



Central Statistical
Bureau of Latvia

Using different data sources to improve LFS

Liliana Roze

17th Workshop on Labour Force Survey Methodology
Switzerland, April 2024



Central Statistical
Bureau of Latvia

Content

Introduction

LFS sample information

Used data sources in different procedures:

- Creating target sampling frame
- Weight calculation

Conclusion



Central Statistical
Bureau of Latvia

Introduction



Various data sources



Lengthy journey, gradually increasing number of sources and databases



Socio-economic impact cannot be avoided



Creating target sampling frame



Weight calculation

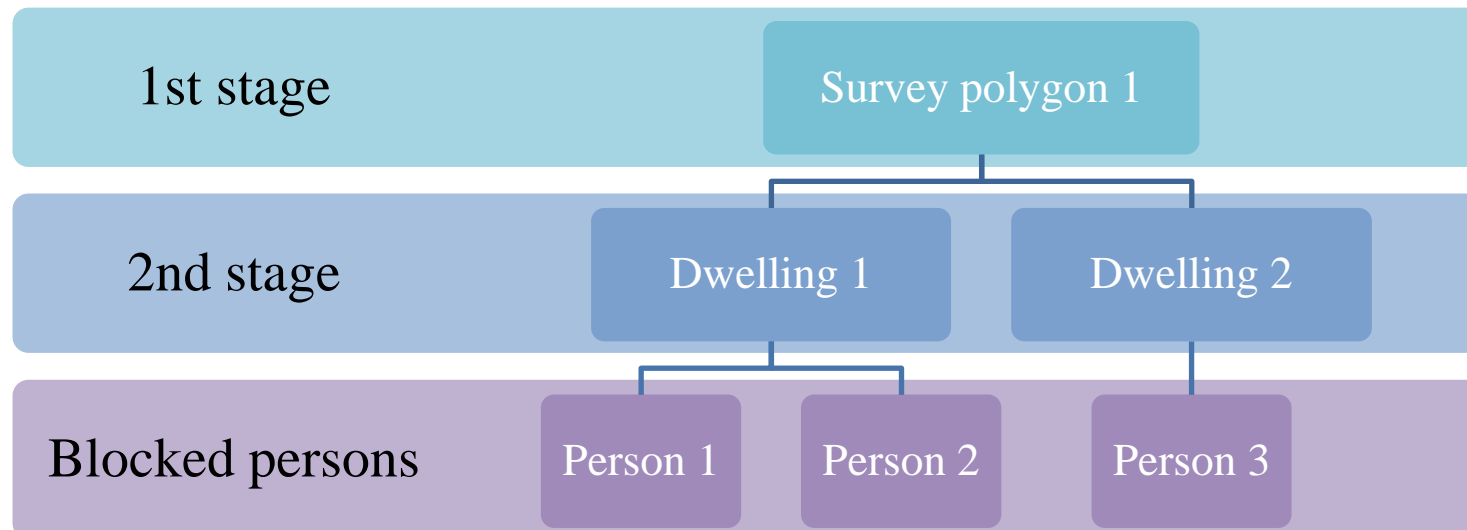


Central Statistical
Bureau of Latvia

LFS in Latvia

- Two stage sample
- First stage – survey polygons (small territories)
- Second stage – dwellings
- Used sampling units are blocked for (almost 4 years)
- Persons are identified by address identification information

