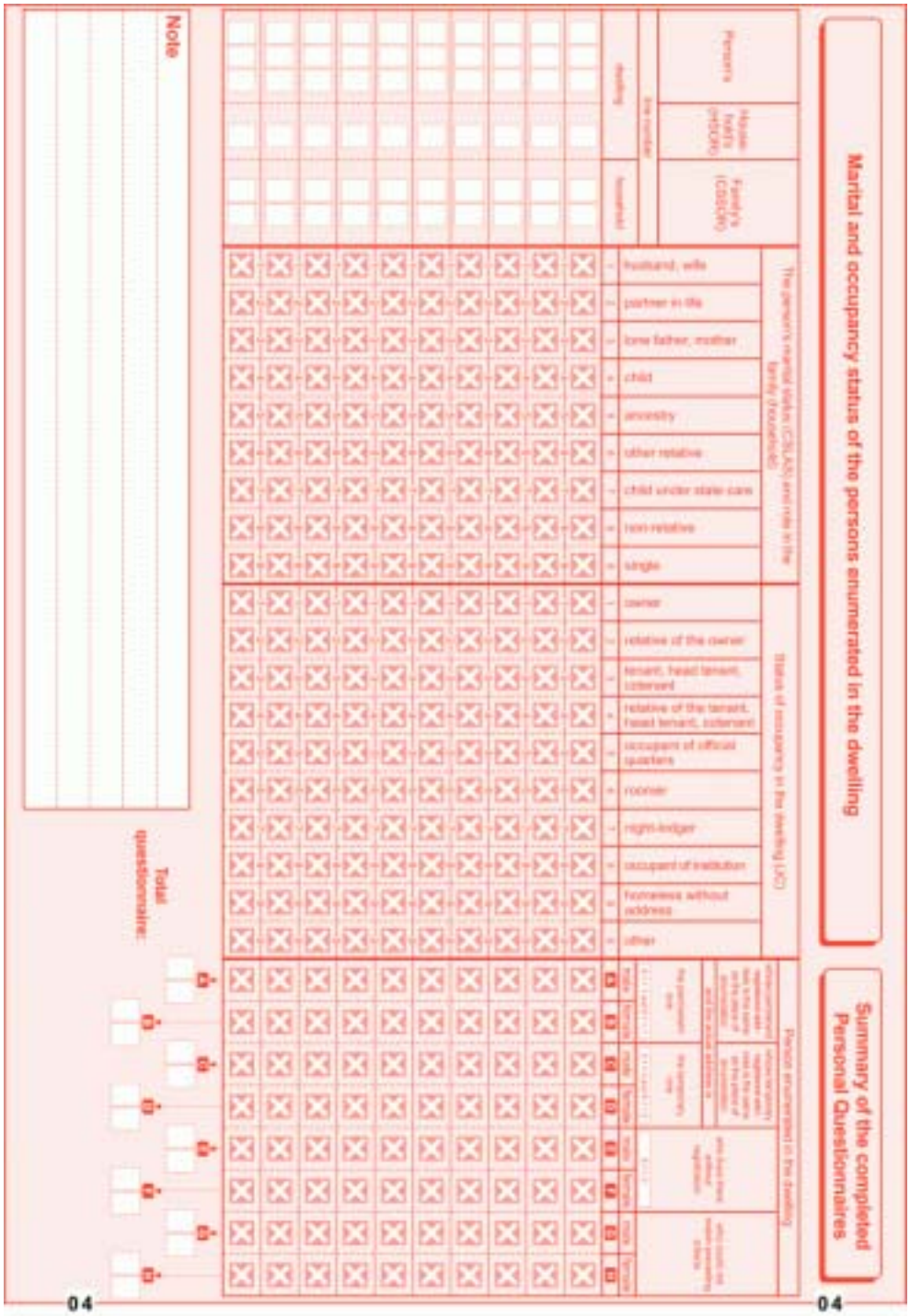
19.1 You may answer the question as *Yes*, only if you were actively looking for a job within the last 4 weeks.

22. Take into account those languages which you understand or you are able to make yourself understood.

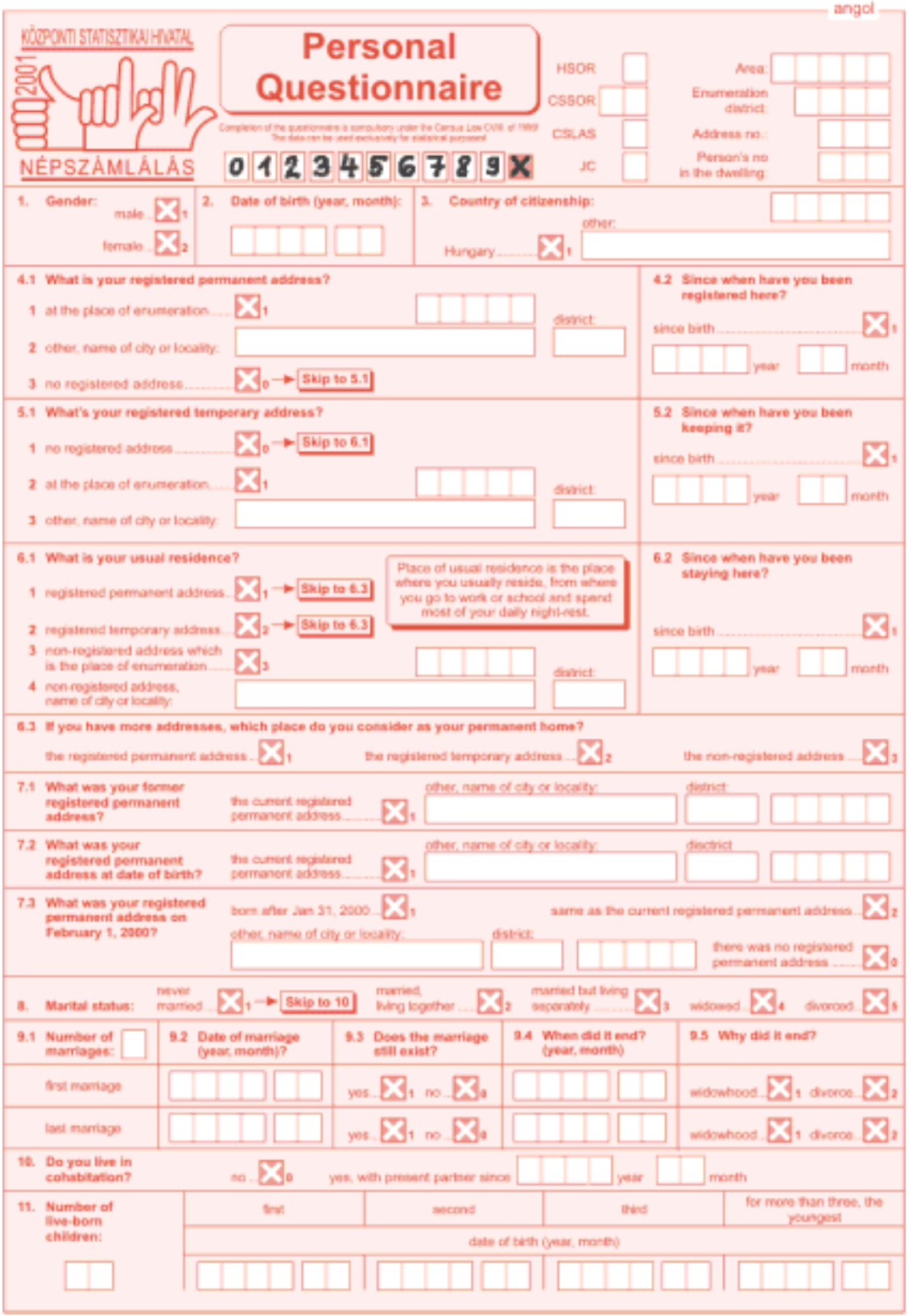
25.1 A person is considered as handicapped or disabled is if he/she has such physical, mental or other deficiencies which hamper him/her in the normal and usual way of living.

