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Definition and design of data flow processes and procedures for the registers

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PROJECT REFERENCES

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REPORT OVERVIEW

Project:	Support to the Improvement of Statistical Information System
Component:	Component 1 - Redesign and improve corporate statistical business processes and enhance institutional capacities in the production and usage of Agricultural and Labour Force statistics
Sub-component:	1a. Redesign and improve corporate statistical business processes
Activity:	1a.2: Review and improve core statistical business process environments
Task:	Task 3: Review and improvement of registers
Sub-activities:	1a2.12: Review of the Statistical Farm Register 1a2.13: Review of the Statistical Business Register 1a2.14: Review of the persons/household register 1a2.15: Development of a standard collaboration protocols between INSTAT and partner institutions 1a2.16: Report preparation
Output:	Output 1a2.3: Report on definition and design of data flow processes and procedures for the registers
Expert:	Dragan Vukmirovic
Date of report:	23 th of March 2017
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Introduction:

In this report, two reviews are presented: Review of the Statistical Business Register (SBR) and Review of the persons/household register (SPR) and the proposal of standard collaboration protocols between INSTAT and partner institutions will be included in the next report, together with future Review of the Statistical Farm Register (SFR).

Planned sub-activity 1a2.12. Review of the Statistical Farm Register (SFR) is postponed to the end of activity 1b.2: Technical assistance and expertise for Agriculture Census calibration (Village Survey) and Annual Agriculture Survey (AAS) 2016 after consultation with Component leader.

DESCRIPTION OF REPORT OBJECTIVES

Objectives:

The production processes for the various statistical domains within Institute of Statistics of Albania (INSTAT) over recent years have been subject of changes due to increment of the work program and the introduction of the new methodologies, technologies and techniques. This has contributed to the progress of the Institute towards its alignment with the European best practices and the EU acquis in statistics. According to the report on sector review of the Business Statistics (BS) in Albania from 2015, the most surveys conducted in INSTAT following EU standards and methodologies, although it does not fully comply with these standards¹.

The targeted result is the improvement of the efficiency and effectiveness of the INSTAT's operation and at the same time preparation the Institute for the establishment of centralised data warehouse(s) and for the introduction of the new information technologies and methodologies. Also the statistical business process environments shall be reviewed and upgraded.

Expected results related with the Activity 1a.2: Review and improve core statistical business process environments, Task 3: Review and improvement of registers are formalized as Output 1a2.3: Report on definition and design of data flow processes and procedures for the registers

In the Terms of Reference (ToR) of this project is stated²:

- INSTAT maintains three registers that function as sampling frame for survey taking and as basic material for demographic statistics and national accounts: the Statistical Farm Register (SFR), the Statistical Business Register (SBR), and the statistical persons/ household register (SPR)

¹ Report on sector review of the Business statistics in Albania, 2015, http://ec.europa.eu/eurostat/documents/45004/6182541/SR_report_BS_Albania_Final.pdf

² Annex II Terms of Reference, Support the improvement of statistical information system, Europe Aid/136334/IH/SER/AL, INSTAT, 2014



- All three have benefited from the last censuses which provided useful basic data for their completion.
- However, all three experience problems with their quality and complications with their updating from administrative sources.
- The Contractor is expected to review the quality of the Registers and to assist with, specifically, the establishment of firm cooperative arrangements with the relevant partner institutions and the design of the related data flow processes and procedures for their periodic updating.

The main objectives of this report are:

- Review of definitions, data flows and protocols for the registers in INSTAT.
- Define some recommendations for improvements of the registers in INSTAT

BACKGROUND

The report is related to the work within the IPA 2013 Project: Support to the Improvement of Statistical Information System (Project). Project is conceptualized into three main components with large number of activities, sub-activities and tasks having a different degree of complexity and largely depending on a number of various factors, of internal and external nature.

Component 1 - Redesign and improve corporate statistical business processes and enhance institutional capacities in the production and usage of Agricultural and Labour Force statistics

Component 2 - Develop and test system for upgraded corporate ICT infrastructure with inclusion of establishment and pilot implementation of centralised Data Warehouse(s)

Component 3 - Strengthen communication function and statistical coordination role of INSTAT with focus on dissemination and quality management.

The activities to be performed during the Project have been singled out according to the objectives of the Project and were further defined according to discussions made during the meetings with the beneficiary's - INSTAT nominated experts. The institutional framework provides solid background, so that the project is managed in an efficient and transparent way at high professional level and respecting existing legislation.

