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***The system of feedback from statistical surveys ("Survey side of SBR") in Bosnia and Herzegovina***

### **Abstract**

Statistical Business Register in Bosnia and Herzegovina (BiH) is kept and maintained by the Agency for Statistics of BiH in cooperation with two entity statistical institutes on the basis of administrative registers, other administrative sources and statistical surveys. Bosnia and Herzegovina (BiH) is administratively divided into two entities and one district: Federation of Bosnia and Herzegovina (F BiH), Republika Srpska (RS) and Brčko District.

Due to specific of the state and administrative organization, SBR staff makes special efforts to respond on the needs of statistical production as well as at the state and at the European level.

One of the main challenge of maintaining and updating of SBR in Bosnia and Herzegovina is coordination between three statistical institutions in order to get more useful Business Register and improving the quality of statistical production on the state level. In line with that, big efforts are made to find solution for getting better and unique feedback information from statistical surveys all three statistical institutions. It was agreed that required information for updating SBR data from surveys should be kept centrally and unique way.

IT Application of the Statistical Business Register is designed that contains two parts, i.e. two sides of the application. Statistical side contains merged and updated data from administrative and statistical sources, from two entities and Brčko District, and represents the basis of the statistical production. The other side allows the monitoring of statistical activities that are based on response units and that part of the application we call "Survey side of SBR" and is intended for exclusively statistical survey divisions.

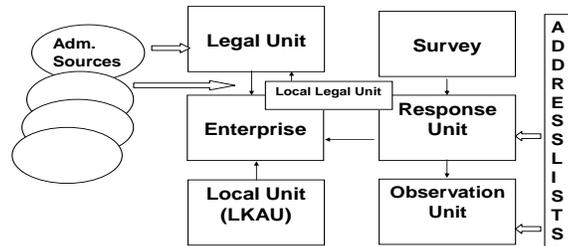
Functioning of the survey side would allow much better coordination between SBR and survey divisions. It is anticipated that for each statistical survey special list of units is designed that will suit the needs of specific statistics. The survey side would contain more comprehensive information for statistical surveys and on the other hand more feedback information to the SBR.

This system was partly developed during the development of IT application of SBR, in period 2006 – 2008, but was not used in all three institutions. Last year, it was agreed to get improve survey side of SBR and start to use this system on unique way.

This paper will describe concept, planned work and outline the issues connected with the system of feedback from statistical surveys in order to meet user needs on the one hand and improve quality of data in SBR, on the other.

## Introduction

Statistical Business Register (SBR) in BiH is kept and maintained by the Agency for Statistics of BiH in cooperation with two entity statistical institutes on the basis of administrative registers, other administrative sources and statistical surveys.



*Chart 1: Data model of Statistical Business Register in BiH*

The chart above illustrates the three major parts of the SBR model:

1. Legal units and Local legal units – data from the administrative sources
2. Enterprises and Local units - data on statistical units in line with the EU regulation
3. Response units and Observation units - survey units

SBR in BiH does not contain Enterprise groups (EG). According to the five-year development plan, implementation of EG in SBR started. This activity is one of the planned activities in the IPA Twinning Project in cooperation with Denmark statistics, which was started in September 2014.

## Relations between administrative and statistical units

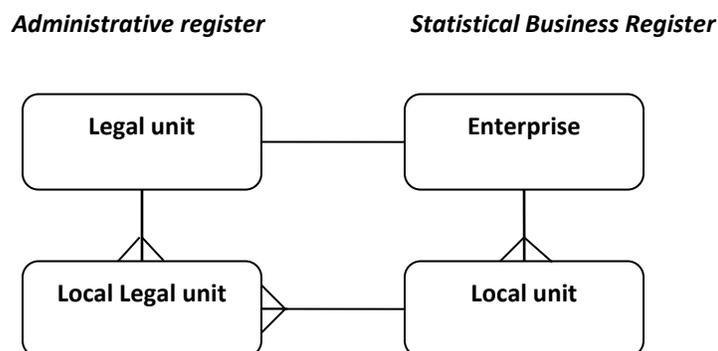


Chart 2: Administrative and statistical units

The chart above illustrates the relations between administrative and statistical units in SBR:

- legal unit and enterprise – one enterprise is created for each legal unit, 1:1 relation
- legal unit and the local legal unit
- enterprise and local units - link between the enterprise and the main local unit and the enterprise and other local units
- local legal units and local units of enterprise – one or more local legal units can build the local unit in the SBR, n:1 relation

### Updating of SBR

Updating process of SBR is organized according to the complex administrative structure of Bosnia and Herzegovina.

In order to protect the common core of the system, as well as data model and on-line applications, all changes in the SBR, must be performed in accordance with previously agreed procedures by the SBR team all three statistical institutions and may not be doing independently.

Data are updated only in statistical institutions. The entity statistical institutions and Brčko District receive data from administrative registers in regular periodicity. Based on these data, newly registered legal entities are automatically included in the Statistical Business Register, and in the same way the changes of identification and demographic characteristics are downloaded.

Exchanging information on individual units between all statistical institutions is done on a quarterly basis, in clearly defined periods of time. An identical copy of the SBR data base has every statistical institution. Each SBR unit contains information about the entity that is responsible for maintaining and updating these units.

According to the agreement reached between the three statistical institutions, data on turnover and number of persons employed are exchanged in categories by size and not on individual level. These variables are currently performed annually on the basis of annual financial statements. Updated registers, entity institutes and Brčko Distrikt submit to the Agency for Statistics, which then perform data compilation, control and complete updated SBR data base forwards entity statistical institutes. In this way is established a common database and unique SBR in Bosnia and Herzegovina.

Agency for Statistics of BiH assumes information from Central Bank of BiH twice a year. Thereafter, BHAS delivers obtained data for those subjects for which a given entity or district responsible. Central Bank data are used as one of the significant inputs to update the status of activities of enterprises.

## Functioning of the Survey side

IT Application of the Statistical Business Register is designed that contains two parts, i.e. two sides of the application (Chart 1.) Statistical side contains merged and updated data from administrative and statistical sources, from two entities and Brčko District, and represents the basis of the statistical production. The other side allows the monitoring of statistical activities that are based on response units and that part of the application we call "*Survey side of SBR*" and is intended for exclusively statistical survey divisions.

It is anticipated that for each statistical survey special list of units is designed that will suit the needs of specific statistics. This implies that the data related to the enterprise and the local units of the particular survey to be at the same time placed on the response units and observation units of the same survey, on the survey side of the SBR application. This would allow updating of the response units and observation units, adding new units and in special cases, deleting the response units and observation units on the survey side. Survey methodologists would update the results obtained from this survey, on the survey side. However, the SBR team would ultimately decide who will make corrections on the enterprises and local units in the SBR.

Improvement of the survey side of SBR will provide more useful and comprehensive information flows, as follows:

- Creating two-way information flows among the register and statistical surveys as well as between surveys in all three statistical institutions
- The data sharing among surveys and the register will be done in a consistent and systematic manner
- Collecting information centrally in order to get better statistical production
- Marking of burden on statistical units through surveys

## The survey system

The survey system comprises of three basic units: survey, response unit and observation unit. Each of these units has *instance unit*, i.e. survey instance, response unit instance and observation unit instance.

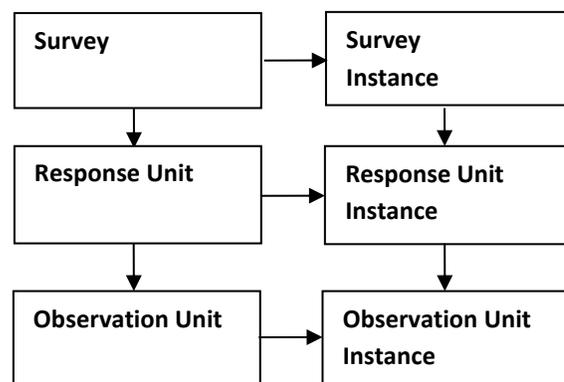


Chart 3: The survey system

The survey will be used to identify a survey, i.e. Industry, Employment, Wages etc. Each survey may have one or more instances, i.e. a yearly survey will have one instance for each year.

