Preparation for use of administrative data sources for Structural Business Statistics

BHAS – Agency for Statistics of Bosnia and Herzegovina
Vesna Šehovac
SBS – Structural Business Statistics in Bosnia and Herzegovina

Earlier
- Survey - Structural Business Statistics (in further text SBS) data - annually

Today
- Transformation phase

Tomorrow
- Twinning Project - use administrative data sources
Activities

- Analysing current process collecting and statistical data editing;
- Analysing availability and quality of financial reports (administrative sources);
- Finding the best solution for using administrative data;
- Analyse available administrative data (timing, availability, quality);
- Incorporate AD data in our SBS database;
- Analysing AD data and creating procedures for controls;
- Controlling and identifying errors;
- Analysing data errors;
- Defining basic principles of editing;
- Defining editing rules;
- Creating automatic scripts for editing;
- Statistical data editing;
- Creating final table with SBS Data.
Reasons

- Reduce the burden on business entities filling out multiple forms with similar data;
- Reduce the burden on statistical institutions;
- Reduce costs;
- Accelerates data processing;
- Increases data quality;
- Get exact data instead of estimates.
Incorporating administrative sources data in SBS

Business integration model
• Structural: 2 Entities 1 District

• Three different administrative sources
Steps for adding administrative data in existing system

- Three different Excel files;
- Identifying set of data (columns) for calculating variables;
- Unifying naming of columns;
- Creating table objects in MS SQL and Importing sources;
- Creating formulas for transformations;
- Scripting formulas in SQL;
- Creating SSIS Project in Visual Studio.
Mathematical and logical controls of AD on micro level – Result:

*Table with rules and descriptions*
Treatments of Errors

- **Uncommon influential Errors** (big Enterprises - high impact on estimates) - treated selectively and in a small number of cases manually;

- **Errors with little impact on estimates** - mismatched with the set of predefined limitations - Automatic editing;

- An initial set of rules for automatic editing has been established;

- Data will be edited automatically at the **micro level** and the original tables will be kept in history table for security and later analysis and comparison.
Estimation of missing data for Entrepreneurs

➢ Move estimation on aggregated level to estimation on unit level, based on ratio estimator – the share of a variable in turnover of the same stratum population (for which variables are calculated from available sources).

➢ Since there is still no turnover information in SBR for some units, the 3-step evaluation model is recommended:
  • Step 1 – estimation of turnover where it’s missing,
  • Step 2 – estimation of other financial variables,
  • Step 3 – estimation of variables of personnel costs.
Final result

- Reduce costs and burden
- Using administrative sources
- Improve quality
- Data by variables
- Process automated
- All Data on State level for SBS in one Table
Thank you!

- Vesna Šehovac – vesna.sehovac@bhas.gov.ba
- Specialist for Design and Programming
- Department for Applications and Database management
- Agency for Statistics of Bosnia and Herzegovina