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## **Use of Administrative Data Sources in the Globalization Processes in Statistics**

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**Abstract.** One of the fundamental globalization tendencies in statistics is searching for and use of new processes in gaining the data. In statistics based on traditional methods of data collection, to which belongs also Slovak Republic, it represents, besides other, more effective and systematic use of administrative sources. Creation of conditions for data exchange between these sources and statistical information system calls for modification of legal environment as an important determinant in this context. Systematic use of administrative sources for statistical purposes is a strategic task of Slovak statistics.

If we characterize any phenomenon of modern society, the term globalization would be definitely the most frequent. The globalization is generally interpreted as comprehensive term for a society in which economic, political, environmental and cultural events in one part of the world quickly come to have significance for people in other parts of the world as the result of development in communication, transportation and information technologies. It describes the growing economic, political, technological and cultural linkages that connect individuals, communities, businesses and governments around the world.

The basic globalization tendencies in statistical world, those that connect national statistical systems and trends common to the whole statistical community, include first of all the searching for new procedures in the data obtaining. It is the most important role of contemporary statisticians because it is related to creation of new ways and methods of obtaining data that are the most considerate to reporting unit, respect its burden and its way of keeping register of social-economic facts. Besides that, they have to keep the data for statisticians in required quality and frequency. Friendly and partnership approach to reporting unit, leading to decrease its reporting duty, should be accompanied not only by increase of demands on quality, independence, impartiality, accuracy, and relevance of statistical data, but also on coverage of new areas of society. As an example could be given increased demands on statistical results reflecting the whole social sphere, especially the areas of health, education, culture, environment, living conditions, respecting human and civil rights, and other factors of sustainable development, as defined by Lisboa Strategy.

It is very difficult to meet these requirements as such. However, it is even more demanding in situation where there is a permanent lack of financial sources and capacities. I think that these obstacles are common for all of the post-socialist countries of Middle and Eastern Europe.

One of the strategic ways for rationalization of statistics is better and more effective use of administrative sources, more meaningful and especially more systematic work with data continuously collected or already accumulated by administrative sources.

Statistical information system of the Slovak Republic is presently based on using the data from state statistical surveys carried out by the Statistical Office of the SR itself or by other subjects of national statistical system, and on using the data from administrative sources. Based on the Act on state statistics, the content, the way of collection and the purpose of using the data from all statistical surveys including administrative sources are determined by the 3-year Programme of State Statistical Surveys. The administrative sources from which the SO SR takes data for state statistics are listed in the separate part of this programme. At present, the Programme of State Statistical Surveys includes 14 institutions with registered 137 administrative sources used for the state statistics. Another data sources, e.g. sociologist surveys, reports and information on activities of various organizations and associations, are used as additional sources of statistical information system.

Generally we can say that Slovak statistics are presently based mainly on sources of data obtained from traditional statistical surveys. Administrative sources are rather supplement - though important - but most of data are collected by empiric statistical surveys, it means directly from reporting units.

For its needs, activities and aims an administrative source keeps its own information system in the form of various records, registers, accounting, and etc. Their data and information are used mainly within the institution itself and serve primarily as a base for own decision making. The institution defines the methodology of these data collection and their content and frequency are defined mostly by legislation.

Administrative sources, which are used by several institutions and several information systems as well, are known as public administration registers. The typical data source of this kind in the SR is the Central Population Register kept by the Ministry of Interior. It is used also by the Social Insurance Agency, the National Public Health Institute, the National Inspection Office of Labour and others, including the Statistical Office of the SR.

*In the SR the administrative data source is the source created by the public authority, or by other subject executing public power, on the base of the Act and within its bounds. It is primary created for other than statistical purpose, while information for the register is provided by the persons obliged to do so. This duty is set either by the Act, or provision of information is a necessary condition for obtaining financial support or other service financed particularly from public budget, or it is the condition for getting a licence for performance of specific activity.*

**Typical administrative sources (not the only ones) in Slovakia are:**

1. registers with reporting obligation (e.g. business register, tradesman register, organization register);
2. compulsory reports and other declarations of obliged persons, e.g. tax returns, financial statements;
3. information necessary for examination of claims financed from public budgets, e.g. social benefits system;
4. data important for decision or approval of relevant public authority for specific activity performance, e.g. building permit, building approval process;
5. other obligations of selected persons, e.g. annual or other reports of legal persons.

The most suitable administrative sources to be used for state statistics are those of the first and the second group where can be expected that the level of data collection and data processing are comparable with statistical surveys. As to the coverage, these types of administrative sources correspond to exhaustive statistical survey.

So administrative sources represent a very rich and abundant source of information accumulated outside of the Statistical Office, data sources not created primary for statistics, but under the certain conditions they can fully meet its requirements.

Integration of relevant administrative sources into statistical information system is long-lasting, highly sophisticated process, which requires solution of many issues. First of all, it requires detailed identification and detailed analysis of individual data sources. It is necessary to describe the content of administrative sources mainly as to used indicators, metadata and to assess the accordance with similar indicators used in existing statistical reporting. Last but not least it is necessary to focus on analysis of database description of administrative sources information system, on technology and software interoperability with software used by the Statistical Office, on data collection and

processing in administrative sources. Simultaneously with this, the analysis of effective legal measures as well as recommendations of European Union on use of administrative sources for European Statistical System should be performed.

