Innovations of the 2016 Microcensus in Hungary
Virag Erdei

Meeting of the Group of Experts on Population and Housing Censuses, 28-30 September 2016
Microcensus is a “small census” that is carried out between two censuses – generally half-time – on a sample in order to update census information.

Main features:
• Applies the same methodology as the census,
• Compulsory and ordered by law,
• Based on a sample,
• Census topics,
• Connecting surveys,
• Census organization phases (preparatory works, data processing, execution and dissemination),
• Test function.
The essential features of a population and housing census compared to those of a microcensus.

<table>
<thead>
<tr>
<th></th>
<th>Census</th>
<th>Microcensus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual enumeration</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Availability of small-area data</td>
<td>yes</td>
<td>partly</td>
</tr>
<tr>
<td>Universality within a defined territory</td>
<td>yes</td>
<td>no</td>
</tr>
<tr>
<td>Simultaneity</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Defined periodicity</td>
<td>yes</td>
<td>yes</td>
</tr>
</tbody>
</table>
The history of microcensuses in Hungary

1. Microcensuses have a **long tradition** in Hungarian statistics.
2. Strong connection with the **history of censuses**. From the beginning of the series of modern censuses, statistical science, mathematical methods and IT technology have gone through a significant development.
3. The need for a **detailed and actual data**
   - more detailed data: short and long questionnaires
   - actual data: surveys and microcensuses in the meantime
4. HCSO executed **6 microcensuses periodically** from the 1960s. 2016 microcensus will be the **7th one** in this series.
5. There are always **supplementary questionnaires** about relevant social issues.
6. **Test function.**
1. The **methodology and the technical executions have been designed**;
2. The **content of the questionnaire have been defined, the supplementary surveys have been chosen**;
3. **Convince decision makers about the necessity of this big data collection and get the budget for its execution**;
4. **Legal preparation, accepting the Act on Microcensus 2016**;
5. **Common execution with the Farm Structure Survey, one big project**;
6. **Strong cooperation is needed between the departments in the HCSO**;
7. **Usual census preparatory works**: testing questionnaires, preparation for data producing, coding, IT service, monitoring system, recruiting and training enumerators etc.
Sample design

Microcensuses used to apply a 2 per cent sample. The 2016 one however will use an extraordinary and uniquely large 10 per cent sample.

- The sample was chosen to be representative to a smaller level than before. It will be representative to district level (close to LAU1) the number of which is 197.
- The sampling frame is based on the updated 2011 Census Address Register of HCSO.
- The sample covers 440 thousand dwellings and 500 institutions in 2148 settlements (out of the total 3176 settlements in Hungary).
- The sample is a stratified two-stage probability sample of dwellings in each district.
- Allocation is far from being proportional. This variability (distribution of target variables) resulted in an unproportional allocation.
The sample

Country data
- Rate of the settlements in the sample: 67.6%
- Size of the sample: 10.0%
New data collection method

Data collection period: 1 October – 8 November 2016.
Reference date: 0 o’clock 1 October 2016.

Two-step data collection:
• Internet answering 1 – 9 October
  (respondents can answer only on the internet)
• Answering to enumerators 10 October – 8 November
  (enumerators will visit the households from which no online questionnaires have been received)

Delivering information letter: 26 – 30 September

Technology:
• using only electronic devices without any paper questionnaires
• the enumerators will use laptops and tablets for their work
New data producing method
Supplementary surveys 1.

Five supplementary surveys are connected to the microcensus.

1. Social stratification (20%)
2. Occupational prestige (10%)
3. Well-being (10%)
4. Limitations due to health problems
5. International Migration (4 and 5 together: 60%)
Supplementary surveys 2.

• **Important social surveys**
  • new information about the society
  • more detailed data about certain topics
• Answering to these questionnaires is voluntary,
• **One type** of supplementary survey will be conducted to each private household in the sample,
• **HCSO uses the possibility** of getting in contact with many people to get information on other social issues at the same time,
• These surveys are prepared by **strong cooperation with the leading researchers** of the Hungarian social science.
Results and data dissemination

• **An informative publication** about the microcensus is released a month before the microcensus.
• The **dissemination** of the results is planned to start in May 2017, **six months after the end of the data collection**.
• Dissemination will start with the **basic information** about the population and the housing conditions.
• The main channel of dissemination is **online**.
• Data producing and analyses will be done **by the departments responsible for each survey**.
• **Researchers** participating in the development of these questionnaires **will also participate** in the detailed analyses of the gained information.
Challenges 1.

1. **The new data collection method:** We are curious about the success and the acceptance of the two-step data collection method. We wait a bigger internet answering rate than in 2011.

2. **Expenses:** We expect that the new data collection method, the modernization of data producing, and using technical devices we will have financial benefits.

3. **The improved IT background:** Many IT tasks are outsourced as in 2011. However we have a lot of experiences from the previous census and we hope to benefit from these.

4. **Recruiting and training enumerators:** Data collection with tablets and laptops needs enumerators with different knowledge and skills. We train enumerators so that they can use the application properly and be prepared for the new challenges, but the training itself is a new task for us as well.

5. **Easier answering:** Using an IT application has many effects on the questionnaires. The electronic data collection has many advantages compared to paper questionnaires. We are curious about its effect on the data suppliers also.

6. **Online questionnaire accessible to disabled persons:** This will be the first attempt to make online questionnaires accessible to disabled persons.
7. **Data quality:** We expect that the electronic data collection method and the many in-built rules will have good effect on data quality. We hope that we will manage to find a good balance between the necessary in-built rules and the smooth work of the internet application.

8. **Data protection:** Electronic data collection is very safe solution but this has to be well and clearly communicated to the public to ensure trust in the statistical office.

9. **Communication:** Even though microcensus is a compulsory survey, it is very important to inform people about it. As people are randomly chosen in the sample, we have to communicate the sampling method well and clearly. A special emphasize will be put on the internet answering in order to urge people to fill the questionnaire by themselves through the internet.

10. **Data processing:** A totally new method has been developed for the microcensus data processing. Hopefully the process will work and we can keep the planned timetable.

11. **Training for the Census Department:** Microcensus is a very good practice for the colleagues of the department, especially for those who did not participate in the 2011 census. This task is a good and big test for the census team as well.
The whole 2016 microcensus exercise is a big task and challenge for the Hungarian statistical office. We expect a good and successful execution, good quality and valuable data, much new and up to date information, effective cooperation, and much experience for our next census.

Thank you for your attention!