

**Usage of administrative data sources, combining
data from different sources for the next
Census of Population, Households and Dwellings,
2021**



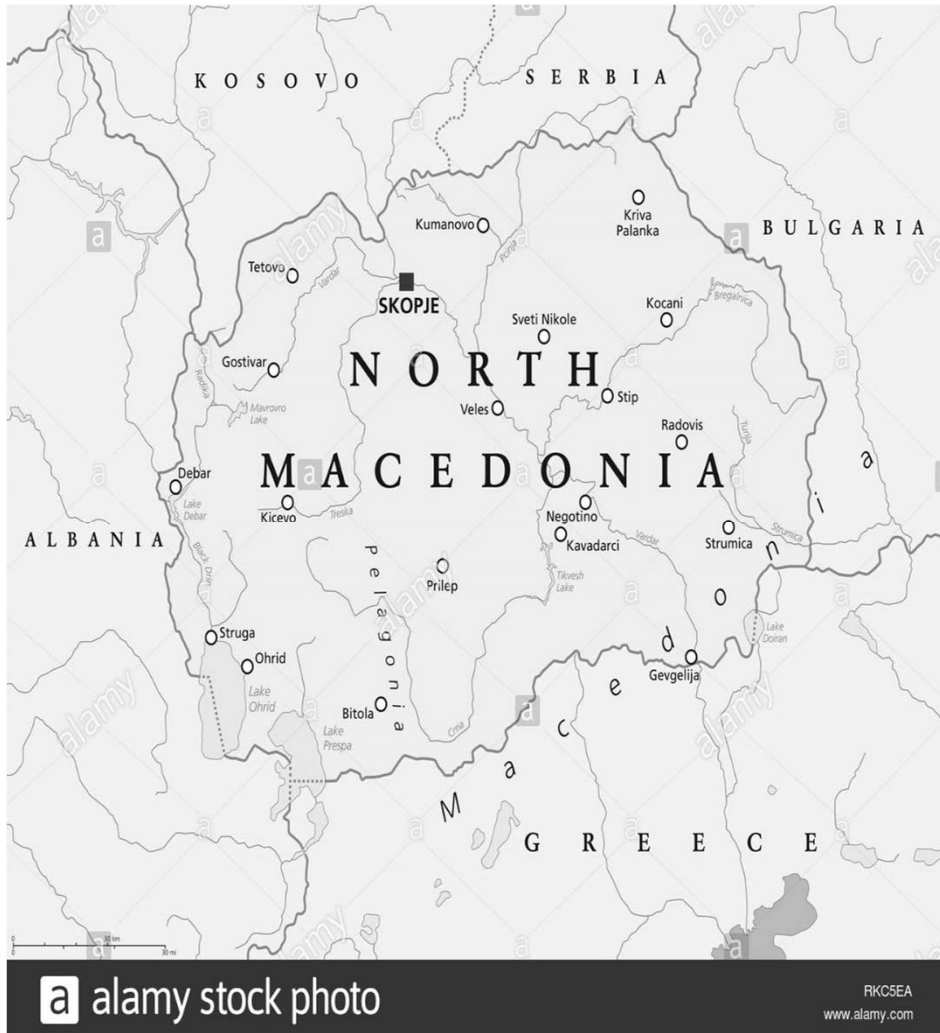
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Introduction

- **Background;**
- **Use new combine census method – challenges, basic preconditions ;**
- **Quality assesment of administrative sources;**
- **Where we are now;**



Census Background



- Traditional census method
- 10 years periodicity (there were exceptions: 1994, 2011)
- Face-to-face interview / Paper questionnaires
- Responsible institution - State Statistical Office (SSO)
- Every Census is regulated by separate Law.

The next Census of Population, Households and Dwellings, 2021 is...

- national priority project
- activity of high state interest
- crucial role in updating the needed statistical data and presenting the changes which have taken place - since the last Census, 2002.
- first paperless Census;

