



THE SLOVENIAN
NATIONAL
STATISTICS

TRUSTWORTHY
AND
USER-ORIENTED



registrski
popis 2011

Register-based Census 2011 in Slovenia

Erika Žnidaršič

Statistical Office of the Republic of
Slovenia

7th Quality Conference “Towards Responsible Public
Administration“, Vilnius, 3 October 2013

Background

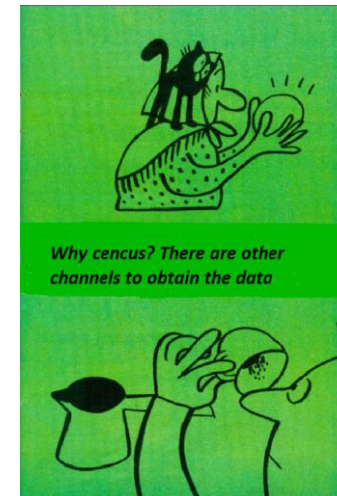
- Population censuses are conducted all over the world
 - Except 7 countries in 2010 round
- Census is a huge operation in terms of costs, human resources, IT support...
 - The main method of data collecting in most countries is still field work
- Census 2011 was for the first time obligatory for EU Member States
 - Regulation 763/2008



Census history in Slovenia

- First census in 1857 (1,10 mio)
- Last traditional census in 2002 (1,96 mio)
- First complete register-based census in 2011 (2,05 mio)

- Which are the main drivers for transition from field work to virtuality?



Censuses 2002 and 2011

	2002	2011
Number of field work staff	10,000	-
Number of SURS employees	100 +	< 10
Budget	10 mio EUR	-
First final results	1 year	4 months
Quality assessment	Sub(o)bjective	Systematic
Outsourcing	Processing	-
Security of personal data	Under risk	No risk

General prerequisites

- Legislation
 - ✓ Free of charge use of administrative data
 - ✓ Right to linkage data
- Unique identifiers
 - ✓ PIN is widely used in public administration
- Availability of appropriate sources
 - ✓ Internal sources, all other from public sector
- Close co-operation with data owners from public administration
 - ✓ Signed agreements with data providers

Development of data sources

- SURS established four basic registers (population, territorial units, business, employment) in the 1980s
 - Only employment one still maintained by SURS
 - Other registers relocated to relevant governmental authorities
- Developments since 2002 outside SURS
 - Real Estate Register established in 2007
 - Informatization of Household Register
 - Update of CPR addresses with dwelling number

Census 2011 – sources of data

Administrative		Statistical	
Registers	Databases	Register	Surveys
Population	Social Security	Employment	Students
Household	Social Benefits		Graduates
Real Estate	Unemployment		Birth
Territorial	Pensioners		Migration
Business	Educational		Scholarship
	Tax Income		Census 2002