The purpose of this Project is to enhance the institutional capacities in the Albanian Statistical System (ASS), and in particular in INSTAT, for streamlining the statistical processes and development of a redesigned IT architecture based on the data warehouse concept, enabling efficient and effective production, analysis and dissemination of official statistics meeting the requirements of the acquis in statistics



and following best practices as implemented in the European Statistical System (ESS).

This report on definition and design of data flow processes and procedures for the registers, is an output (1a2.3) for the:

- **Component 1:** Redesign and improve corporate statistical business processes and enhance institutional capacities in the production and usage of Agricultural and Labour Force statistics;
 - **Sub-component 1a:** Redesign and improve corporate statistical business processes;
 - **Activity 1a.2:** Review and improve core statistical business process environments
 - **Task 3:** Review and improvement of registers.

METHODOLOGICAL APPROACH

The methodological approach for creating this Report was based on four sub-activities:

- 1a2.13: Review of the Statistical Business Register
- 1a2.14: Review of the persons/household register
- 1a2.15: Development of a standard collaboration protocols between INSTAT and partner institutions
- 1a2.16: Report preparation

Sub-activity 1a2.12: Review of the Statistical Farm Register is postponed to the end of activity 1b.2: Technical assistance and expertise for Agriculture Census calibration (Village Survey) and Annual Agriculture Survey (AAS) 2016 after consultation with Beneficiary.

SBR and SPR are located in Economic Statistics Directory and Social Statistics Directory, respectively (Figure 1).

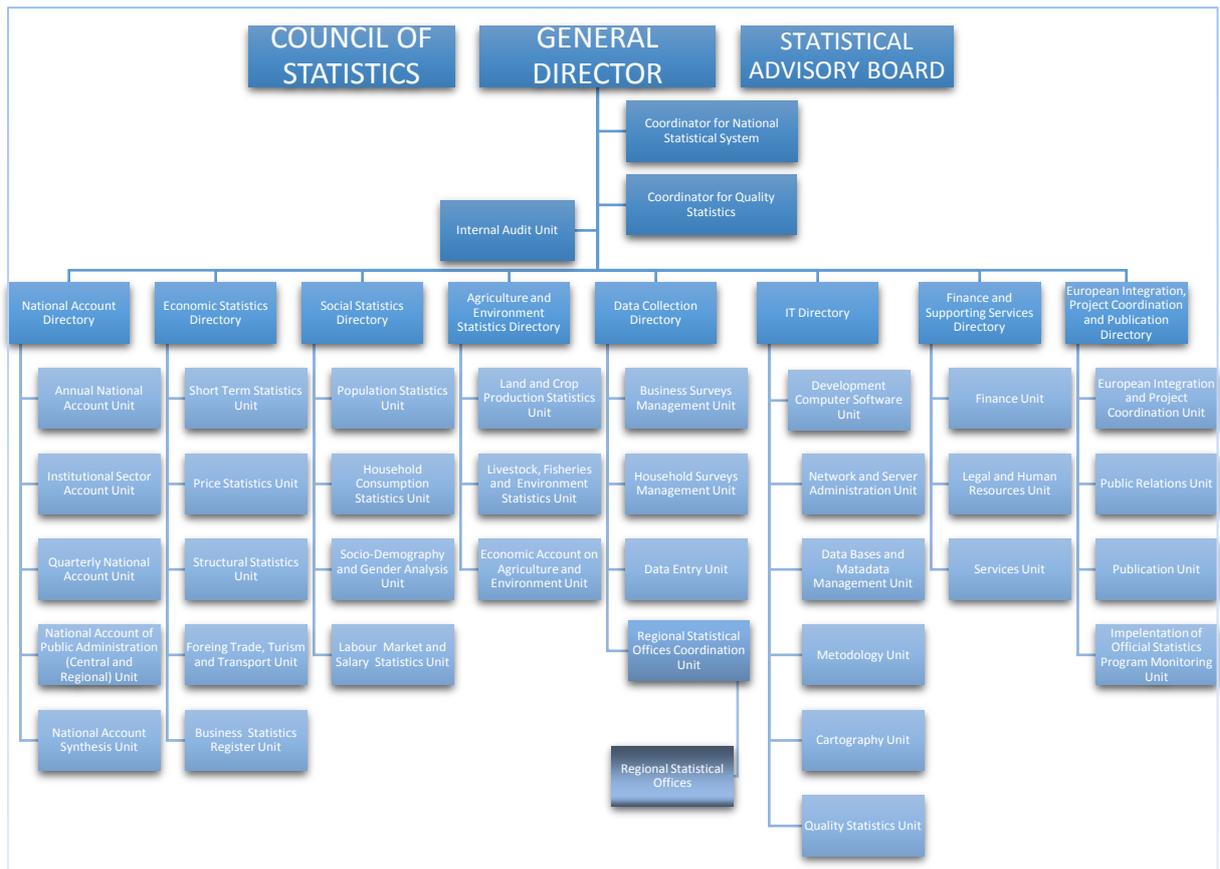


Figure 1. INSTAT's organisational chart

The **first step** was to review the input documents and other necessary information:

Internal references:

- Annex II Terms of Reference, Support the improvement of statistical information system, Europe Aid/136334/IH/SER/AL, INSTAT, 2014
- Business Register 2015, Prepared by Flutura Sala and Leonora Gjini, INSTAT 2016, http://www.instat.gov.al/media/331402/regjistri_ndermarrjeve_2015.pdf
- Census of non-agriculture economic enterprises, 2010, INSTAT, 2012, http://www.instat.gov.al/media/154917/census_2010.pdf
- Law no. 9180, dated 05.02.2004 "official statistics",
- Light Peer Review of the Implementation of the European Statistics Code of Practice in the Republic of Albania - Final Report, 2014 (LPR 13)
- MB IPA 2011 Pilot Project: 19 Business Registers, "NACE ad hoc Mission to INSTAT" Tirana, 7 to 9 May 2014, Peter Thomas, GOPA
- Official Statistics Programme for the period 2017-2021 (OSP 2017-2021)
- Report on Limited Peer Review of the Institute of Statistics of Albania, 2015 (LPR 15),



- Report on sector review of the Business statistics in Albania, Report prepared by Violeta Kunigeliene and Virginia Balea, 2015
- Sector review of Implementation of the Labour Force Survey in Albania, Draft report ver. March, 2016
- Short Term Statistics – STS 2014, Technical Report, INSTAT, www.instat.gov.al
- Statistical Business Register - Quality Report 2012, Drafted by: Ertugrela Curumi, Confirmed by: Flutura Sala, with the assistance of: Flutura Sala and Peter Thomas
- Statistical Business Register - Quality Report 2013, Drafted by: Ertugrela Curumi, Confirmed by: Flutura Sala, With the assistance of: Flutura Sala and Peter Thomas
- Structural Business Survey – SBS 2013, Technical Report, INSTAT, www.instat.gov.al

External references:

- Business registers, Recommendations manual, 2010 edition, Luxembourg: Publications Office of the European Union, 2010, ISBN 978-92-79-14659-6
- Country progress report 2015, Wiesbaden Group on Business Registers, International Roundtable on Business Survey Frames, Tokyo, 2016
- Encyclopedia of Survey Research Methods, Edited by: Paul J. Lavrakas, SAGE Publication, <http://dx.doi.org/10.4135/9781412963947.n477>
- Guidelines on Population Registration, Published by the OSCE's Office for Democratic Institutions and Human Rights (ODIHR), OSCE/ODIHR, 2009
- How to modernize a Civil Registration System, The case of Albania, Halvard Skiri, Mirela Talka Kumbaro, Anne Abelsæth, Stein Opdahl, Helge Brunborg and Dag Roll-Hansen, Statistics Norway, 2012

Second step: Consultation with INSTAT staff.

Third step: Creation an inventory of the existing definitions, data flows and protocols.

Fourth step: Analysis of existing definitions, data flows and protocols.

Fifth step: Draft report preparation - define recommendations for the improvements definitions, data flows and protocols in INSTAT.

Six step: Consultation with INSTAT staff on Draft report.

Final step: Final report.



THE OVERVIEW

Statistical Business Register

SBR variables definitions are according to EUROSTAT recommendations on Business Register (BR) but have much room for improvement, even though a huge work has been done³.

SBR include all legal unit registered to National Registration Centre (NRC) or to Tax offices. All legal units are identified by the unique code, NIPT, carried on economic activity in Albanian territory.

One of SBR roles is to support the business surveys of INSTAT. The Register of Enterprises is used as the basis for designing samples of economic surveys. For this reason the enterprise is the main statistical unit on the SBR. The enterprise represents the whole of a particular business with the name and address of the enterprise, generally being that of the Head Office. It is important that the SBR is both comprehensive (the vast majority of businesses being covered by the SBR) and accurate.

The SBR is updated **annually**. In April of every year, a frozen file of the register is prepared with data for the previous year. This file is used for preparation of the business survey samples; for coordination of different business surveys; calculation of GDP; updating information about enterprises; calculating aggregated data for external users etc.

According to the statistical legislation INSTAT can have access to administrative registers for statistical purposes. In most cases working arrangements with different authorities are functioning well. Administrative data are currently mostly used either for checking or improving the accuracy of data. The data are also used to update the business register. Until now no administrative data have been used to replace survey data.