The response unit is designed to hold information about the unit that will receive questionnaires and is responsible for returning these to the statistical office. This is only for the purpose of proper

administration of the survey. A response unit contains a link to an enterprise, the enterprise that is surveyed.

The response unit itself may be this enterprise, part of the enterprise or an external accountant etc. who are responding on behalf of the enterprise. The most vital information is contact information, name, address, telephone, fax, e-mail, contact person.

Most enterprises will have one response unit, the system allows for an enterprise to have multiple response units, i.e. regional offices or even each local unit. This introduces an option for a more customised way to address large units.

An observation unit may be observed by one or more instances of the survey. For each such instance, an observation unit instance is created and the related response unit will have a response unit instance as well related to the survey instance.

As a result of this, the survey keeps information about all units that has been part of one or more instances of a survey and all contact information and any attributes are preserved.

Currently, no marking of burden on statistical units through surveys in SBR but through this model it will be enabled.

## **Assigning attributes**

Each survey may define its own set of attributes in addition to the standard attributes. When assigning the attributes, start by selecting if this is an attribute belonging to the statistical unit, a statistical attribute, or to the response unit, an administrative attribute. Even in the case, where the unit observed is the enterprise, so in effect there is just one response unit and one observation unit, this distinction between data related to survey administration and data related to the statistical unit should be maintained.

Then consider if the attribute should be connected to the base unit or the instance. When the value of an attribute is changed, the old value is not preserved by the system. If the attribute is connected to instance, then it may be different for each instance keeping at least the last recorded value for the instance.

Information like mailing address, contact person etc. are kept in the response unit as it is not considered to be of interest to maintain information about old mailing addresses. The response unit instance could contain an attribute telling if the questionnaire has been returned for the instance, keeping a record of how the units has responded to previous surveys.

## **Instances**

Each survey should define how it will define an instance. It is suggested to link this to the time when a new sample is drawn from SBR, that in most cases would result in one instance for each year, even if the survey a quarterly or monthly survey.

If this is used, it is suggested to have an attributes on the response unit instance and observation unit instance, giving the first and last period within the instance where the unit was part of the survey.

A specific problem with surveys using the same sample for a period is that the units of the sample may change during the period. If they become complete inactive this should be handled by the attribute discussed above to avoid further contact. But what should happen, if an observation unit are changing its owner. From the surveys point of view, the actual unit should probably still be observed. But in the SBR, there will be a new Legal Unit and a new Enterprise. So there must be a new response unit and new observation unit(s) defined on the survey side. In general, it is recommended to take a further look into, how monthly and quarterly surveys are dealing with changes in the base population of the survey and changes in the actual sample.

## **Adding survey data**

Selected response data from surveys could be added to a survey as a special table connected to the observation unit, i.e. number of employee, total turnover etc.

In that case a survey specific table should be created, holding a reference to the observation unit, information about time and data columns.

## Conclusion

The main sources for updating of the SBR of BiH are administrative data and statistical surveys. One of the basic tasks of statistical business register is to provide appropriate frames for the statistical surveys. To meet this goal, the register must to expand its offerings in terms of new tools, to add functional capabilities, and appropriate interface for users.

Functioning of the survey side would allow much better coordination between SBR and survey divisions. The survey side would contain more comprehensive information for statistical surveys.

Establishing, maintaining and standardizing current survey organizational structures require an internal commitment for resources to focus on this long-term goal. This will challenge for all three statistical institutions in BiH as day-to-day work.

## References

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