03 03

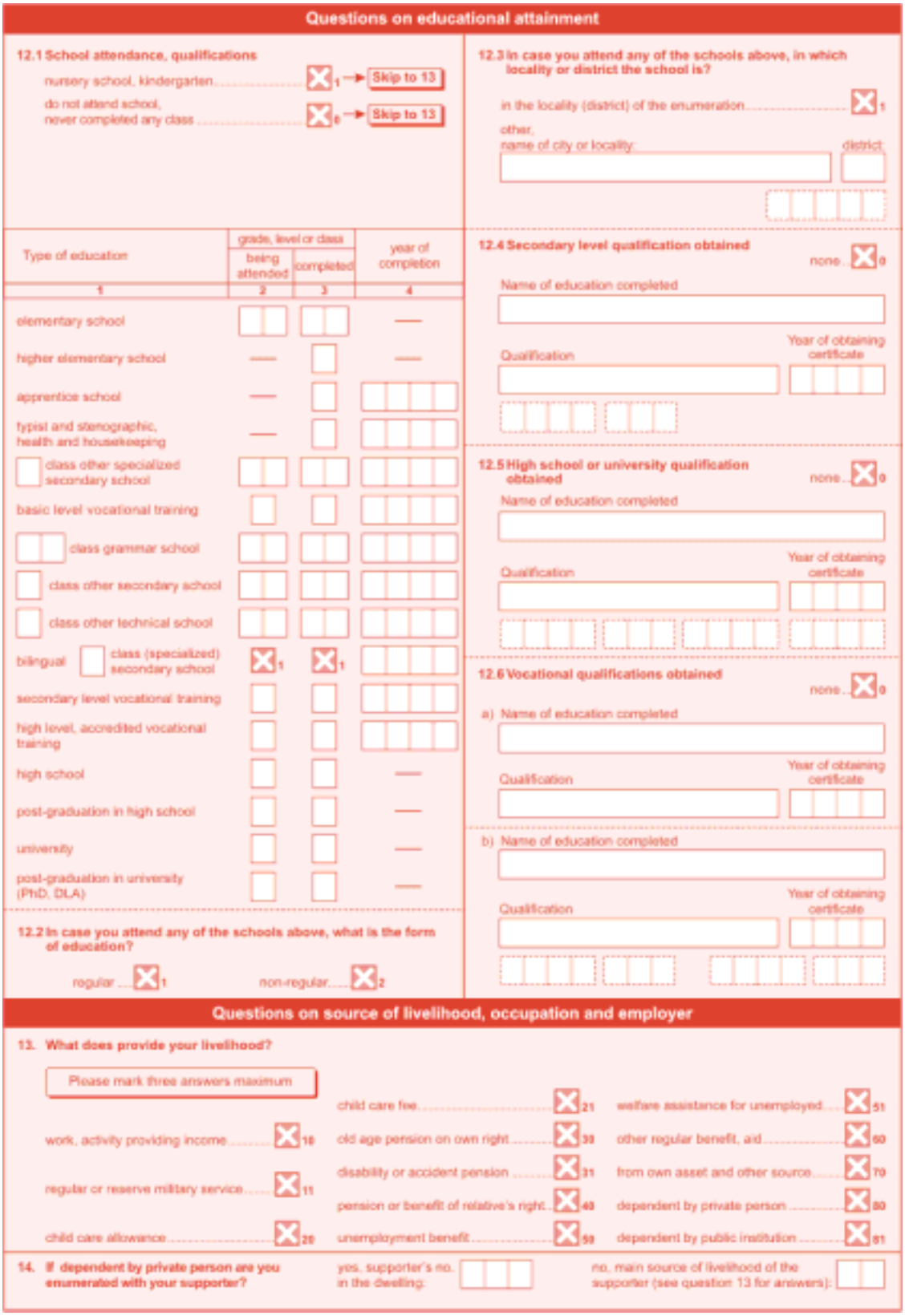
Dwelling questionnaire, third page



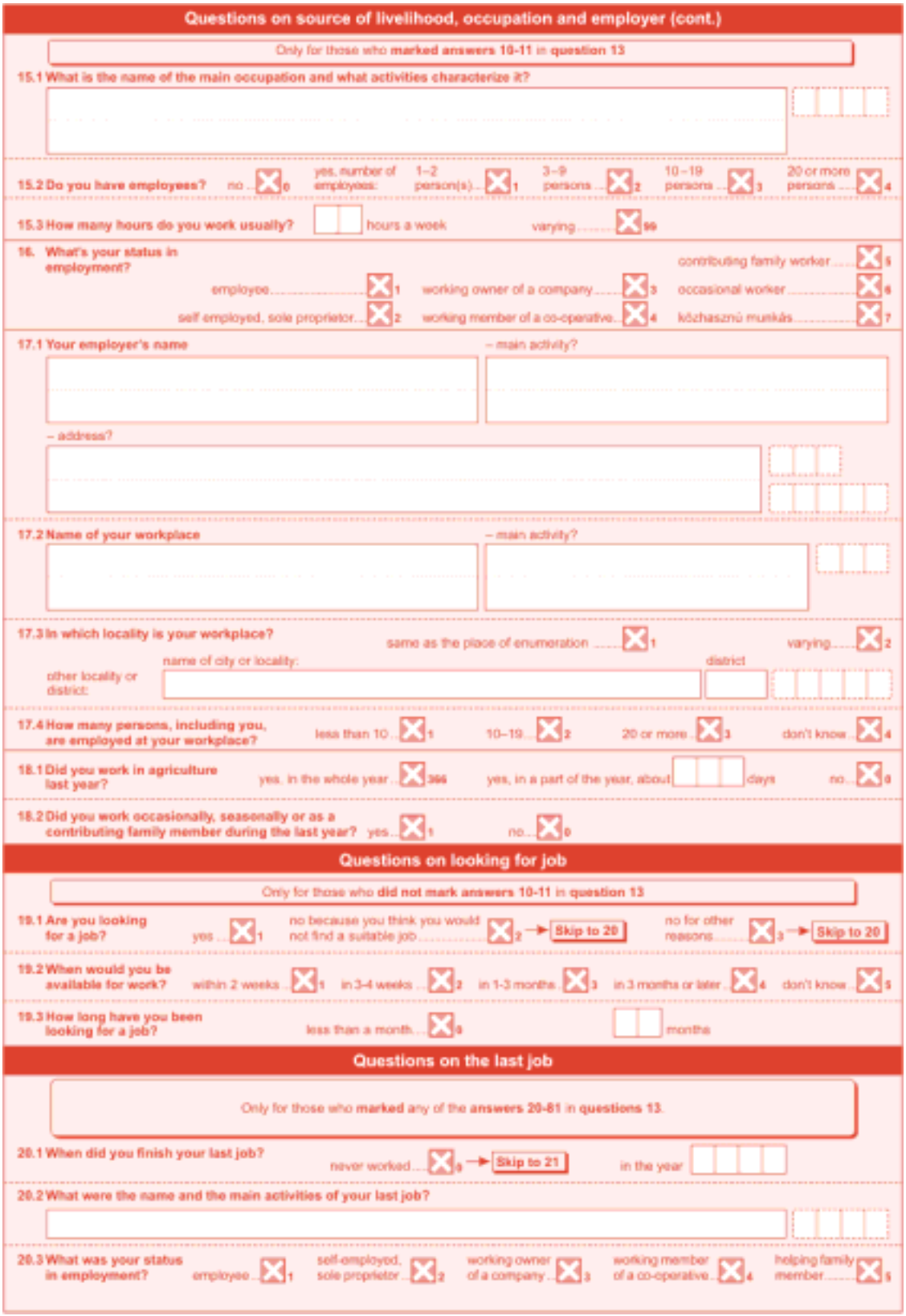
Dwelling questionnaire, fourth page



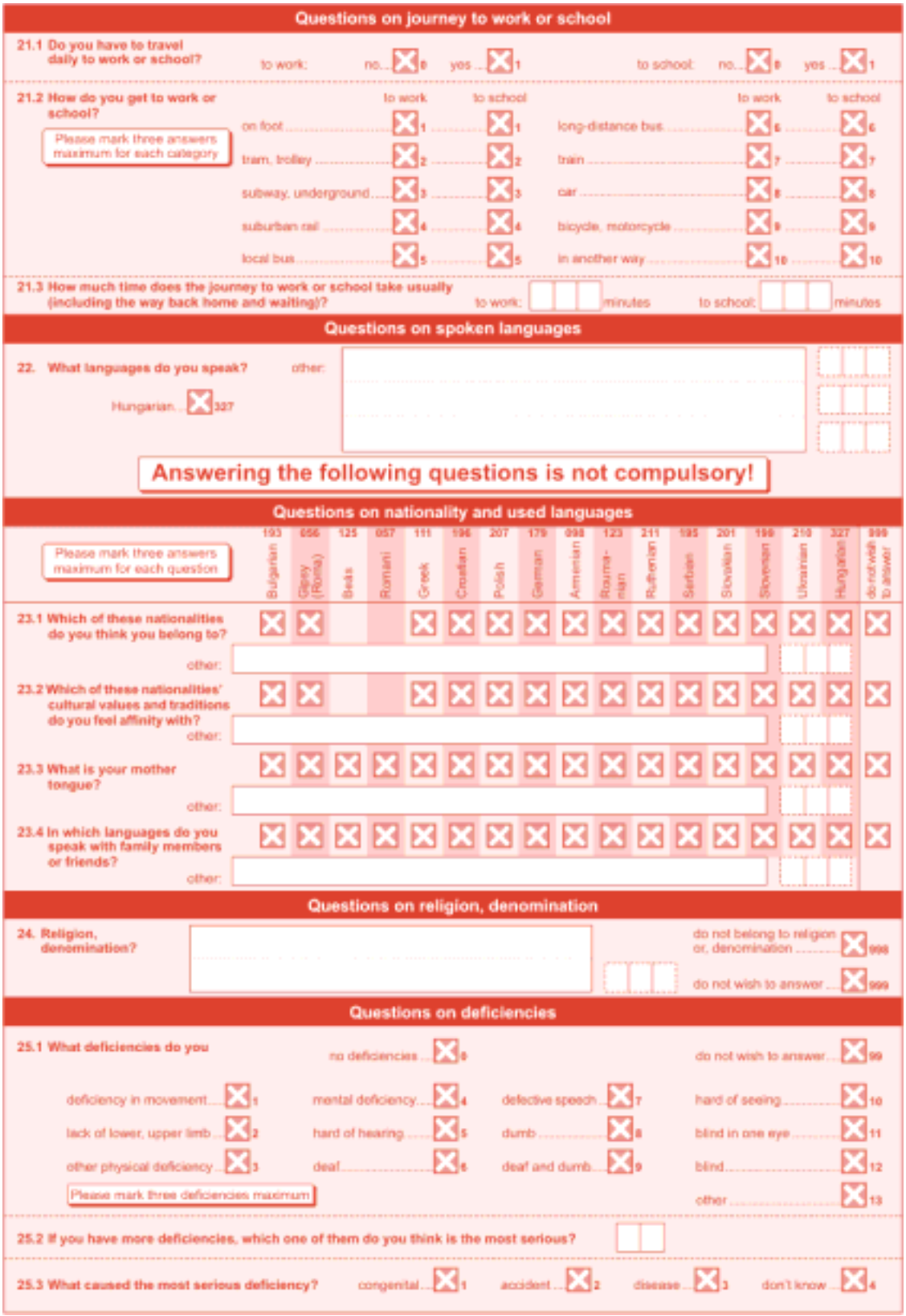
Personal questionnaire, first page



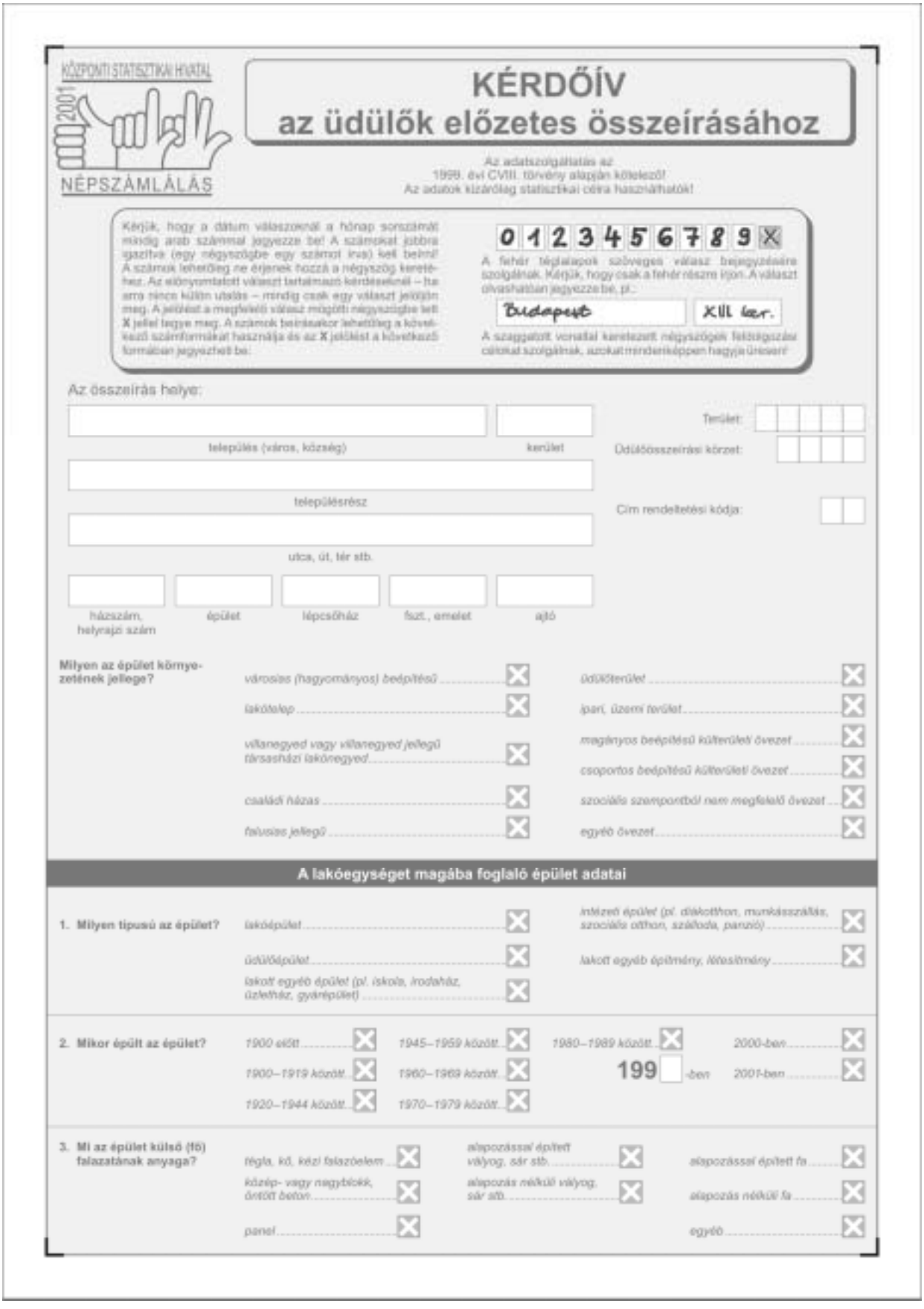
Personal questionnaire, second page



Personal questionnaire, third page



Personal questionnaire, fourth page



KÖZPONTI STATISZTIKAI HIVATAL

2001 NÉPSZÁMLÁLÁS

KÉRDŐÍV
az üdülők előzetes összeírásához

Az adatszolgáltatás az 1998. évi CVIII. törvény alapján kötelező!
Az adatok kizárólag statisztikai célra használhatók!

Kérjük, hogy a dátum válaszoknál a hónap sorszámát mindig arab számmal jegyezze be! A számokat jobbra igazítva (egy négyszögbe egy számot írva) kell beírni! A számok lehetőleg ne érjenek hozzá a négyszög kereteihez. Az előnyomtatott választ tartalmazó kérdéseknél – ha arra nincs külön utalás – mindig csak egy választ jelöljön meg. A jelölést a megfelelő válasz mögötti négyszögbe tett X jellel tegye meg. A számok beírásakor lehetőleg a következő számformákat használja és az X jelölést a következő formában jegyezhető be:

0 1 2 3 4 5 6 7 8 9 X

A fehér téglalapok szöveges válasz bejegyzésére szolgálnak. Kérjük, hogy csak a fehér részre írjon. A választ olvashatóan jegyezze be, pl.:

Budapest | XIII ker.

A szaggatott vonallal keretezett négyszögek feldolgozási célokat szolgálnak, azokat mindenképpen hagyja üresen!

Az összeírás helye:

település (város, község) | kerület

Terület:

Üdülőösszeírási körzet:

településrész

Cím rendeltetési kódja:

utca, út, tér stb.

házszám, helyrajzi szám | épület | lépcsőház | fszt., emelet | ajtó

Milyen az épület környezetének jellege?