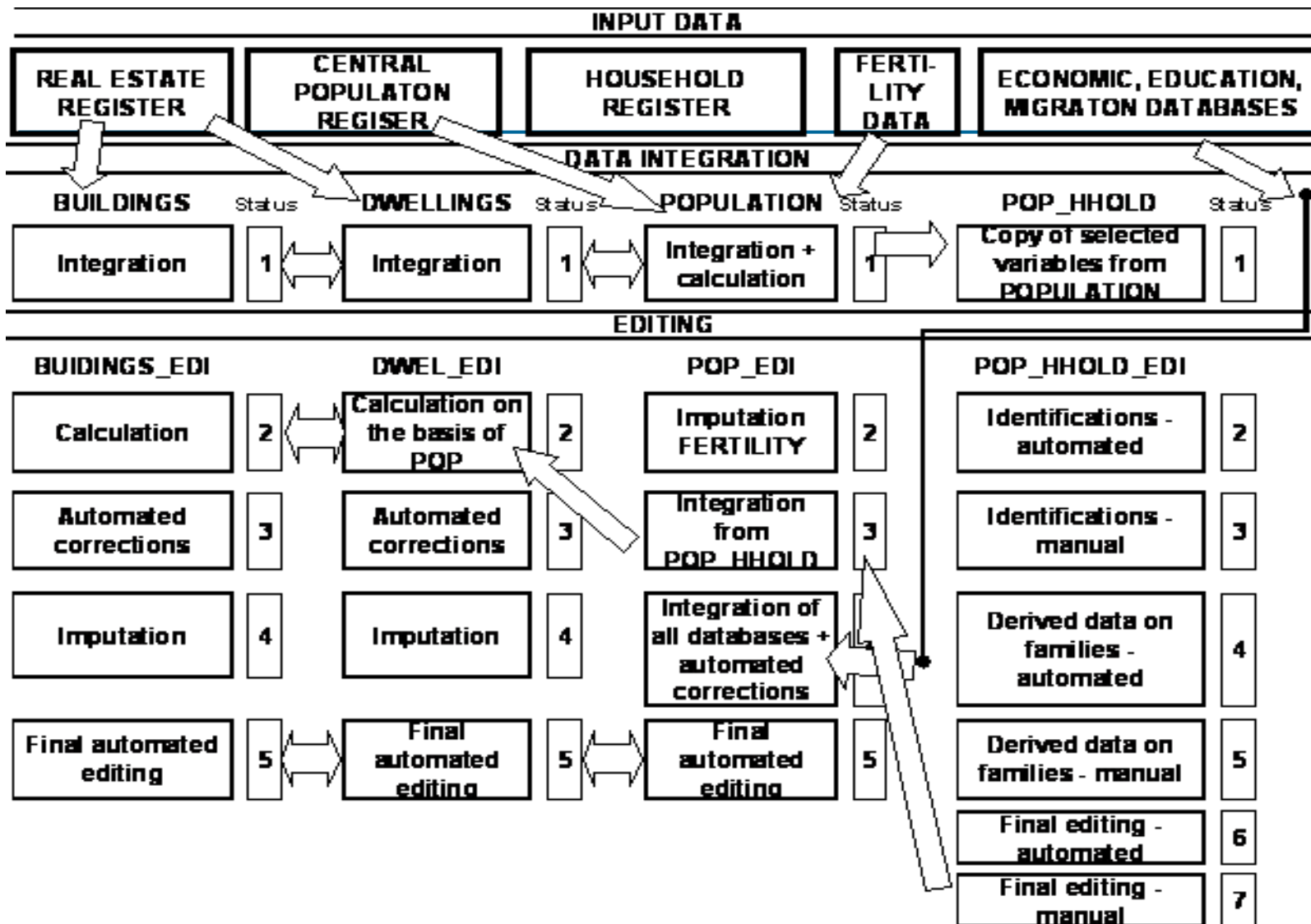
Agreements with data providers

- Assure the regular transmission of data
- Clarify the content of data
- Prescribe the technical protocol
- Raise the awareness of the owners to consult the SURS before any change in the administrative source



IT processing

- Three main phases of data processing
 - Input database preparation - files
 - Data integration - ORACLE
 - Data editing - SAS
- Basic principles for IT processing
 - Graduality
 - Traceability
 - Repeatability
- Very complex statistical process



Input data

- 40 input files from 20 different administrative and statistical sources
- The same topics in several sources
 - Migration topics – 3 sources
 - Education – 11 sources
 - Economic characteristics – 9 sources
- No sensitive data in census database
- All public identifiers were replaced by statistical one

Data integration

Central Population Register

PIN	Address	Dwelling number	
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Household Register

PIN	Address	Dwelling number	Household number
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Real Estate Register

	Address	Dwelling number	
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All other population data sources

PIN			
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Data editing

- Distinction between administrative and statistical concepts
- Generating households and families the most complex process
- Generic metadata driven SAS application used for editing and imputation
 - Mostly automated

IT processing – basic principles

- ❑ Gradual data processing
 - ✓ All data sources are not available at the same time - integration of the input data had to be adapted to the timeliness of the sources
- ❑ Traceability
 - ✓ Corrections did not replace the old values - new version of the record is created
- ❑ Repeatability
 - ✓ Each step in the process is repeated as many times as necessary with the same outputs

Advantages of the project

- Savings of 14 mio EUR for state budget
- No burden on respondents
- Improvement of the quality of input administrative data
 - Feedback implemented in data sources
 - Consequently better quality of statistical data
- Implementation of IT solutions and transfer to the regular statistical processes



Summary

- ❑ Register-based census is not a simple push on button
 - In case of Slovenia the final push on button was result of:
 - ❑ Decades and years of development of registers
 - ❑ Intensive cooperation between governmental bodies
 - ❑ Trust of people in information security
 - ❑ Dedicated very small census team