Based only on the results of these analyses it is possible to determine contents of files intended to be extracted into statistical system of the SR. The criteria for determination of content of files are requirements of our National Statistical System, European Statistical System as well as requirements of statistical systems of those international organizations (e.g. OECD, ILO, WHO, UNESCO, IMF, UN).

The data files extraction from various administrative sources into statistical system is not one-way process, but bidirectional. It means that the above-mentioned criteria and claims are applied also in provision of data from Statistical Office to individual administrators of administrative sources.

At present the Statistical Office makes an effort to formulate the most accurately the cooperation relations with the administrators of individual administrative sources. It is being realized based on the project “Use of administrative sources for enhancement and improvement of the statistical information system”, which is implemented with the financial support of European Commission. The effort to solve bidirectional data exchange is the example of new access of state statistics to data providers. The main idea of this approach is to decrease the burden on reporting units and to use the data already existing in public administration most effectively. It is based on customer orientation and partnership with providers and users of statistical data.

The results of the project so far confirm that the orientation on administrative source is correct and reasonable. They can be summarized in the following recommendations:

1. To prefer takeover of micro-data files from administrative sources. It is suitable to takeover the micro-data once for the relevant reference period. Further handling these files will be fully in competence of the Statistical Office, including the dissemination of results to users. A big data volume and the press resulting from it on capacities of nowadays-functional statistical system still remain open and risky.
2. Together with micro-data, it is optimal to takeover also metadata. The description of micro data and metasytem tools from administrative sources must be compatible with those used in statistical information system.

3. After solving the possible problems on interface of information systems of administrative sources and statistical information system, it is possible to use only electronic data transmission.
4. If every micro data is unambiguously assigned to reporting unit (natural person, legal person, etc) by using relevant identifier, it is possible to connect data from various administrative sources and statistical surveys. Real possibility of connecting micro data related to the same reporting unit creates qualitatively new possibilities for meeting the requirements of national and international statistics.
5. If we are able to use some public administration registers, it would be possible to substitute some statistical surveys by statistics built on registers. From this point of view the key registers are:
  - a/ population register
  - b/ register on addresses and residences (not created in the SR yet)
  - c/ register on education (not created in the SR yet)
  - d/ registers on economic activities of population (tax registers, social and health insurance registers on insured persons and insurance payers)

As to the needs of the Statistical Office, the register must include, beside others, the family relationship (husband-wife, parents-children) and unambiguous address by using the register of addresses and residences. The register of addresses and residences must unambiguously identify every residence up to the level of flat unit or similar to flat unit. Register of education should contain the data on education (level of highest education, study major) of every person, which has started or has reached formal education higher than elementary. Registers on economic activities should provide selected data on economic activity of population.

The establishment of the registers mentioned above, missing in the SR at present, should help to transform in the future such exceptional statistical action as population census. The Census 2011 in the SR will be conducted by traditional data collection based on filling-in the questionnaires by natural persons. Besides the common use of the census results we are considering the possibilities of using them also for filling-up the content of missing registers as much as possible.

Globalization tendencies in economic and business areas, e.g. increasing integration of finance markets, establishment of foreign affiliations and multinational enterprise groups, globalization changes at labour market or in migration, call directly for effective use of administrative sources,

not only using the national registers of individual countries but also European registers (Euro Business Register or Enterprise Group Register).

Our experiences and analysis of administrative sources point to need of their systematic and consistent review as well as identification of included data and the need of detection of new epistemological possibilities of this type data usage in statistical practise. After solving the still open question of administrative demandness of data exchange, it will be possible to concentrate capacities on key activities such increase of data quality on the base of mutual requests and increase efficiency of mutual communication.

In the period of globalization, modern statistics is reliant on use of administrative sources. Creating an integrated system of administrative sources and increasing the extent and quality in using their data for statistical purposes is not only technical or organizational issue or problem, which can be solved by simple organizational and technical decisions. It is long-term and strategic issue, it is a challenge, which can affect, and it really affects, the whole activity of statistical office and the whole system of national statistics. It begins with decision on the way how to ensure the data for particular statistics, it continues through development of methodology for elimination of risks arising from the essence of administrative sources themselves (in comparison with standard statistical survey), and it finishes at discussions on necessity to change the valid legislation. Legal environment considerably determines effective use of data from administrative sources, because existing legal measures (mainly on personal data protection) significantly restrict the possibilities of interconnection and subsequent use of data from different administrative sources, mainly registers. Besides that, effective use of administrative data requests active involvement of statisticians in creation or modification of data files established and kept by administrative sources. I perceive administrative sources as statistical line in globalization frame that is common for all of us and is particularly important for the future of statistics and statistical information systems. The experiences of countries using the registers and administrative sources for a longer period of time and in a larger extent than Slovakia, can contribute to acceleration of this process considerably.