- városias (hagyományos) beépítésű
- lakótelep
- villanegyed vagy villanegyed jellegű társasházi lakónegyed
- családi házas
- falusias jellegű
- üdülőterület
- ipari, üzemi terület
- magányos beépítésű külterületi övezet
- csoportos beépítésű külterületi övezet
- szociális szempontból nem megfelelő övezet
- egyéb övezet

A lakóegységet magába foglaló épület adatai

1. Milyen típusú az épület?

- lakóépület
- üdülőépület
- lakott egyéb épület (pl. iskola, irodaház, üzletház, gyárépület)
- intézeti épület (pl. diákotthon, munkásszálló, szociális otthon, szálloda, panzió)
- lakott egyéb építmény, létesítmény

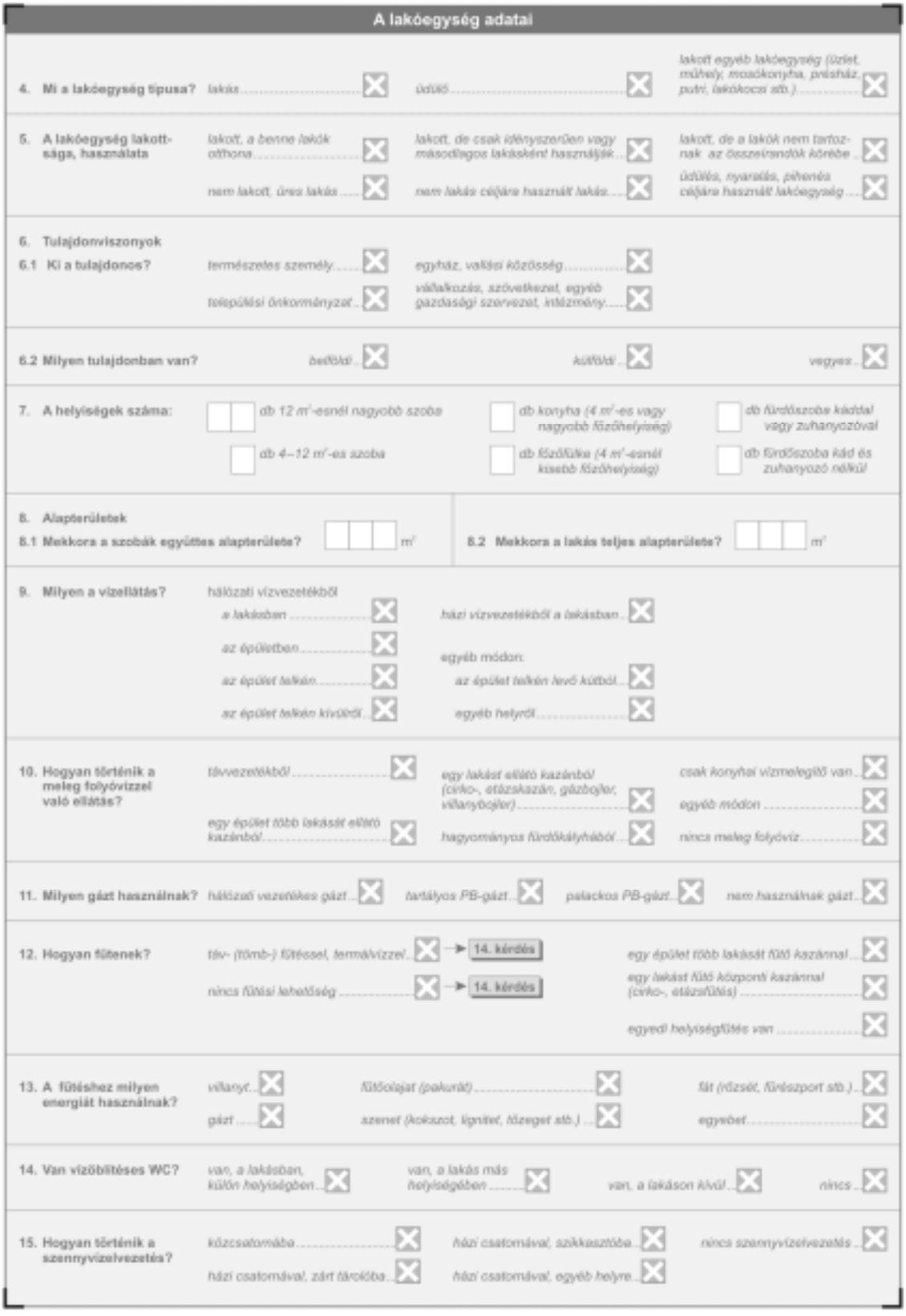
2. Mikor épült az épület?

- 1900 előtt
- 1900–1919 között
- 1920–1944 között
- 1945–1959 között
- 1960–1969 között
- 1970–1979 között
- 1980–1989 között
- 199 -ben
- 2000-ben
- 2001-ben

3. Mi az épület külső (fő) falazatának anyaga?

- tégla, kő, kézi falazóelem
- közép- vagy nagyblokk, öntött beton
- panel
- alapozással épített vályog, sár stb.
- alapozás nélküli vályog, sár stb.
- alapozással épített fa
- alapozás nélküli fa
- egyéb

Questionnaire for the preliminary census of the holiday houses, first page



A lakóegység adatai

4. Mi a lakóegység típusa? lakás ☒ üdülő ☒ lakott egyéb lakóegység (üzlet, műhely, mosókonyha, présház, pince, istállószerű épület stb.) ☒

5. A lakóegység lakottsága, használata
lakott, a benne lakók otthona ☒ lakott, de csak időszakosan vagy másodlagos lakásként használják ☒ lakott, de a lakók nem tartoznak az összeírandók körébe ☒
nem lakott, üres lakás ☒ nem lakás céljára használt lakás ☒ üdülés, nyaralás, pihenés céljára használt lakóegység ☒

6. Tulajdonviszonyok
6.1 Ki a tulajdonos?
természetes személy ☒ egyház, vallási közösség ☒
települési önkormányzat ☒ vállalkozás, szövetkezet, egyéb gazdasági szervezet, intézmény ☒

6.2 Milyen tulajdonban van? bedőlő ☒ külföldi ☒ vegyes ☒

7. A helyiségek száma:
☐☐ db 12 m²-esnél nagyobb szoba
☐ db 4–12 m²-es szoba
☐ db konyha (4 m²-es vagy nagyobb főzőhelyiség)
☐ db főzőfülke (4 m²-esnél kisebb főzőhelyiség)
☐ db fürdőszoba káddal vagy zuhanyozóval
☐ db fürdőszoba kád és zuhanyozó nélkül

8. Alapterületek
8.1 Mekkora a szobák együttes alapterülete? ☐☐☐ m²
8.2 Mekkora a lakás teljes alapterülete? ☐☐☐ m²

9. Milyen a vízellátás? hálózati vízvezetékből
a lakásban ☒ az épületben ☒ az épület telkén ☒ az épület telkén kívülről ☒
házi vízvezetékből a lakásban ☒
egyéb módon:
az épület telkén lévő kútból ☒ egyéb helyről ☒

10. Hogyan történik a meleg folyóvízzel való ellátás?
távvezetékből ☒ egy lakást ellátó kazánból (cirkó-, etázskazán, gázbojler, villanybojler) ☒ egy épület több lakását ellátó kazánból ☒ hagyományos fürdőkályhából ☒ csak konyhai vízmelegítő van ☒ egyéb módon ☒ nincs meleg folyóvíz ☒

11. Milyen gázt használnak? hálózati vezetékes gázt ☒ tartályos PB-gázt ☒ palackos PB-gázt ☒ nem használnak gázt ☒

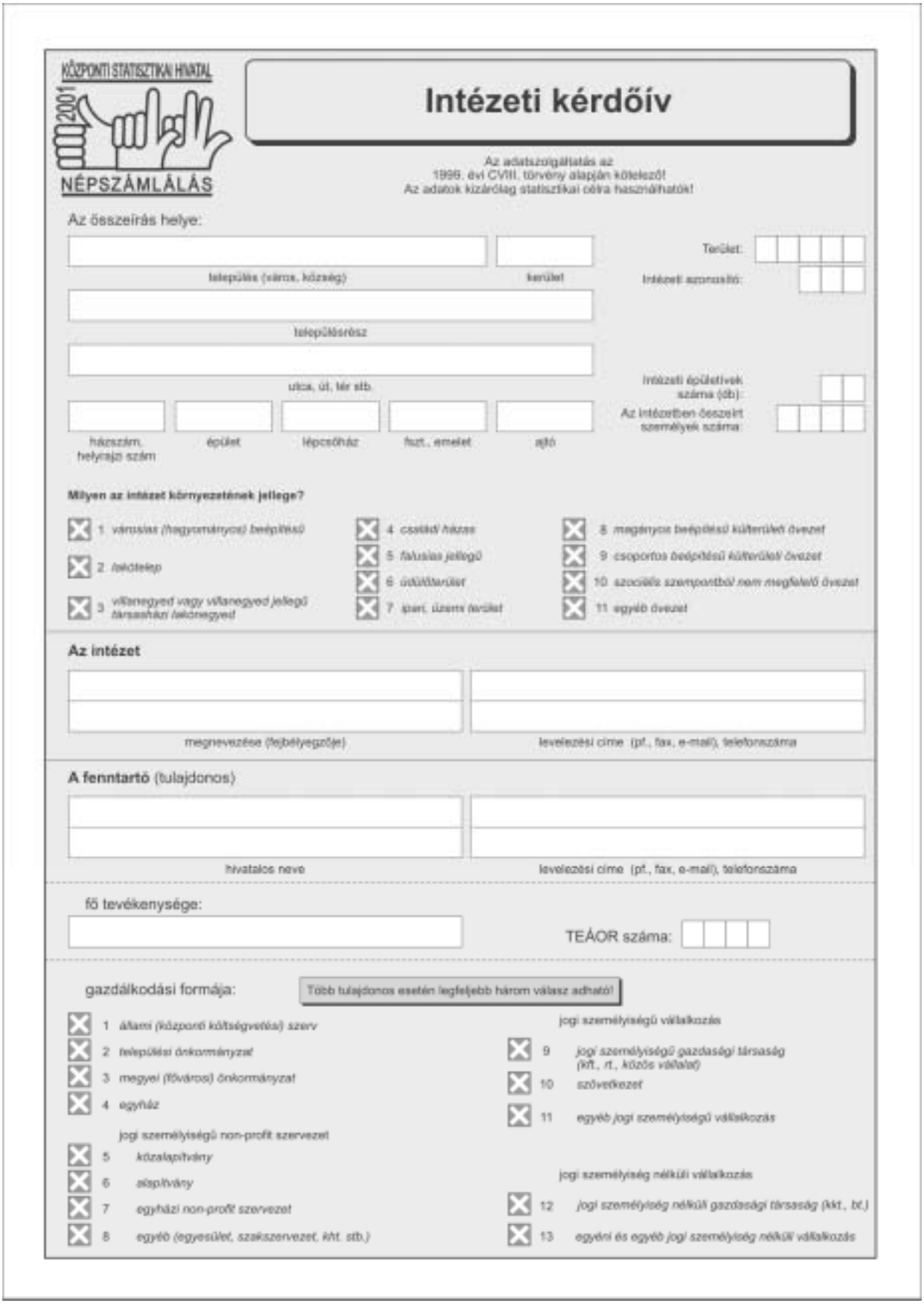
12. Hogyan fűtenek?
tév- (tömb-) fűtéssel, termálvízzel ☒ → 14. kérdés
nincs fűtési lehetőség ☒ → 14. kérdés
egy épület több lakását fűtő kazánnal ☒
egy lakást fűtő központi kazánnal (cirkó-, etázsfűtés) ☒
egyedi helyiségfűtés van ☒

13. A fűtéshez milyen energiát használnak?
villanyt ☒ gázt ☒ fűtőolajat (pakurát) ☒ szenet (kokszot, lignitet, tűzeget stb.) ☒ fát (rőzsét, fűrészport stb.) ☒ egyebet ☒

14. Van vízöblítéses WC? van, a lakásban, külön helyiségben ☒ van, a lakás más helyiségében ☒ van, a lakáson kívül ☒ nincs ☒

15. Hogyan történik a szennyvízelvezetés?
közcsatornába ☒ házi csatornával, zárt tárolóba ☒ házi csatornával, szikkasztóba ☒ házi csatornával, egyéb helyre ☒ nincs szennyvízelvezetés ☒

Questionnaire for the preliminary census of the holiday houses, second page



KÖZPONTI STATISZTIKAI HIVATAL

2001 NÉPSZÁMLÁLÁS

Intézeti kérdőív

Az adatszolgáltatás az
1996. évi CVIII. törvény alapján kötelező!
Az adatok kizárólag statisztikai célra használhatók!

Az összeírás helye:

település (város, község) | kerület | Terület: | Intézet azonosító:

településrész

utca, út, tér stb.

házszám, helyrajzi szám | épület | lépcsőház | fszt., emelet | ajtó | Intézeti épületek száma (db): | Az intézetben összeírt személyek száma:

Milyen az intézet környezetének jellege?

1 városias (hagyományos) beépítésű
2 telepszerű
3 villanegyed vagy villanegyed jellegű társasházi lakónegyed
4 családi házas
5 falusias jellegű
6 üdülőterület
7 ipari, üzemi terület
8 magányos beépítésű külterületi övezet
9 csoportos beépítésű külterületi övezet
10 szociális szempontból nem megfelelő övezet
11 egyéb övezet

Az intézet

megnevezése (fejbélyegzője) | levelezési címe (pf., fax, e-mail), telefonszáma

A fenntartó (tulajdonos)

hivatalos neve | levelezési címe (pf., fax, e-mail), telefonszáma

fő tevékenysége:

TEÁOR száma:

gazdálkodási formája: Több tulajdonos esetén legfeljebb három válasz adható!