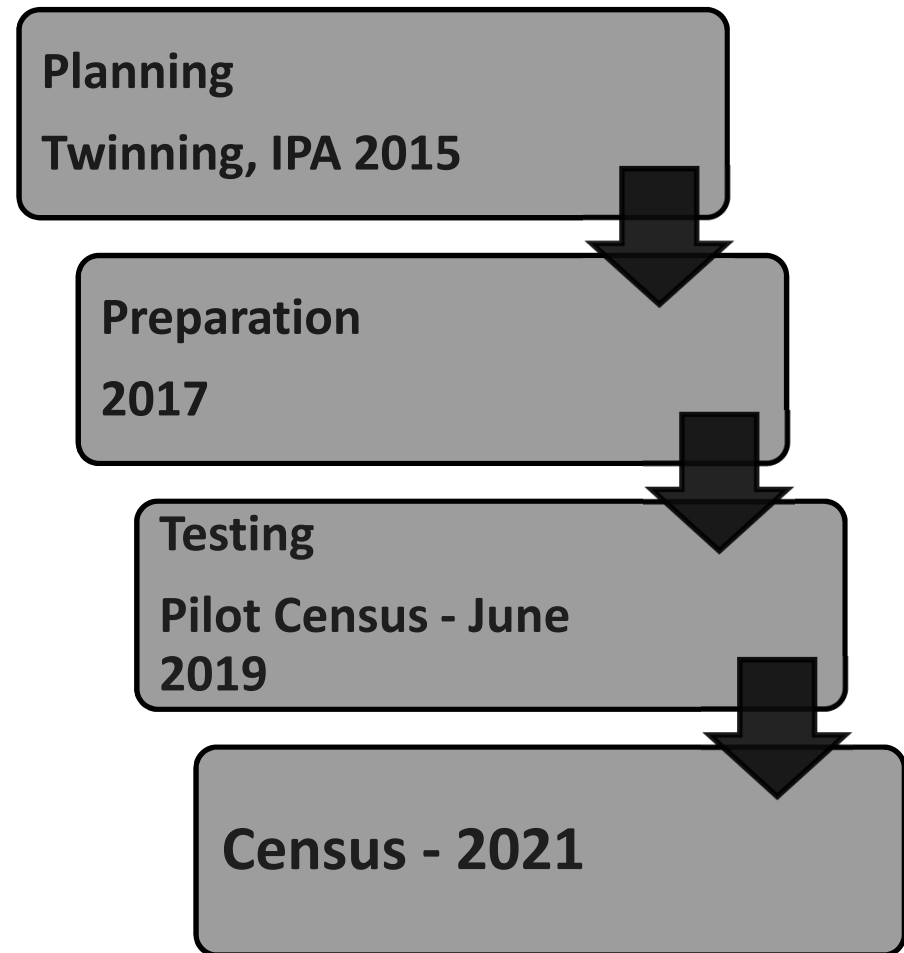


Starting point

- The next round of population and housing censuses is scheduled for **the start of the new decade (2021)** both in the EU and in the partner countries.
- For each partner country, it is important that it successfully undertakes a census that closely follows international guidelines, CES Recommendations, EU and domestic legislation.
- The State Statistical Office is fully in line with the obligation to conduct the next Census of Population, Households and Dwellings in 2021 - **based on the so-called combined census method.**

Starting point

- Due to its importance and extensiveness, the Census requires extremely careful planning, preparation, testing, analysis and documentation of each phase.



Starting point


- For many years, in the SSO- consideration has been given to **changing the methodological approach** and all activities are directed towards the use of the so-called **combined method of conducting a census.**
- The SSO considered that using of the combined method (combination of using register data and full enumeration) is the real option.
- Also, the use of new technology (CAPI application on laptops), instead of paper questionnaires, will make this operation much more efficient.

Way combined census method?

Advantages of using the combined census method:

- Reducing the time needed for data collection.
- Reducing the cost of the census operation.
- Reducing the time needed for data processing.
- Final census data in a short period of time.
- Much higher quality level of the census data.

Basic preconditions

- During the Twinning Project and IPA 2015 MBP:
Assessment of possibilities to use administrative registers as the data sources
- **Main findings:**
 - Existing administrative registers can be used in different stages of the census process!

 - But not all available
 - Not used for census purposes
 - No access to microdata
- No adequate conditions for conducting register-based census!

Basic preconditions

1. **Legislation - enables the linkage of data from different sources** - The existing legislation has been assessed positively, i.e. the Law on State Statistics (Articles 24 and 25) provides a solid legal basis for the use of administrative data sets by the SSO for statistical and census purposes.
 - The SSO has the right to collect, use and link data from different administrative and other collections for **statistical purposes only.**