Data provided from the administrative sources in Albania (NRC; GDT; VAT file; Annual account of enterprises) feed into the SBR. They are supplemented with data collected from INSTAT business surveys, mainly from Structural Business Statistics (SBS), Short Term Statistics (STS) and survey of local units.

Memorandum of Understanding (MoU) between INSTAT and General Directorate of Taxes (GDT) was signed in 2015 includes more information from Tax, especially for local unit and employment⁴. This information allowed INSTAT to increase coverage

³ Business registers, Recommendations manual, 2010 edition, Luxembourg: Publications Office of the European Union, 2010, ISBN 978-92-79-14659-6

⁴ Memorandum mirëkuptimi ndërmjet Institutit të Statistikave dhe Drejtorisë së Përgjithshme të Tatimeve – there is only in Albanian



of enterprises with multi-locations, coverage of local unit updating local unit register with administrative source and improved quality of SBR.

But, despite legal provisions and this MoU, the use of administrative data is scarce, mainly because enterprises submit their financial statements on paper and additional administrative data sources (e.g. social security data) are identified and being used. Hence, additional work to edit submitted data would be needed to use these data (control and convert data it into electronic files). This makes it difficult and slows down the use of administrative data for statistical purposes.

As one of the ad-hoc activity for the ensuring comprehensiveness and accuracy of business data for the SBR was related with the Census of (Non agricultural) Economic Enterprises (Census) in Albania. The objective of the Census was to develop an updated statistical register according to the EU recommendations and standards. The Census was one of the main activities supported by the European Commission within the framework of IPA 2007 Project. The Technical Assistance for improvement of INSTAT statistical capacities is present from 2010. With their support this Census was significantly improved the quality of SBR and has allowed INSTAT to be able to produce more reliable, accurate and comparable economic statistics for its users.

INSTAT produced methodology material for the SBR in the form of the Quality reports (for 2012 and 2013). Within the framework of ESS, quality reporting represent an important process in providing users of these statistics with information relating to matters such as the relevance, accuracy and comparability of the statistics being reported on. The role of quality reporting is strengthened in the forthcoming revision of the basic legal framework for European Statistics, reflecting the critical importance of all aspects of quality in the world of statistics⁵.

The User Group of internal users of the SBR in INSTAT (SBR UG) is setting up on 2014 for identifying and determining the important list of enterprises (1500) for which the economic activity code should be fixed and consistent. SBR UG meets regularly to share experiences, plans and issues on the SBR.

Persons/household register – statistical population register (SPR)

While in the Project's ToR noted that "INSTAT maintains three registers that function as sampling frame for survey taking and as basic material for demographic statistics and national accounts: SFR, SBR, and the persons/ household register" - the reality is different. The persons/ household register –statistical population register (SPR) is not established in INSTAT. Instead of SPR, one data base produced in SAS as result of Population census 2012 is existing.

⁵ Statistical Business Register - Quality Report 2012, Drafted by: Ertugrela Curumi, Confirmed by: Flutura Sala, With the assistance of: Flutura Sala and Peter Thomas



The current situation with regard to SPR is:

- Instead of SPR, one data base are using as sampling frame for the social surveys in INSTAT;
- INSTAT have plan to update enumeration areas on September 2017 in this data base;
- INSTAT use data from General Directorate for Civil Status (GDCS) for the demographics statistics, mainly for the purpose of vital statistics and migration.
- Data from GDCS is retrieved quarterly, and.
- MoU between INSTAT and GDCS is signed 2010 but not fully implemented until now.

CHALLENGES AND POTENTIAL IMPROVEMENTS OF THE SBR

Although SBR variable definitions are according to EUROSTAT recommendations on Business Register, SBR has a lot of challenges and rooms for the improvements, even though a huge work has been done.

Challenge related with users needs:

- **Determination of turnover:** GDT doesn't provide to INSTAT data about enterprise's turnover This important variable is set in SBR from the Census but GDT. For updating of the turnover variable SBR use statistical sources but the coverage accuracy is in low level.
- **Business demography:** Administrative data provided by NRC are not enough complete to produce business demography. INSTAT provide some business demography information about births and deaths, but this information is partial. Administrative sources don't provide SBR with full information about deaths, dormant, merges and splits in this moment. There is also lack of employment data about 40%.
- **Enterprise Groups:** INSTAT wants to introduce this group, but different difficulties are faced to build up statistics about enterprise groups.

Challenge related with better data quality:

SBR has different types of users with different needs for each class. From the quality perspective, it is really important to determine the priorities to be given to the various classes and to determine the associated metadata needs of users. INSTAT defined and described the classes of users of SBR and their priorities. In this phase they are trying to fulfil all the SBR metadata according to the different user's needs.