1 állami (központi költségvetési) szerv
2 települési önkormányzat
3 megyei (fővárosi) önkormányzat
4 egyház

jogi személyiségű non-profit szervezet

5 közalapítvány
6 alapítvány
7 egyházi non-profit szervezet
8 egyéb (egyesület, szakszervezet, kht. stb.)

jogi személyiségű vállalkozás

9 jogi személyiségű gazdasági társaság (kft., rt., közös vállalat)
10 szövetkezet
11 egyéb jogi személyiségű vállalkozás

jogi személyiség nélküli vállalkozás

12 jogi személyiség nélküli gazdasági társaság (kkt., bt.)
13 egyéni és egyéb jogi személyiség nélküli vállalkozás

Questionnaire for the enumeration of the institutions, first page

1. Rendeltetés

Gyermekvédelmi szakellátás bentlakásos intézményei
- ☒ 1 *gyermekotthon*
- ☒ 2 *speciális gyermekotthon*
- ☒ 3 *lakásotthon*
- ☒ 4 *utógondozó otthon*

Gyermekjóléti alapellátás bentlakásos intézményei
- ☒ 5 *helyettes bölcsőde*
- ☒ 6 *helyettes óvoda*
- ☒ 7 *gyermekek átmeneti otthona*
- ☒ 8 *családok átmeneti otthona*

Diákotthon, kollégium
- ☒ 9 *általános iskolai*
- ☒ 10 *középfokú iskolai*
- ☒ 11 *általános és középfokú iskolai*
- ☒ 12 *főiskolai, egyetemi*
- ☒ 13 *középfokú iskolai és főiskolai, egyetemi*
- ☒ 14 *egyéb oktatással összefüggő*

Munkavállalók elhelyezésére szolgáló intézmények
- ☒ 15 *munkásszálló*
- ☒ 16 *alkalmazotti szálláshely*
- ☒ 17 *Kolostor, rendház*

Tartós elhelyezést biztosító felnőttvédelmi szociális intézmény

ápolást, gondozást nyújtó intézmény
- ☒ 18 *idősek otthona*
- ☒ 19 *fogyatékosok otthona*
- ☒ 20 *pszichiátriai betegek otthona*
- ☒ 21 *szenvedélybetegek otthona*
- ☒ 22 *hajléktalanok otthona*

rehabilitációs intézmény
- ☒ 23 *fogyatékosok*
- ☒ 24 *pszichiátriai betegek*
- ☒ 25 *szenvedélybetegek*
- ☒ 26 *hajléktalanok rehabilitációs intézménye*

lakóotthon
- ☒ 27 *fogyatékosok*
- ☒ 28 *pszichiátriai betegek*

Átmeneti elhelyezést biztosító felnőttvédelmi szociális intézmény
- ☒ 29 *idősek gondozóháza*
- ☒ 30 *fogyatékosok gondozóháza*
- ☒ 31 *pszichiátriai betegek és szenvedélybetegek átmeneti otthona*
- ☒ 32 *hajléktalanok éjjeli menedékhelye és átmeneti szállása*

Fekvőbeteg ellátó intézmény
- ☒ 33 *kórház*
- ☒ 34 *klinika*
- ☒ 35 *szakkórház*
- ☒ 36 *Menekültek befogadó állomás*

Kereskedelmi szálláshely
- ☒ 37 *szálloda*
- ☒ 38 *panzió*
- ☒ 39 *üdülőház*
- ☒ 40 *turistaszálló*
- ☒ 41 *ifjúsági szálló*
- ☒ 42 *kemping*

Üdülő
- ☒ 43 *vállalat, intézmény üdülőszállója*
- ☒ 44 *vállalat, intézmény hétvégi pihenője*
- ☒ 45 *egyéb üdülőszolgálati és sportcélú intézmény*
- ☒ 46 Otthonház
- ☒ 47 Laktanya
- ☒ 48 *Büntetés-végrehajtási intézet*

Egyéb, mégpedig:

2. Az intézet dolgozói létszáma
- ☒ 1 *10 főnél kevesebb*
- ☒ 2 *10–19 fő között*
- ☒ 3 *20 fő vagy több*

3. Működés jellege
- ☒ 1 *önálló intézmény, intézmény központja*
- ☒ 2 *intézményrész (kihelyezett részleg, telephely stb.)*

4. Az intézetben élők étkeztetése
- ☒ 1 *helyben főznek, főzőkonyha van*
- ☒ 2 *helyben melegítik az ételt, melegítő konyha van*
- ☒ 3 *az ételt más konyhából szállítják és melegítés nélkül tálalják*
- ☒ 0 *nincs étkeztetés*

Az 5. kérdésre csak akkor kell válaszolni, ha az 1. kérdésnél a 33–35 kódszámú válaszok egyike sem került megjelölésre!

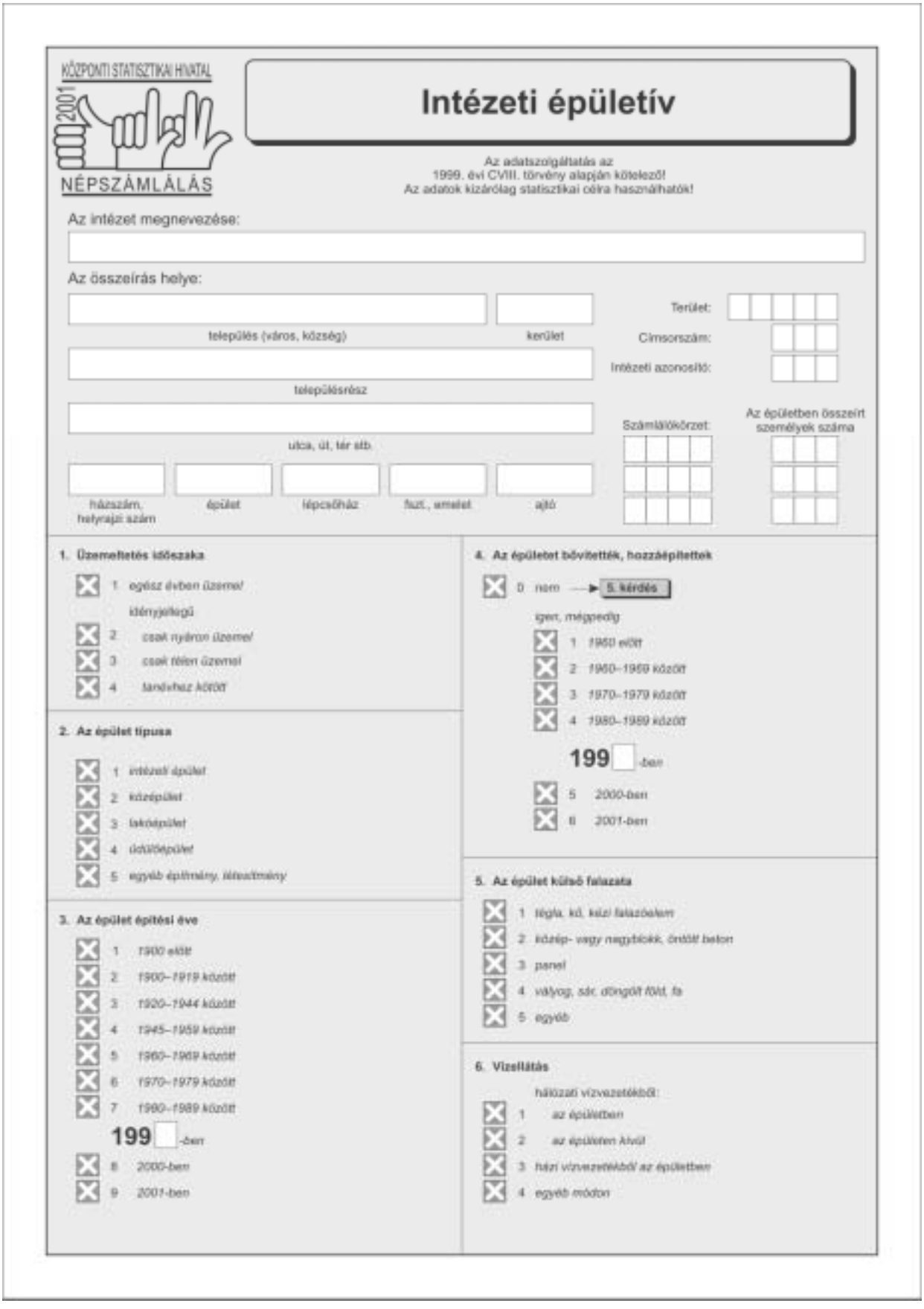
5. Egészségügyi helyiségek száma
- 5.1 ☐☐ *db váróhelyiséggel ellátott orvosi rendelő*
- 5.2 ☐☐ *db váróhelyiség nélküli orvosi rendelő*
- 5.3 ☐☐ *db betegszoba*
- 5.4 ☐☐ *db fizikoterápiás helyiség*

6. Férőhelyek száma

☐☐☐ *fő*

ebből
- 6.1 ☐☐☐ *pótágy*
- 6.2 ☐☐☐ *működő férőhely*
- 6.3 ☐☐☐ *igénybe vett férőhely*

Questionnaire for the enumeration of the institutions, second page



KÖZPONTI STATISZTIKAI HIVATAL

2001 NÉPSZÁMLÁLÁS

Intézeti épületív

Az adatszolgáltatás az
1999. évi CVIII. törvény alapján kötelező!
Az adatok kizárólag statisztikai célra használhatók!

Az intézet megnevezése:

Az összeírás helye:

település (város, község) | kerület

településrész

utca, út, tér stb.

házszám, helyrajzi szám | épület | lépcsőház | fszt., emelet | ajtó

Terület:
Címsorszám:
Intézeti azonosító:
Számlálókörzet:
Az épületben összeírt személyek száma

1. Üzemeltetés időszaka

1 egész évben üzemel
időjellegű
2 csak nyáron üzemel
3 csak télen üzemel
4 tanévhez kötött

2. Az épület típusa

1 intézeti épület
2 középület
3 lakóépület
4 üdülőépület
5 egyéb építmény, létesítmény

3. Az épület építési éve

1 1900 előtt
2 1900–1919 között
3 1920–1944 között
4 1945–1959 között
5 1960–1969 között
6 1970–1979 között
7 1980–1989 között
199 -ben
8 2000-ben
9 2001-ben

4. Az épületet bővítették, hozzáépítettek

0 nem → 5. kérdés
igen, mégpedig
1 1950 előtt
2 1950–1959 között
3 1970–1979 között
4 1980–1989 között
199 -ben
5 2000-ben
6 2001-ben

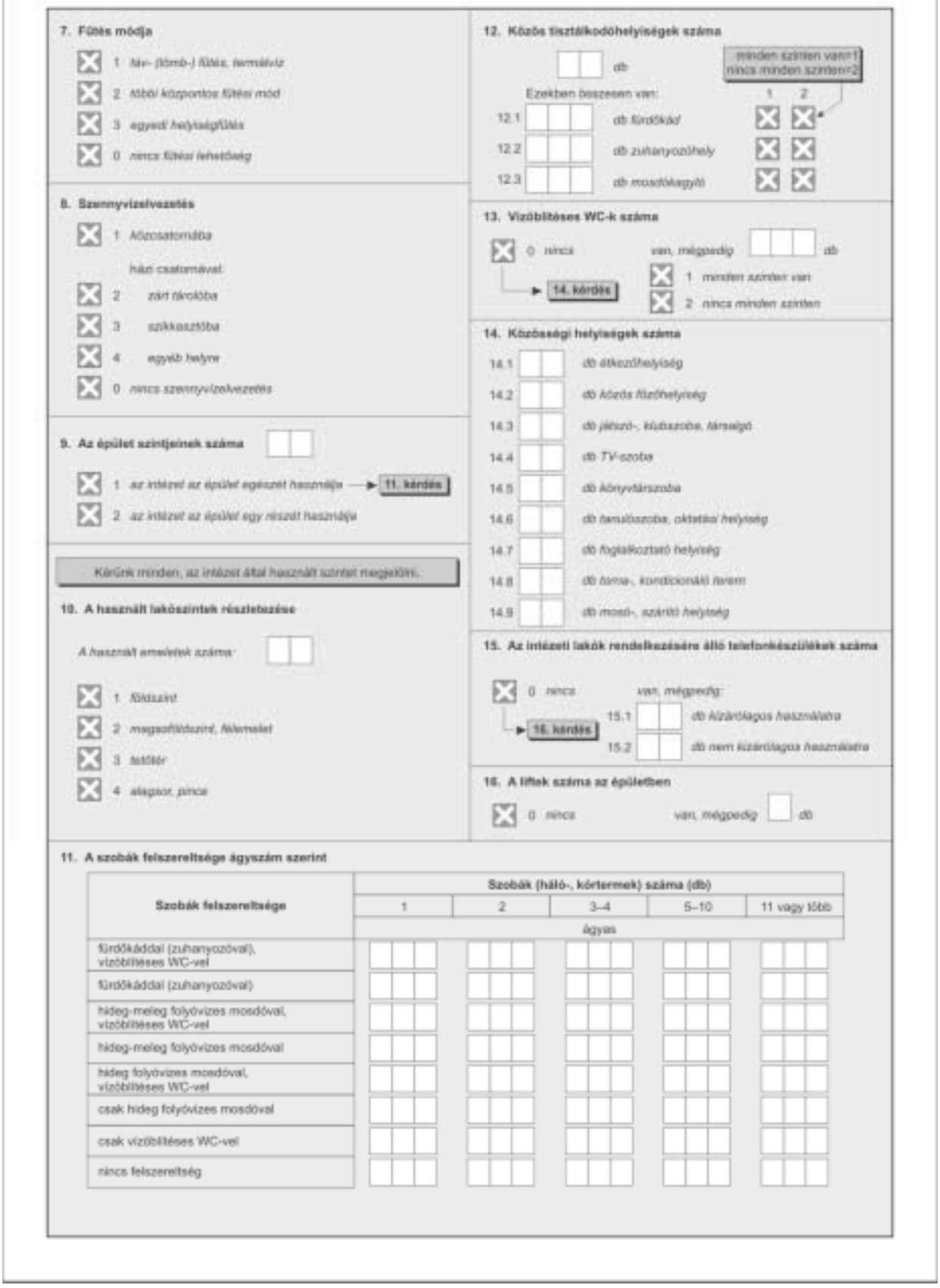
5. Az épület külső falazata

1 tégla, kő, kézi falazóelem
2 könny- vagy nagyblokk, öntött beton
3 panel
4 vályog, sár, döngölt föld, fa
5 egyéb