Example, how sample and blocked persons are obtained





Central Statistical
Bureau of Latvia

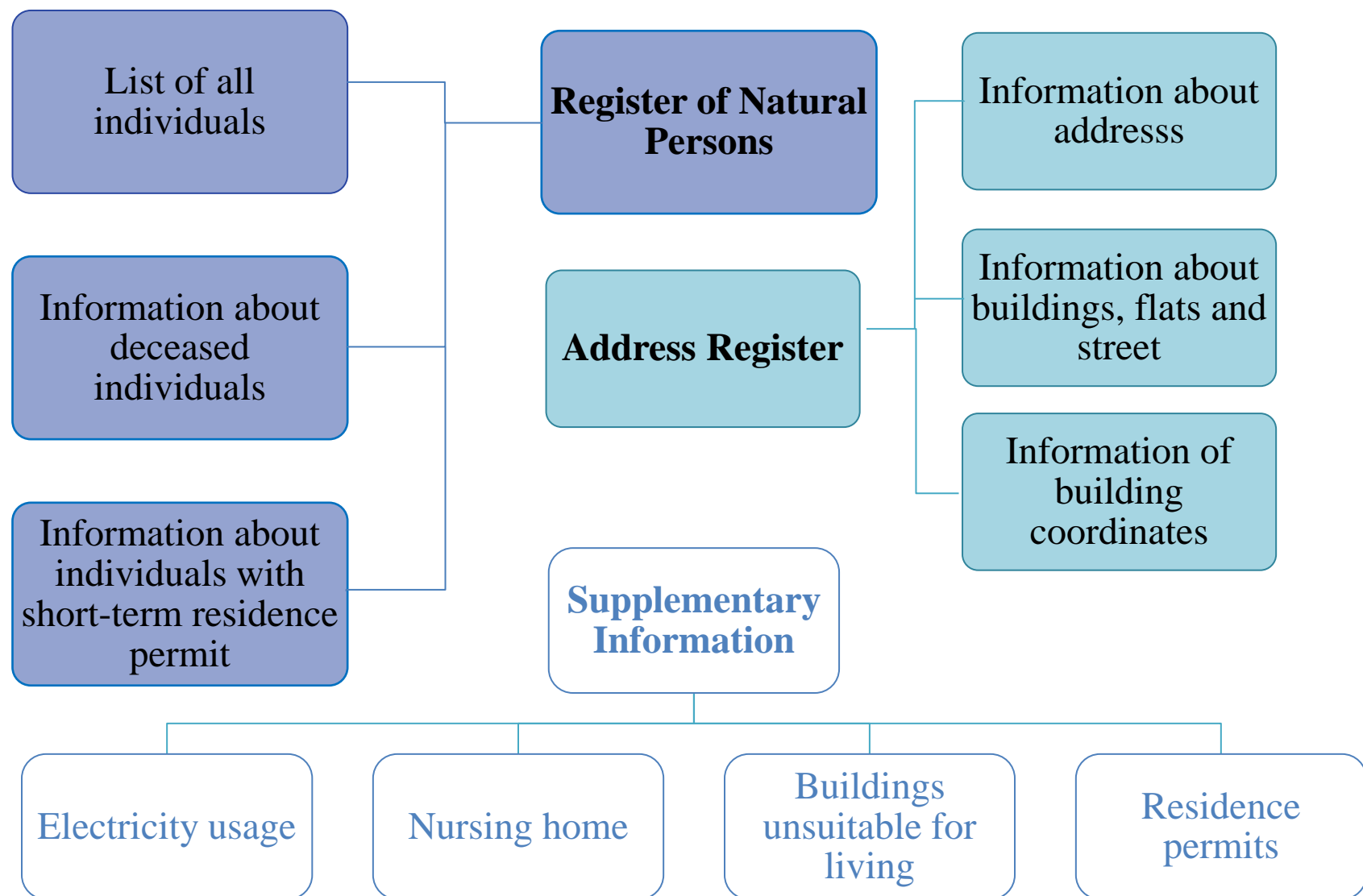


Sampling frame

- Sampling frame is updated monthly
- Dwelling and person frame is made, to obtain valid dwelling list
- Primary data sources :
 - Register of Natural Persons
 - Address Register
 - Supplementary information (electricity usage, nursing homes, buildings unsuitable for living, residence permits)
- Sample design calculation includes blocked persons
- LFS sample is conducted quartly and selected every half-year
- Updated information about addresses and telephone numbers is integrated (to ensure that data are most up-to-date before the data collection)