Basic preconditions

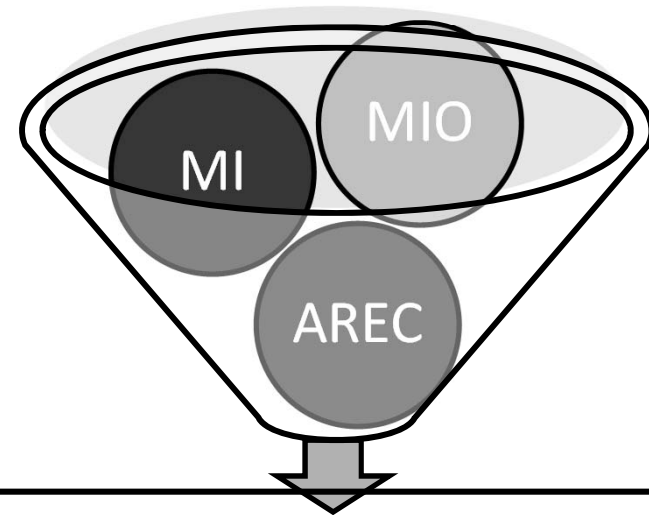
2. The **existence and availability of a unique identification system** - The key for networking, processing and analysing administrative databases is the citizen's personal identification number (PIN), which is unique in all records and databases maintained by the institutions.
3. Appropriate **topics in the sources – cover demands of users and national and EU legislation.**

Activities Undertaken

- The possible administrative sources were identified (6 of 21), and the possibility of using them in terms of availability, content and quality was assessed.
- Methodological investigation was made of the content of individual administrative sources: the structure of databases, description of variables, classifications used, harmonisation of concepts from different sources.
- Six institutions were chosen, whose databases when networked with each other form the **skeleton of a statistical pre-census database on population.**

Activities Undertaken

- **Ministry of Interior**
- **Employment Agency**
- **Ministry of Labour and Social Policy**
- **Ministry of Education and Science**
- **Public Revenue Office**
- **Available databases from the statistical surveys carried out by the State Statistical Office.**



Construction of the pre-census database

Activities Undertaken

- The application of the combined census method imposes certain conditions and solutions that are essential for the preparation process:
 - Design of the Pre-Census Database – SSO
 - Usage of the Pre-Census Database - SSO
 - Developing an IT Census System - (supplied by 3 (three) IT firms contractors) that provided a software solution and IT assistance for all operations within the census.

Activities Undertaken

- Developing the content of the e-census questionnaire for CAPI. From a methodological point of view, the content of the e-census questionnaire is fully aligned with the UN/Eurostat Recommendations and EU Regulations.
- All core topics are included, plus ethno-cultural topics, disability and topics to support the preparations of the agricultural census;

Pre-Census Database (1)

- Source information on methodological analyses of possible administrative data sources
- Technical analyses of applicable administrative data sources
- Integral part of the Census data model
- Census web data collection application retrieves data on persons
- PIN – used for effective and reliable linkage of records from different administrative data sources

Usage of the Pre-Census Database (2)

- Retrieved data for persons
 - Personal data
 - Residence address
 - Country of birth
 - Citizenship
 - Work/Education information
 - Social transfers

Quality assesment / suitability (1)

- **Basic investigation of individual administrative source**
 - Population concerned = characteristics of enumeration units
 - Variables selection = adequacy for census topics
 - Methodology behind = administrative vs statistical approach
 - Classifications used = harmonization and standardization

Quality assesment / suitability (2)

- Reliability of data
 - De facto / registered residence
- Timeliness
 - How long we have to wait for data
 - The census reference period in the e-questionnaires and the reference period of the information taken from the registers are as close to each other as possible (Pilot Census 31.03.2019).
- Accessibility
 - Frequency of data availability

Quality assesment / suitability (3)

- Completeness
 - Coverage of population concerned
 - Double-counting
 - Under-coverage
- Comparability
 - Between same topics in different sources

Where we are now

- Problems when using administrative data for statistical purposes, in general for all areas of statistics, particularly those relevant for Population census, can be overcome, or at least reduced, by effective planning and management, a good knowledge of data sources, creative thinking, and the willingness to exchange experiences and learn from others.
- Despite of all problems, there are a lot of benefits of using administrative data.

Where we are now

- With Pilot Census, June 2021 – Successfully and timely testing of new methodological and organisational approaches, as well as the applicability of new software solutions (developed by outsourcing company) for implementation of the next Census of Population, Households and Dwellings, 2021.
- Now, we are working on analysis of the results that will help to discover and correct all the weaknesses identified in order for us to be fully prepared for the next Census.

The main challenges

The SSO is much more aware about the necessary conditions

- Greater acceptance and full understanding of the Census Law by all participants in the procedure;
- Timely preparations;
- Stable state policy;
- Create a climate of trust.

The main challenges

- *The SSO considers that it has the capacity, experience and knowledge and is prepared to meet the challenge of carrying out the next Census of Population, Households and Dwellings in 2021.*

Thank you for your attention!