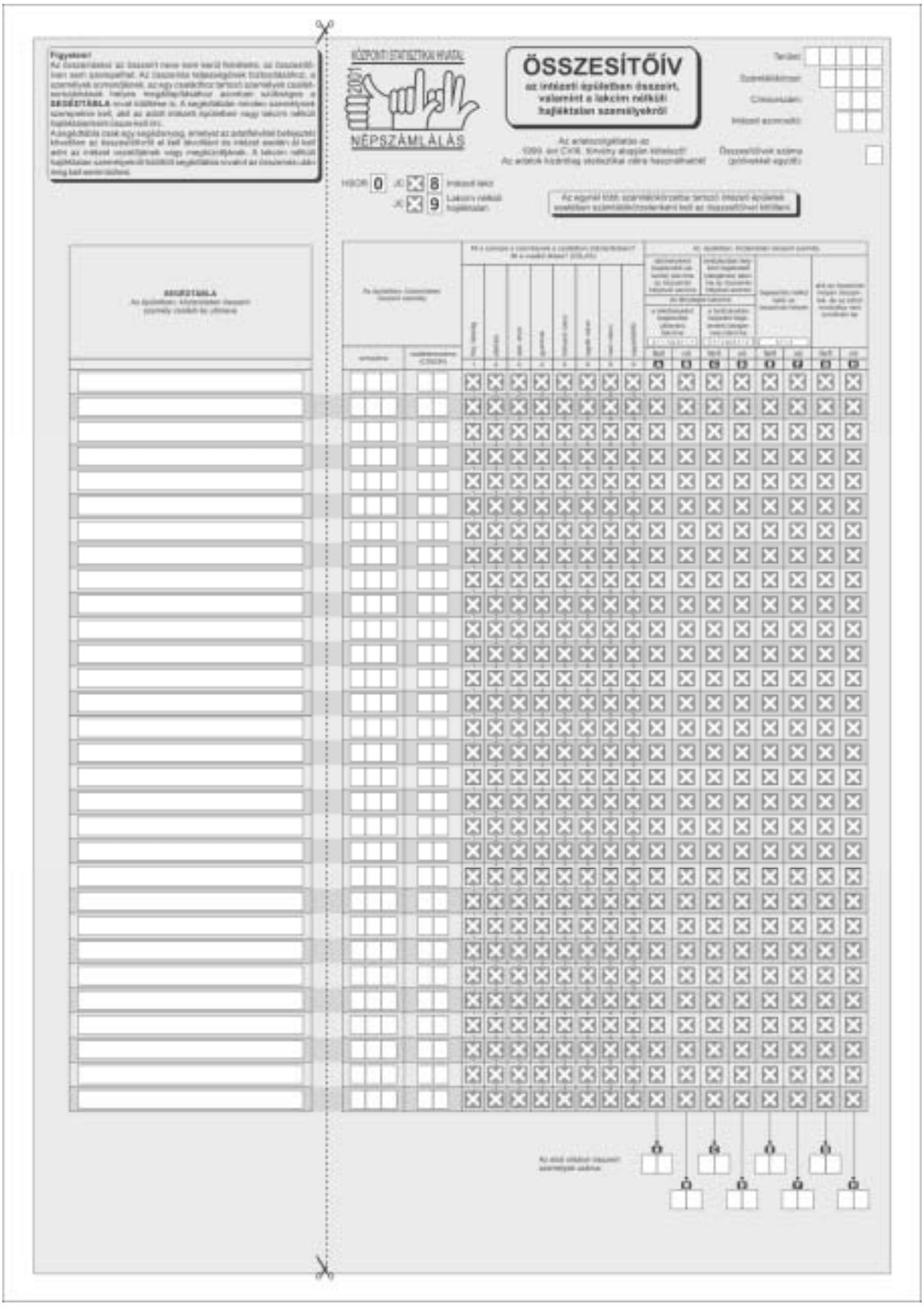
6. Vízellátás

hálózati vízvezetékből:
1 az épületben
2 az épületen kívül
3 házi vízvezetékből az épületben
4 egyéb módon

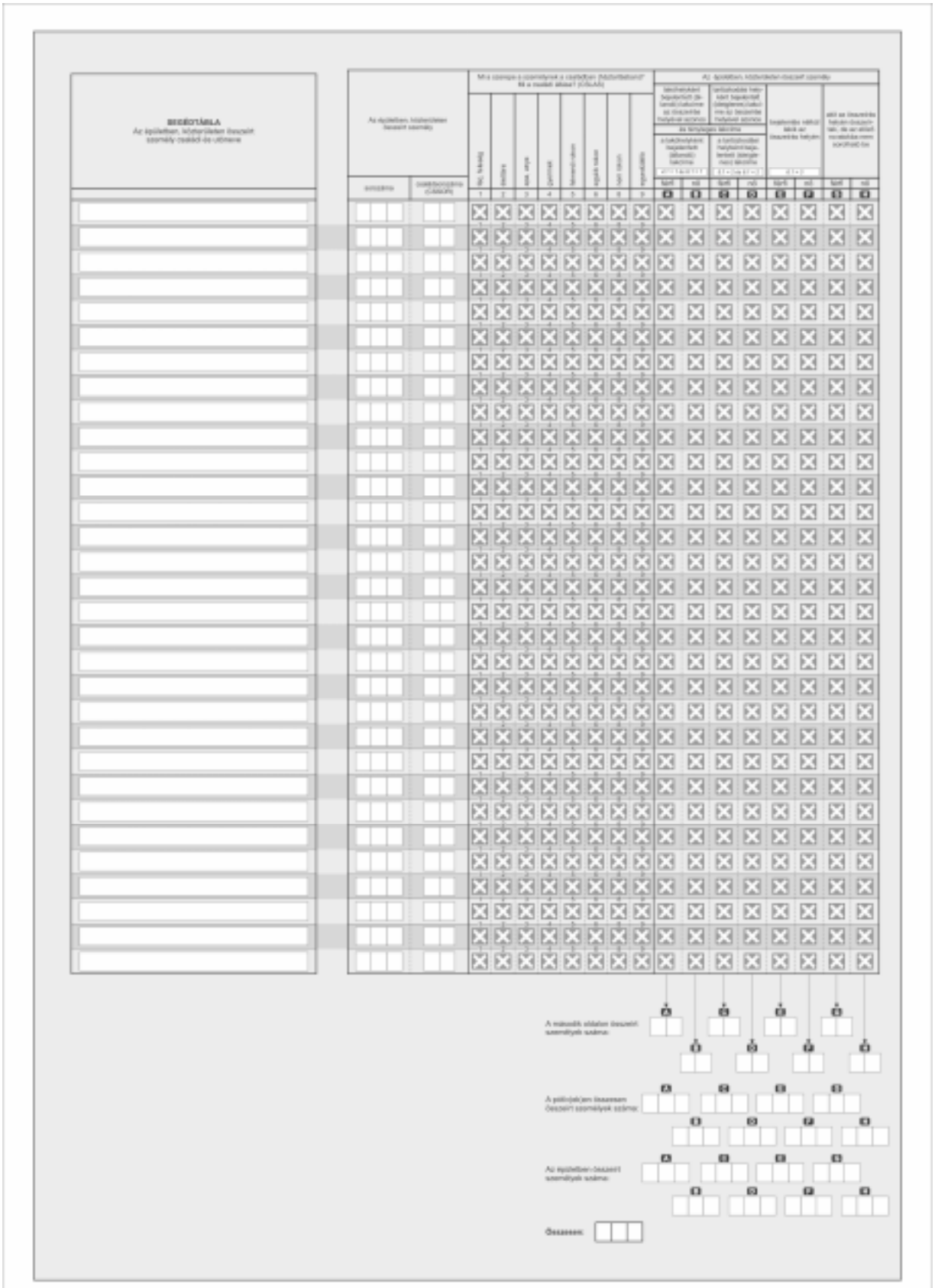
Questionnaire on the institutional building, first page



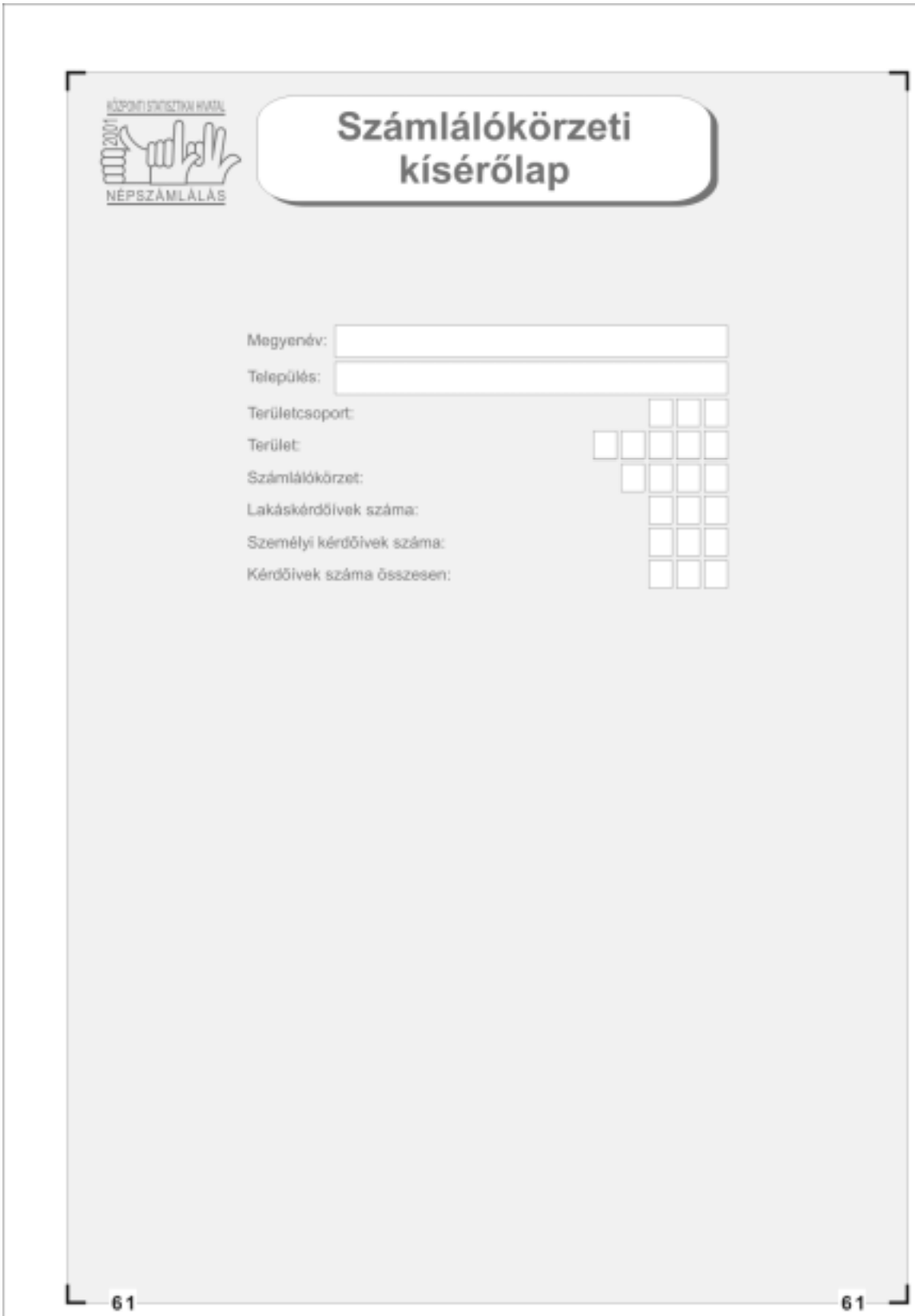
Questionnaire on the institutional building, second page



Bordereau of persons enumerated in institutional households and in “enumeration districts without address” (homeless), first page

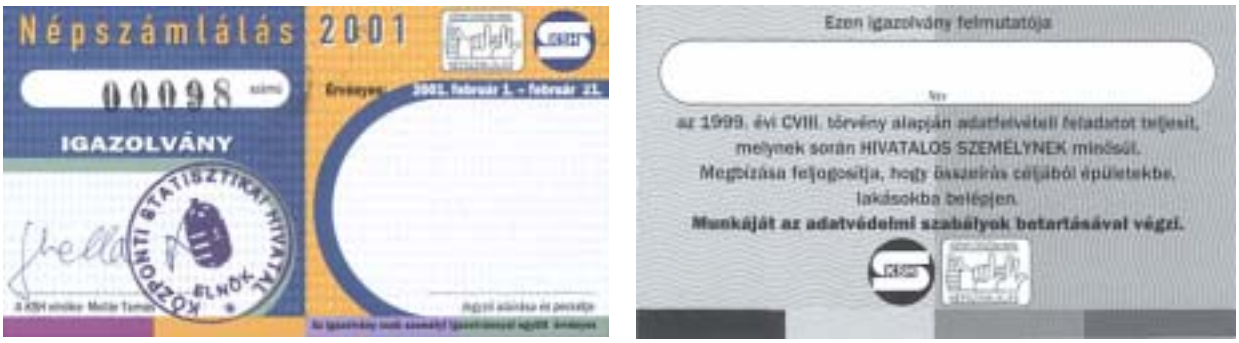


Bordereau of persons enumerated in institutional households and in “enumeration districts without address” (homeless), second page



Accompanying (identification) sheet for the enumeration districts

Identity card for the enumerators in the preliminary census of holiday houses



Identity card for enumerators

Identity card for supervisors

KÖZPONTI STATISZTIKAI HIVATAL

2001

NÉPSZÁMLÁLÁS

ÉRTESÍTÉS

..... részére

A 2001. évi népszámlálás adatfelvétele céljából a mai napon felkerestem.