Sampling frame primary information illustration





Central Statistical
Bureau of Latvia



Sample weighting

- Calibration is performed, so the weighting frame is acquired
- Primary data sources (inapplicable information is removed):
 - Register of Natural Persons
 - Address Register
 - Supplementary information
- Classification of Administrative Territories and Territorial Units also applied
- Weighting frame unit – person



Central Statistical
Bureau of Latvia

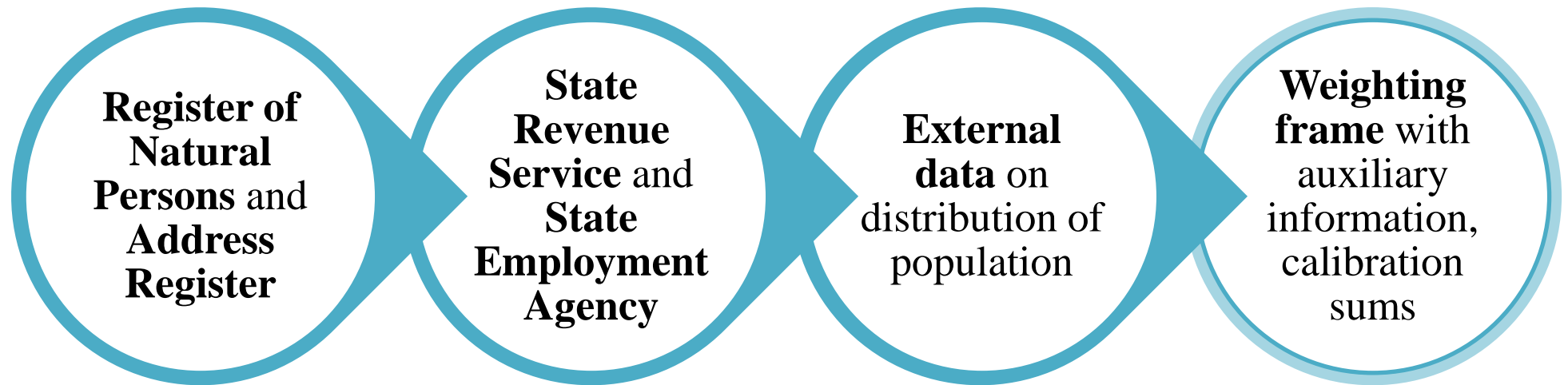
Extra data sources and information used to compute weighting frame

- State Revenue Service and the State Employment Agency data (employed and unemployed)
 - Gender and age groups
- Dwelling size (each person gets a value ≤ 1)
 - Territorial division of residence (Rīga, State cities, other cities and rural territories)
- External data (do not match the sampling frame data)
 - Territorial division, gender, age groups
 - Regions of residence, age groups
 - Capital and State cities

Initial data processing takes place on a weekly basis, the calibration sums are determined for the corresponding period



Data sources used to compute weighting frame



- Except: persons in collective dwelling, with residence permit, deceased.
- Also dwelling data are calculated.

- Information about employed and unemployed

- Information about population in private households in different breakdowns



Central Statistical
Bureau of Latvia

Conclusion (Setbacks)

- Use of some registers requires preparation or revision of legislative framework, which can be time-consuming.
- As regards data sources, the data must have high quality and correct integration of the data calls for thoughtful verification and analysis.
- The monthly updating of the sampling frame benefits from a skillful merging of the key administrative data sources on the data maintainer side.



Central Statistical
Bureau of Latvia



Conclusion

- Unfortunately, we lack specific results from comparing outcomes with and without administrative data (as obtaining this data, methodology was also changed).
- Leveraging various administrative sources across several data processing stages has been beneficial for quality of the data collection process, as well as optimization of the weight calculation.
- It helps to understand and explain population change and demographic fluctuations better and allows building more representative sampling frame.



Central Statistical
Bureau of Latvia

Thank you for your attention!