2001. február ...-n, ...–... óra között ismét jelentkezem. Kérem, hogy ebben az időpontban Ön, akadályoztatása esetén a család egyik felnőtt tagja szíveskedjék otthon tartózkodni.

2001. február ...-n

.....
számlálóbiztos

Information leaflet on the census

KÖZPONTI STATISZTIKAI HIVATAL

2001

NÉPSZÁMLÁLÁS

FELHÍVÁS

A 2001. évi népszámlálás adatfelvételére, a lakások és a személyek összeírására

ebben **a házban / az utcában**

február ..... – ..... kerül sor

.....
számlálóbiztos

Announcment oh the date of the census

Review of the questions of the Hungarian censuses, 1869–2001

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
QUESTIONS RELATED TO PERSONS																
Name	+	+	+	+	+	+	+	+	+	+	+	·	+	+	·	–
Title, rank	+	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Data on parents																
Name of the father	–	–	–	–	–	–	+	+	–	–	–	–	–	–	–	–
Maiden name of the mother	–	–	–	–	–	–	+	+	–	–	–	–	–	–	–	–
Personal identity number	–	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–
Sex	O	O	O	O	O	O	O	O	O	O	O	·	O	O	·	O
Citizenship	O	O	O	O	O	+	O	+	O	G	–	–	–	–	–	O
Connection to the head of household	–	–	–	–	–	–	–	–	–	O	O	·	–	X	·	X
Connection to the head of family	–	–[26]	–[1]	–[1]	+	–	+	+	O	O	X	·	O	X	·	X
Demographic and economic characteristics of the head of household (family)	–	–	–	+	+	+	+	G	+	–	X	·	X	X	·	X
Date of birth	O	O	O	O	O	O	O	O	O	O	O	·	O	O	·	O
Marital status	O	O	O	O	O	O	O	O	O	O	O	·	O	O	·	O
Mother tongue	–	O	O	O	O	O	O	O	O	O	O	·	O	O	·	O
Language spoken besides mother tongue	–	O	O	O	O	O	O	G	O	O	–	G	O	O	·	O
Nationality[27]	–	O	O	O	O	O	–	O	G	G	–	–	O	O	·	O
Ethnic affiliation (to cultural values, traditions)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
Language spoken with family members, friends	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
Religion, denomination	O	O	O	O	O	O	O	O	O	–	–	–	–	–	–	O
Regarded as a Jew	–	–	–	–	–	–	–	G	–	–	–	–	–	–	–	–
Disability (in body or mentally)																
– kind	O	O	O	O	G	G	O	+	O	–	–	–	–	–	G	O
– cause	–	–	–	–	–	–	+	–	–	–	–	–	–	–	G	O

[26] The heads of families and family members were listed (by sexes) on the building questionnaire.

[27] From 1880 to1920 „nationality” was defined according to the answer given to the question „mother tongue”.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
Illness																
– length	–	O	O	–	–	–	–	–	–	–	–	–	–	–	–	–
– apical lesion	–	–	–	–	–	+	+	–	–	–	–	–	–	–	–	–
Invalidity	–	–	–	–	–	–	+	–	–	–	–	–	–	–	–	–
Staying abroad	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–
Voting right[28]	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–	–
QUESTIONS RELATED TO EMPLOYMENT																
Economic activity	–	–	O	O	O	O	O	G	O	O	O	·	O		·	X
Source of livelihood	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
For persons not working																
– kind of dependency	+	+	+	+	+	+	+	+	+	O	O	·	O	O	·	O
– last activity	–	–	–	–	–	–	–	–	–	–	G	·	–	–	G	–
– length of activity in the previous year	–	–	–	+	–	–	–	–	–	–	O	·	O	–	–	–
– cause of concluding activity	–	–	–	G	–	–	–	–	–	–	–	G	–	–	–	–
Supporter																
– specification	–	–	+	+	+	+	+	+	+	+	+	·	+	–	G[29]	–
– occupation, title of job	–	–	O	O	O	O	O	G	O	+	O	·	+	–	G	–
– employment status	–	–	–	O	O	O	O	G	O	O	O	·	O	–	G	–
– base staff group, position	–	–	–	–	–	–	–	–	–	–	–	–	O	–	G	–
– name, address of employer (sector of industry)	–	–	–	O	O	O	O	G	O	O	O	·	O	–	G	–
– property of land, business	–	–	–	–	–	–	–	–	–	+	–	–	–	–	–	–
Occupation scope of activity	O	O	O	O	O	O	O	+	O	O	O	·	O	O	·	O
Employment status	O	O	O	O	O	O	O	G	O	O	O	·	O	O	·	O
Quality of employment, staff group, position	O	O	O	O	O	O	O	G	O	O	O	·	O	O	·	O

[28] Males over 24 years of age.

[29] Economic activity of the supporter too.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
Private entrepreneur, industrial venture																
– address of the undertaking, venture	–	–	–	+	–	–	F	–	F	–	–	–	–	X	·	–
– type of the undertaking, venture	–	–	–	O	O	+	+	+	O	–	–	–	–	X	·	–
– partner(ship)	–	–	–	O	–	–	F	–	F	–	–	–	–	–	–	–
– number of outside workers	–	–	–	O	M	–	–	–	–	–	–	–	–	–	–	–
– number of other employees	–	–	–	O	M	M	M	G	O	+	–	–	–	–	–	–
– number of engines, machinery	–	–	–	O	–	–	F	–	F	–	–	–	–	–	–	–
– use and supply of raw material	–	–	–	+	–	–	–	–	F	–	–	–	–	–	–	–
– final product of the undertaking	–	–	–	+	–	–	F	–	F	–	–	–	–	–	–	–
Employment																
– name of the employer	–	–	O	O	O	O	O	G	O	O	O	·	O	O	·	O
– name of the workplace (plant)	–	–	–	O	O	O	O	G	O	O	O	·	O	O	·	O
– address of the employer	–	–	–	+	+	+	+	+	+	O	O	·	O	O	·	O
– size of the employer	–	–	–	O	M	O	F	G	–	–	–	–	–	–	–	–
– distance between the dwelling and the workplace	–	–	–	–	–	–	–	+	–	O	–	–	–	–	–	–
– number of staff at the workplace	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
Odd jobs, work performed as family member	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
Daily travel for work																
– kind, means	–	–	–	–	–	–	–	–	–	–	–	+	–	–	G	O
– length	–	–	–	–	–	–	–	–	–	–	–	+	–	–	G	O
Social sector	–	–	–	–	–	–	–	–	O	G	O	·	O	–	–	–
Working hours	–	–	–	O	–	–	–	–	–	–	–	+	–	–	G	O
Income	–	–	–	O	–	–	–	–	–	–	–	–	–	–	–	–
Pensioners, rentiers																
– preceding the pension																
= occupation, post	–	–	–	+	+	+	+	+	+	+	O	·	O	–	G	O
= employment status	–	–	–	+	O	+	O	G	O	O	O	·	O	–	G	O
= staff group	–	–	–	–	–	–	–	–	–	–	–	–	O	–	G	–
= employer	–	–	–	–	–	–	–	–	–	–	O	·	O	–	G	–

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
– in case of pensioners																
= present occupation (if any)	–	–	–	–	–	–	–	–	–	–	–	G	O	–	G	O
= employer	–	–	–	–	–	–	–	–	–	–	–	G	O	–	G	O
– length of work of pensioners (if any)	–	–	–	–	–	–	–	–	–	–	–	–	O	–	G	–
Property in a residential building (whole or part)	O[30]	–	–	O	O	O	O	G	O	–	–	–	–	–	–	–
Property of land – agricultural production																
– type of agricultural activity	O[5]	O[5]	–	O	O	O	O	G	O	O	–	–	–	–	–	–
– size of the agricultural activity, farm	–	–	–	O	O	O	O	G	O	O	–	–	–	–	–	–
– branch of cultivation	–	–	–	O	O	O	O	G	O	+	–	–	–	–	–	–
– detailed data on agricultural activity	–	–	–	O	O	O	O	G	O[31]	–	–	–	–	–	–	–
– kind of acquisition of the property	–	–	–	–	–	–	–	+	O	–	–	–	–	–	–	–
Animals																
– number of draught animals	O	–	–	–	–	–	–	–	O	–	–	–	–	–	–	–
– number of farm (domestic) animals	O	O	–	–	–	–	–	–	O	–	–	–	–	–	–	–
Agricultural activity in the year preceding the census																
– length	–	–	–	–	–	–	–	–	O	–	O	·	O[32]	–	–	–
– type, kind	–	–	–	–	–	–	–	–	–	–	O	·	–	–	–	–
Agricultural activity	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
Usual (ordinary) employment	–	–	–	–	–	+	+	–	+	–	O	·	O	O	·	O
Second job	–	+	+	O	O	O	O	G	O	–	–	G	–	–	G[33]	–
First employment																
– occupation in first employment	–	–	–	–	–	–	–	–	–	–	–	G	–	–	G	–
– year of the first employment	–	–	–	–	–	–	–	–	–	–	–	G	–	–	G	–
– occupation at the previous census	–	–	–	–	–	–	–	–	–	–	–	G	–	–	G	–
– occupation before/after the war	–	–	–	–	–	+	–	–	–	–	–	–	–	–	–	–

[30] In case this is the main source of income.

[31] Including agricultural machinery.

[32] Refers to other dependents.

[33] Frequency and kind of second job too.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
Father's																
– occupation	–	–	–	–	–	–	G	+	O	–	–	–	–	–	–	–
– employment status	–	–	–	–	–	–	G	+	O	–	–	–	–	–	–	–
Length of employment or unemployment	–	–	–	O	G	+	+	+	O	–	–	–	–	–	–	–
Public relief/assistance	–	–	O	O	O	+	O	G	O	O	O	·	O	–	–	–
QUESTIONS OF GEOGRAPHICAL ASPECTS																
Place of the enumeration	O	O	O	O	O	O	O	O	O	O	O	·	O	O	·	O
Length of time living on site (of enumeration)	O[34]	–	–	–	+	+	–	–	+	+[35]	–	–	–	–	G	–
Place of birth	+	O	O	O	O	O	O	+	O	–	–	+	–	–	G	O
Registered (permanent) address																
– place (locality, country)	–	O[36]	O[11]	+	+	+	+	+	+	+	O	·	O	O	·	O
– address as from date	–	–	–	–	+	+	+	+	–	–	–	–	–	+	G	–
Registered (permanent) address at the previous census	–	–	–	–	–	–	–	–	–	O	–	+	–	–	G	–
Previous registered (permanent) address																
– place (locality, country)[37]	–	–	–	–	–	+	+	+	+	–	–	+	–	–	G	O
– year of resettlement	–	–	–	–	–	+	+[38]	–	–	–	–	+	–	–	G	O
– cause of resettlement	–	–	–	–	–	+	+[13]	–	–	–	–	–	–	–	–	–
Registered (temporary) residence																
– place (locality)	–	–	–	–	–	–	–	–	–	–	O	·	O	O	·	O
– reason of having it	–	–	–	–	–	–	–	–	–	–	+	·	–	–	G	–
– length	–	–	–	–	–	–	–	–	–	–	–	+	–	–	G	–
– frequency of going to the permanent address	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–

[34] Indicating if less or more than one month.

[35] For persons residing temporarily.

[36] Published: same county, other county, the capital, abroad.

[37] 1920 before August 1, 1914; 1930 before June 30, 1914 and on October 31, 1918; 1941 and 1949 before March 1, 1938; 1970 the previous permanent address.

[38] In case the person moved after 1918 from a place which according to the Trianon Peace Treaty is outside the Hungarian borders.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
Address(es)/residence(s) not registered																
– place	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– as from date	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
Registered (permanent) address one year prior to census	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
Temporary (long-lasting) place of residence (in case of persons not being present)																
– place (locality, country)[39]	O	O	O	O	O	O	+[40]	+	+	+	+	·	–	–	–	–
– type of household (private or institutional)	+	–	–	–	–	–	–	–	–	+	–	–	–	–	–	–
– reason of having it	–	–	–	+	–	–	–	–	–	+	+	·	–	–	–	–
– length	O[9]	–	–	–	–	–	–	–	–	+	–	+	–	–	–	–
– frequency of going to the permanent address	–	–	–	–	–	–	–	–	–	+	–	+	–	–	–	–
QUESTIONS RELATED TO EDUCATION																
Literacy	O	O	O	O	O	O	O	O	O	O	–	–	–	–	–	–
Educational attainment	–	–	–	–	O	O	O	O	O	O	O	·	O	O	·	O
Secondary education																
– type	–	–	–	–	–	–	–	G[41]	O	O	O	·	O	O	·	O
– characteristics	–	–	–	–	–	–	–	–	–	–	O	·	O	O	·	+
– branch, speciality	–	–	–	–	–	–	–	–	–	–	–	G	O	–	G	+
– year of acquisition	–	–	–	–	–	–	–	–	+	–	–	G	O	–	G	+
Highest education																
– name of the institution	–	–	–	–	–	–	–	+	+	+	O	·	O	–	G	–
– faculty, branch, speciality	–	–	–	–	–	+	O	G	O	O	O	·	O	–	G	+
– year of acquisition	–	–	–	–	–	–	–	–	+	+	–	G	O	–	G	+
– linkage to the occupation	–	–	–	–	–	–	–	–	–	+	–	+	X	–	–	–

[39] Published: in 1869 Hungary and abroad (by countries) ; in 1880 same county, other county, abroad; in 1910 and in 1920 only abroad

[40] Interrogated only in Budapest.

[41] Secondary school with general certificate completed.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
Professional education of manual workers																
– denomination (profession)	–	–	–	–	–	–	–	+	+	+	·	G	O	–	G	+
– way of acquisition	–	–	–	–	–	–	–	–	–	–	+	·	O	–	G	+
– year of acquisition	–	–	–	–	–	–	–	–	–	–	+	·	O	–	G	+
– length of studies	–	–	–	–	–	–	–	–	–	–	+	·	–	–	–	–
Professional education of intellectuals	–	–	–	–	–	–	–	+	+	–	–	G	–	–	G	+
Technical school, special course/examination	–	–	–	–	–	+	+	+	+	–	–	–	O[42]	–	G	+
School attendance																
– visiting/not visiting a school	–	–	–	–	–	–	+	G	+	O	O	·	–	X	·	O
– type of school, number of grades	–	–	–	–	–	–	+	G	+	O	–	G	–	–	G	O
– section, side of the training	–	–	–	–	–	–	–	–	–	–	–	G	–	–	G	O
– locality of the educational establishment	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	+
– kind of going to school	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	O
– length of time going the school	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	O
Vocational training																
– number of classes (grades)	–	–	–	–	–	–	–	–	–	+	O[43]	·	–	–	–	–
– specialisation	–	–	–	–	–	–	–	–	+	+	–	+	–	–	–	–
QUESTIONS RELATED TO FERTILITY																
Number of marriages																O
Year(s) of marriage(s)	–	–	–	–	–	+	O	+	O	O	–	O	O	O	·	O
Termination(s) of marriage(s)																
– caused by	–	–	–	–	–	–	–	O[44]	O[19]	O[19]	–	O	–	–	G	O
– year(s) of termination(s)	–	–	–	–	–	–	–	+	–	–	–	O	–	–	G	O
Length of separations while married	–	–	–	–	–	–	–	–	–	–	–	+	–	–	G	–
Length of cohabitations outside marriage	–	–	–	–	–	–	–	–	–	–	–	+	–	–	G	–
Living/not living in consensual partnership	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	O

[42] Only technical school.

[43] Completed vocational studies.

[44] Based on marital status.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
Beginning of the present partnership	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	O
Number of children delivered																
– ever born	–	–	–	–	+	O	O	G[45]	O	O	–	O	–	–	–	–
– born alive	–	–	–	–	–	–	–	–	–	–	+	O	O	O	·	O
– born dead	–	–	–	–	–	–	–	–	–	+	–	O	–	–	–	–
– still living	–	–	–	–	+	O	O	G[20]	O	O	–	O	–	–	X	–
– died	–	–	–	–	–	–	–	–	–	–	–	O	–	–	X	–
– living with the mother	–	–	–	–	–	–	–	–	–	–	–	+	–	–	G	X
– not living with the mother	–	–	–	–	–	–	–	–	–	–	–	+	–	–	G	–
Data on children delivered (one by one)	–	–	–	–	–	–	–	–	–	–	–	O	–	–	G	O[46]
QUESTIONS RELATED TO DWELLINGS[47]																
Type (destination) of housing unit	–	+	+	O	O	O	O	G	O	O	O	·	O	–	O	O
Ownership	–	–	–	–	–	–	–	–	+	–	O	·	O	O	·	O
Title of use	–	–	–	O	O	+	O	+	O	O	O	·	O	O	·	X
Year of construction	–	–	–	–	–	–	–	–	–	–	O	·	O	O	·	X
Position of the dwelling	O	+	O	O	O	O	O	+	+	–	–	G	O	O	·	O
Physical state of the dwelling	–	–	–	–	–	–	–	–	O	–	–	–	–	–	–	–
Number of premises																
– room	O	+	O	O	O	O	O	G	O	O	O	·	O	O	·	O
– half room	–	–	–	–	–	–	–	–	–	–	O	·	O	O	·	O[48]
– small room	–	–	–	–	–	–	–	–	–	–	–	–	O	O	·	–
– sleeping partition	–	+	O	O	O	O	O	G	O	O	–	–	–	–	–	–
– hall, lobby	–	–	–	–	–	–	–	G	O	O	–	–	–	–	G	–
– servant's room	–	–	–	O	O	O	O	G	O	O	–	–	–	–	–	–
– servant's partition	–	–	–	–	–	–	–	G	O	O	–	–	–	–	–	–

[45] Outskirts only.

[46] Only live-born children. If three or more children the first and the last child.

[47] In 2001 the questions on dwellings had been applied in the census of the holiday houses too.

[48] Half rooms and small rooms together.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
– kitchen	O	+	O	O	O	O	O	G	O	O	O	·	O	O	·	O
– kitchenette	–	–	–	–	–	–	–	–	–	O	O	·	O	O	·	O
– butlery	O	+	O	O	O	O	O	G	O	O	O	·	–	–	G	–
– bathroom	–	–	–	O	O	O	O	G	O	O	O	·	O	O	·	O[49]
– wash-basin alcove	–	–	–	–	–	–	–	–	–	O	O	·				
– entrance-hall	O	+	O	O	O	O	O	G	O	O	O	·	–	–	G	–
– summer kitchen	–	–	–	–	–	–	–	–	–	+	+	·	–	O	·	–
– other premise(s)[50]	O	–	–	O	O	O	O	G	O	O	O	·	O	–	G	–
– glassed verandah	–	–	–	–	–	–	–	G	O	+	–	–	–	–	–	–
– studio, atelier	–	–	–	–	–	–	–	G	O	–	–	–	–	–	–	–
– balcony, loggia, terrace	–	–	–	–	–	–	–	–	–	–	–	–	–	–	G	–
Common use of premises	–	–	–	–	–	–	–	+	–	+	–	–	–	–	–	–
Additional data on premises	O	+	O	O	+	+	+	G	O	+	–	–	–	–	–	–
Garage	–	–	–	–	–	–	+	–	+	–	–	–	–	–	G	–
Workshop	–	–	–	–	–	–	–	–	–	–	–	–	–	–	G	–
Loft, cellar, partitions (together)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	G	–
Floor-space by rooms, premises	–	–	–	–	–	–	–	–	–	–	–	G	O	–	G[51]	
Total floor-space of rooms	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
Total floor-space of dwelling	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
Floors of the rooms and that of the kitchen	–	–	–	–	–	O	O	G	O	O	–	G	–	–	–	–
Number of rooms with adobe clay	–	–	–	–	–	O	O	G	O	O	O	·	O	–	–	–
Walls, basement	–	–	–	–	–	–	–	–	–	–	–	–	O	–	G	–
Equipment																
– electricity	–	–	–	–	–	+	O	G	O	O	O	·	O	–	–	–
– supply of drinking water	–	–	–	–	–	+	O	G	O	O	O	·	O	O[52]	·	O[27]

[49] Separate question relating to bathrooms with and without bath-tube/shower.

[50] The premises listed here and not marked at the given year – with the exception of the sleeping partition joining the next room – are regarded as other premises. As from census 1960 the category „servant's room/partition" is not applied.

[51] Floor-space by rooms and the total surface of the dwelling.

[52] Type of water supply.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
– place (position) of the water tap	–	–	–	–	–	–	O	G	O	O	O	·	O	–	–	–
– type of external water supply	–	–	–	–	–	–	O	G	O	O	O	·	O	–	–	–
– distance of external water supply	–	–	–	–	–	–	O	G	O	O	O	·	–	–	–	–
– gas	–	–	–	–	–	+	O	G	O	O	O	·	O	O	·	O
– toilet																
= type, kind	–	–	–	–	–	O	O	G	O	O	O	·	O	O[53]	·	O[28]
= place, positioning	–	–	–	–	–	+	+	G	+	O	O	·	O	O	·	O
= exclusive/common use	–	–	–	–	–	–	+	–	–	+	+	·	–	–	–	–
– sewage facility	–	–	–	–	–	–	–	–	–	–	O	·	O	O	·	O
– waste treatment	–	–	–	–	–	–	–	–	–	–	–	G	O	–	–	–
Construction, extension, refurbishing of dwelling	–	–	–	–	–	–	–	–	–	–	–	G	–	–	G	–
Supply of public utilities	–	–	–	–	–	–	–	–	–	–	–	+	–	–	G[54]	–
Repair, renovation	–	–	–	–	–	–	–	–	–	–	–	–	–	–	G	–
King of acquisition of the dwelling	–	–	–	–	–	–	–	–	–	–	–	–	–	–	G	–
Heating of the rooms	–	–	–	–	–	–	+	–	–	–	–	G	O[55]	O[30]	·	O[30]
Heating material	–	–	–	–	–	–	–	–	–	–	–	–	O	–	G	O
Hot water supply	–	–	–	–	–	–	+	–	–	–	–	G	–	O	·	O
Facility used for cooking	–	–	–	–	–	–	–	–	–	–	–	G	–	–	–	–
Housing conditions																
– satisfaction of the families with the dwelling	–	–	–	–	–	–	–	–	–	–	–	–	–	–	G	–
– quality of dwelling according to inhabitants	–	–	–	–	–	–	–	–	–	–	–	–	–	–	G	–
Vacant dwelling	–	–	–	–	–	–	–	–	–	–	–	–	–	–	G	O
– since when	–	–	–	–	–	–	–	–	–	–	–	–	–	–	G	–
– reason of vacancy	–	–	–	–	–	–	–	–	–	–	–	–	–	–	G	–
Rental fee	–	–	–	–	–	+	+	G	+	–	–	–	–	–	–	–
Rental fee paid by subtenants night lodgers	–	–	–	–	–	+	+	–	+	–	–	–	–	–	–	–
Consumer durables	–	–	–	–	–	–	–	G	–	–	–	G	–	–	–	–

[53] Is there a toilet?

[54] Including modernisation of the heating system, production of hot water.

[55] Heating of the dwelling.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
Telephone	–	–	–	–	–	–	–	G	–	–	–	G	–	–	G	–
Built-in kitchen furniture	–	–	–	–	–	–	–	–	–	–	–	G	–	–	–	–
Built-in cupboard	–	–	–	–	–	–	–	–	–	–	–	G	–	–	–	–
Holiday house, weekend house[56]																
– type	–	–	–	–	–	–	–	–	G	–	–	G	O[57]	–	–	–
– place, locality	–	–	–	–	–	–	–	–	–	–	–	G	O[32]	–	–	–
Number of persons living in the dwelling	–	+	–	+	O	O	O	G	O	O	O	·	O	X	·	X
Person using the dwelling at the earliest date	–	–	–	–	–	–	–	–	–	–	–	+	–	–	–	–
Listing of the persons living in the dwelling, their title of use of dwelling	–	–	–	–	–	–	–	–	+	O	+	·	O	O	·	O
Died, missed in the (1914-18) war, military prisoners	–	–	–	–	–	+	–	G	–	–	–	–	–	–	–	–
Co-tenancy, sub-tenancy, night-lodging																
– number	–	–	–	–	–	–	–	–	–	–	O	·	O	X	·	X
– number of persons	–	–	–	–	–	–	–	–	–	–	O	·	O	X	·	X
QUESTIONS ON BUILDINGS																
Data of the owner, proprietor	+	–	–	+	+	+	O	G	+	+	–	–	–	–	–	–
Size of the ground of the building	–	–	–	–	–	–	–	+	+	–	–	–	–	–	–	–
Surrounding (zone)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
Destination (type)	O	–	O	O	O	O	O	G	O	O	O	·	O	O	·	O
Type of ownership	O	–	O	O	O	O	O	G	–	O	X	·	X	X	·	X
Height of building	O	–	–	O	O	O	O	G	O	O	O	·	X	X	·	X
Basement	–	–	O	O	O	O	O	G	O	O	O	·G	X	–	X	O[58]
Walls	–	–	O	O	O	O	O	G	O	O	O	·	X	–	X	O
Trussing	–	–	–	–	–	–	–	G	+	O	–	–	–	–	–	–
Roof covering	–	–	O	O	O	O	O	G	O	O	–	G	–	–	–	–

[56] In 2001 the same questionnaire was applied int he census of the holiday houses.

[57] On a separate questionnaire.

[58] Only in case of buildings with walls of adobe clay or wood.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
Having/not having a cellar under the building	–	–	–	–	–	O	O	G	O	O	–	–	–	–	–	–
Physical condition of the building (dwelling)	–	–	–	–	–	–	–	–	O	–	–	–	–	–	–	–
Year of construction	–	–	–	–	–	–	+	–	–	O	X	·	X	X	·	O
Restoring																
– kind of restoring	–	–	–	–	–	–	–	–	–	–	–		–	–	–	–
– year of restoring	–	–	–	–	–	–	–	–	–	–	–	G	–	–	–	–
Facilities																
– drinking water	–	–	–	–	–	–	O	G	O	O	X	·	X	X	·	G[59]
– electricity	–	–	–	–	–	–	O	G	O	O	X	·	X	–	–	–
– gas	–	–	–	–	–	–	O	G	O	O	X	·	X	X	·	G
– central (long-distance) heating	–	–	–	–	–	–	–	–	–	O	–	G	X	X	·	G
– number of toilets	–	–	–	–	–	O	O	G	+	–	–	–	–	–	–	–
– sewage facility	–	–	–	–	–	–	–	G	+	O	X	·	X	X	·	G
Number of housing units (dwellings) in the building	–	O	–	+	+	+	+	G	O	O	O	·	X	X	·	X
Number of rooms, premises of the building	O	–	–	+	+	+	O	G	+	G	–	–	–	–	–	–
Number of inhabitants in the building	O	O	–	O	+	+	O	G	O	O	X	·	X	X	·	X
Air-raid shelter	–	–	–	–	–	–	–	G	–	–	–	–	–	–	–	–
Reconstruction of the building																
– finished	–	–	–	–	–	–	–	–	O	–	–	–	–	–	–	–
– not started	–	–	–	–	–	–	–	–	O	–	–	–	–	–	–	–
– in course	–	–	–	–	–	–	–	–	O	–	–	–	–	–	–	–
QUESTIONS RELATING TO INSTITUTIONS																
Institution (institutional household)																
– place (locality)	–	–	–	–	–	–	–	–	–	–	O	·	O	O	·	O
– function, destination of the institute	–	–	+	O	O	O	O	G	O	G	O	·	O	O	·	O
– surrounding (zone)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– maintainer																
= name	–	–	+	+	+	+	+	+	+	+	O	·	O	O	·	O
= main activity	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O

[59] Type of water supply.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
= form of financing	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– number of staff	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– independent or part of an establishment	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– type of catering	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– characteristics of the operation																
= full year or seasonal	–	–	–	–	–	–	–	–	–	–	G	·	O	O	·	O
= central or subsidiary	–	–	–	–	–	–	–	–	–	–	G	·	O	O	·	O
– number of beds																
= by license	–	–	–	–	–	–	–	–	–	–	O	·	O	O	·	O
= additional beds	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
= beds in use	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
= number of inmates	–	–	O	O	O	O	O	G	O	O	O	·	O	O	·	O
– total number of premises in the institution	–	–	+	+	+	+	+	+	+	+	+	·	O	O	·	–
= dormitories, sick-wards	–	–	+	+	+	+	+	+	+	+	O	·	O	O	·	–
= wash and sanitary rooms	–	–	+	+	+	+	+	+	+	+	+	·	O	O	·	O[60]
= cooking rooms	–	–	+	+	+	+	+	+	+	+	+	·	O	O	·	–
= other premises for common use	–	–	+	+	+	+	+	+	+	+	+	·	O	O[61]	·	–
– equipment	–	–	+	+	+	+	+	+	+	+	O	·	O	O	·	–
– heating																
= type	–	–	–	–	–	–	–	–	–	–	+	·	O	O	·	–
= heating material	–	–	–	–	–	–	–	–	–	–	+	·	O	O	·	–
Institutional building																
– characteristics[62]	–	–	O	O	O	O	O	G	O	O	G	·	O	O	·	
– type	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– period of operation (running)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– year of construction	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O

[60] Without rooms for washing.

[61] No other equipment as flush toilet.

[62] Disregarding the number of buildings it refers to the institution as a whole.

Item	1869	1880	1890	1900	1910	1920	1930	1941	1949	1960	Census 1970		Census 1980	Census 1990		Census 2001
	census										total	sample		total	sample	
– enlargement and year (period) of extension	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– outer walls	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– the whole building or only a part of it in use	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– number of levels	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– number of levels used	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– type of heating	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– number and positioning of the flush toilet(s)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– sewage facility	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– number and use of telephone terminals	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– number of elevators	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
– premises																
= number of rooms by number of beds and equipment	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O
= number of commonly used wash rooms, their position in the building	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	O

Legend:

– not asked
+ asked, not processed
G asked and processed
O asked, processed and published
X processed and published on the base of other questions
F asked on a different questionnaire than that of the census, though published with census data
· part of the full-scale program

Publications of the Hungarian census 2001 in printed form, on CD-ROM and Internet

(Closed: December 31, 2005)

Title	Size (pages)	Form of publication	Issued on (month, year)	Number of copies
Regions, counties, subregions (Preliminary figures)	54	printed	June 2001.	
Regions, counties, subregions (Preliminary figures in English)	54	printed	July 2001.	
1. Preliminary data	483	printed, Internet	Sep. 2001.	622
1. Preliminary data	–	CD-ROM	Oct. 2001.	75
2. Detailed data based on a representative sample	578	printed, Internet	March 2002.	842
2. Detailed data based on a representative sample of enumerated addresses	–	CD-ROM	Apr. 2002.	377
3. Data of the individual parliamentary constituencies				
3.1 Budapest	123	printed, Internet	Feb. Feb. 2002	437
3.2 Bács-Kiskun county	57	printed, Internet	Feb. Feb. 2002	390
3.3 Baranya county	47	printed, Internet	Feb. Feb. 2002	394
3.4 Békés county	47	printed, Internet	Feb. Feb. 2002	400
3.5 Borsod-Abaúj-Zemplén county	65	printed, Internet	Feb. Feb. 2002	400
3.6 Csongrád county	47	printed, Internet	Feb. Feb. 2002	400
3.7 Fejér county	47	printed, Internet	Feb. Feb. 2002	403
3.8 Győr-Moson-Sopron county	47	printed, Internet	Feb. 2002.	406
3.9 Hajdú-Bihar county	53	printed, Internet	Feb. 2002.	400
3.10 Heves county	45	printed, Internet	Feb. 2002.	390
3.11 Jász-Nagykun-Szolnok county	51	printed, Internet	Feb. 2002.	390
3.12 Komárom-Esztergom county	41	printed, Internet	Feb. 2002.	400
3.13 Nógrád county	39	printed, Internet	Feb. 2002.	405
3.14 Pest county	75	printed, Internet	Feb. 2002.	380
3.15 Somogy county	45	printed, Internet	Feb. 2002.	405
3.16 Szabolcs-Szatmár-Bereg county	57	printed, Internet	Feb. 2002.	404
3.17 Tolna county	41	printed, Internet	Feb. 2002.	400
3.18 Vas county	41	printed, Internet	Feb. 2002.	403
3.19 Veszprém county	47	printed, Internet	Feb. 2002.	407
3.20 Zala megye	41	printed, Internet	Feb. 2002.	400
4. Ethnic affiliation. Data on national and ethnic minorities	396	printed, Internet	July 2002.	918
4. Ethnic. Data on national, ethnic minorities (in English)	144	printed, Internet	July 2002.	300
4. Nationality affiliation. Data on national, ethnic minorities	–	CD-ROM	Oct. 2002.	350

Title	Size (pages)	Form of publication	Issued on (month, year)	Number of copies
5. Religion, denomination	133	printed, Internet	Aug. 2002.	939
5. Religion, denomination (in English)	63	printed, Internet	Sep. 2002.	300
6. Regional data				
6.1 Budapest, Vol. 1-2	264 + 651	printed, Internet	Feb.-March Feb. 2003	515
6.2 Bács-Kiskun county, Vol. 1-2	262 + 281	printed, Internet	Feb. 2003.	515
6.3 Baranya county, Vol. 1-2	262 + 515	printed, Internet	Feb. 2003.	515
6.4 Békés county, Vol. 1-2	262 + 221	printed, Internet	Feb. 2003.	515
6.5 Borsod-Abaúj-Zemplén county, Vol. 1-2	262 + 581	printed, Internet	Feb. 2003.	515
6.6 Csongrád county, Vol. 1-2	262 + 239	printed, Internet	Feb. 2003.	515
6.7 Fejér county, Vol. 1-2	265 + 307	printed, Internet	Feb. 2003.	515
6.8 Győr-Moson-Sopron county, Vol. 1-2	265 + 375	printed, Internet	Feb. 2003.	515
6.9 Hajdú-Bihar county, Vol. 1-2	265 + 221	printed, Internet	Feb. 2003.	510
6.10 Heves county, Vol. 1-2	263 + 285	printed, Internet	Feb. 2003.	515
6.11 Jász-Nagykun-Szolnok county, Vol. 1-2	265 + 223	printed, Internet	Feb. 2003.	515
6.12 Komárom-Esztergom county, Vol. 1-2	265 + 225	printed, Internet	Feb. 2003.	515
6.13 Nógrád county, Vol. 1-2	265 + 283	printed, Internet	Feb. 2003.	515
6.14 Pest county, Vol. 1-2	265 + 377	printed, Internet	Feb. 2003.	515
6.15 Somogy county, Vol. 1-2	265 + 463	printed, Internet	Feb. 2003.	515
6.16 Szabolcs-Szatmár-Bereg county, Vol. 1-2	265 + 403	printed, Internet	Feb. 2003.	515
6.17 Tolna county, Vol. 1-2	265 + 273	printed, Internet	Feb. 2003.	515
6.18 Vas county, Vol. 1-2	265 + 401	printed, Internet	Feb. 2003.	515
6.19 Veszprém county, Vol. 1-2	265 + 403	printed, Internet	Feb. 2003.	515
6.20 Zala county, Vol. 1-2	265 + 481	printed, Internet	Feb. 2003.	515
6.21 Summary data, Vol. 1-2	262 + 279	printed, Internet	Feb. –March 2003.	703
6.1 Budapest - Presentation of the data[a)]	47	printed, Internet	June–July 2003	372
6.2 Bács-Kiskun county - Presentation of the data[a)]	56	printed, Internet	June–July 2003	358
6.3 Baranya county - Presentation of the data[a)]	56	printed, Internet	June–July 2003	370
6.4 Békés county - Presentation of the data[a)]	60	printed, Internet	June–July 2003	364
6.5 Borsod-Abaúj-Zemplén county - Presentation of the data[a)]	54	printed, Internet	June–July 2003	370
6.6 Csongrád county - Presentation of the data[a)]	53	printed, Internet	June–July 2003	370
6.7 Fejér county - Presentation of the data[)]	36	printed, Internet	June–July 2003	365
6.8 Győr-Moson-Sopron county - Presentation of the data[a)]	54	printed, Internet	June–July 2003	365
6.9 Hajdú-Bihar county - Presentation of the data[a)]	53	printed, Internet	June–July 2003	369
6.10 Heves county - Presentation of the data[a)]	41	printed, Internet	June–July 2003	370

[a)] With CD-ROM

Title	Size (pages)	Form of publication	Issued on (month, year)	Number of copies
6.11 Jász-Nagykun-Szolnok county - Presentation of the data[a)]	54	printed, Internet	June–July 2003	350
6.12 Komárom-Esztergom county - Presentation of the data[a)]	44	printed, Internet	June–July 2003	369
6.13 Nógrád county - Presentation of the data[a)]	40	printed, Internet	June–July 2003	370
6.14 Pest county - Presentation of the data[a)]	44	printed, Internet	June–July 2003	363
6.15 Somogy county - Presentation of the data[a)]	39	printed, Internet	June–July 2003	398
6.16 Szabolcs-Szatmár-Bereg county - Presentation of the data[a)]	51	printed, Internet	June–July 2003	366
6.17 Tolna county - Presentation of the data[a)]	42	printed, Internet	June–July 2003	370
6.18 Vas county - Presentation of the data[a)]	35	printed, Internet	June–July 2003	370
6.19 Veszprém county - Presentation of the data[a)]	38	printed, Internet	June–July 2003	367
6.20 Zala county - Presentation of the data[a)]	44	printed, Internet	June–July 2003	367
6.21 Summary data –Presentation of the data[a)]	70	printed, Internet	June–July 2003	478
6. Regional data	–	CD-ROM	Aug. 2003.	450
National and county data. Retrospective, summary and detailed data on population and housing (in English)	–	CD-ROM	Dec. 2003.	300
7. Employment and daily commuting	459	printed, Internet	Aug. 2003.	350
8. Institutions and institutional households	103	printed, Internet	Nov. 2003.	370
9. Unemployed and persons not unemployed seeking for a job	235	printed, Internet	Aug. 2003.	370
10. Data on households and families	264	printed, Internet	Sep. 2003.	360
11. Dwellings and their inhabitants	358	printed, Internet	Dec. 2003.	352
12. Disabled persons	400	printed, Internet	Oct. 2003.	355
13. Not occupied (vacant) dwellings	183	printed, Internet	Jan. 2004.	350
14. Daily travel of the persons in employment	211	printed, Internet	March 2004.	350
15. Holiday houses	147	printed, Internet	Feb. 2004.	350
16. Social stratification	367	printed, Internet	March 2004.	350
17. Housing conditions of households	226	printed, Internet	June 2004.	350
18. Demographic data	525	printed, Internet	July 2004.	350
19. Family types, forms of families	359	printed, Internet	Aug. 2004.	350
20. Living conditions of the elderly population	242	printed, Internet	Aug. 2004.	350
21. Data on statistical sub-regions	335	printed, Internet	Nov. 2004.	350
22. Fertility	361	printed, Internet	Nov. 2004.	350
23. Characteristics of dwellings on housing estates	189	printed, Internet	Jan. 2005.	350
24. Ethnic minorities native in Hungary	607	printed, Internet	Feb. 2005.	350
25. Social stratification of the households	300	printed, Internet	May 2005.	350
26. Population by religions, denominations	643	printed, Internet	Feb. 2005.	350

[a)] With CD-ROM

Title	Size (pages)	Form of publication	Issued on (month, year)	Number of copies
27. Religions, denominations of the families	177	printed, Internet	May 2005.	350
28. Agricultural activity – its role in the employment of the population	267	printed, Internet	Feb. 2005.	350
29. Daily travel of the labour force in the districts and in the agglomeration of Budapest, 1980–2001	–	internet	Sep. 2005.	–
30. Data on educational attainment, 1990, 2001	–	internet	Nov. 2005.	–
Children in families	297	printed, Internet	Nov. 2004.	350
EUROSTAT tables	–	internet	March 2004.	300