Adress system

A serious problem in the quality aspect of SBR is related with the data collection - the wrong, incomplete or missing addresses. Albania have not established a unified address system. The address system in Albania has yet to be completed that's prevents easy identification of respondents locations. This is the reason that interviewers have difficulties in finding enterprises, especially the small ones in big cities like Tirana. Due to the lack of well-documented information about the addresses of enterprises, INSTAT collects SBS data directly from the enterprise through face-to-face interviews by enumerators. Additional staff members (controllers) perform logical controls of all SBS questionnaires.

Improvement actions:

- **INSTAT shall achieve agreements with data custodians** on the procedures for access to administrative data and to influence the future development of administrative register to facilitate better statistical use. INSTAT is aware of this shortcoming and has expressed willingness to update the turnover variable and improving SBR in this respect. In the coming year, SBR staff will handle with care each variable which is updated from both administrative and statistical sources.
- Starting Interoperability process on Governmental level. INSTAT should initiate and take co-ordinating role of the Interoperability process. One of the priorities for INSTAT from OSP 2017-2021 is to increase cooperation with the other institutions for improving the methods for transferring the economic data from the other institutions to INSTAT and for effectively using the administrative data. Future emphasis should be placed on the opportunity that enables existing memorandums of understanding signed between INSTAT and other producers of the official statistics or other public/non-public institutions that enable the establishment of joint groups to discuss the implementation of the statistical activities, future programmes, etc. These interoperability process could have an impact on raising the awareness of the relevant agencies about fulfilling their obligations deriving from the OSP 2017-2021 in terms of the statistical production, providing the data as well as better coordination in planning and exchange the official statistical data.
- In general, INSTAT should work with other governmental authorities in establish the Interoperability process with next benefits for INSTAT:
 - To institutionalise its contacts with administrative authorities by signing memorandum of understanding (MoU) or framework agreements with various administrative authorities to guarantee the data delivery needed for statistical production.
 - To be involved in process of strategic planning with the other producer official statistics
 - To be involved in process of data collecting with the other producer official statistics from early beginning



- To ensure that data needed both for administrative and statistical purposes are entered into computer-readable format at one point only in order to avoid duplication of work.
- Data entry should be done at an early stage in the process that leads to statistical production and should preferably be linked to activities for the digitalisation of economy and society.

From other side, INSTAT have to do:

- To prepare a common strategy for the using administrative data with appropriate action plan, which present the next activity of this project (Output 1a3.2: Strategy for the improvement of data sharing between the different parties of the national statistical system).
- Change the Law: INSTAT would find it helpful to pass the information it holds back to the GDT to enable it to improve the data, INSTAT is not permitted by the Law to supply identifiable microdata from SBR (names, addresses and NACE codes) to other state agencies.
- **Set up Enterprise Group Register in National Statistical Business Registers⁶.** IPA 2014 Multi-beneficiary statistical cooperation programme supported INSTAT firstly to establish an inventory of the potential sources of relationship information in the with special focus on administrative data sources until to define a process to maintain the data on relationships between legal units and enterprise groups in the statistical business register. In order to meet requirements of Regulation (EC) No 177/2008 of the European Parliament and of the Council, it is necessary to create in registered the control relationship information between legal and enterprise groups
- **Organize SBR survey.** The main goals of SBR survey is to measures Quality of SBR and to update this. The survey is planning to be yearly and to include as activity in five years National Statistical program.
- **Update automatically SBR.** Finalize and used the data model of business register is setting up in collaboration with Swedish Expert and set up an IT application /interface that will be integrated with data model. Business Register 2015 is updating in automatically way used data model and final result will compare. An interface that will be integrated with the data model of business register is setting up.
- **Create a live register.** Using data model and interface of SBR by internal users and automatically update will create a live register that will used by National Account and Economic statistics for their purposes. In future to use by external users
- **Set up data for the Euro Groups Register (EGR).** EGR is the statistical business register of multinational enterprise groups having at least one legal unit in the territory of the EU or EFTA countries with the aim to facilitate the coordination of survey frames in the European Statistical System (ESS) for

⁶ Country progress report 2015, Wiesbaden Group on Business Registers, International Roundtable on Business Survey Frames, Tokyo, 2016



producing high quality statistics on global business activities, like Foreign Affiliates Statistics and Foreign Direct Investment statistics. The EGR frames are accessible to all national statistical authorities - national statistical institutes and national central banks - responsible in the ESS of producing official statistics. The data of EGR frames are disseminated via EDAMIS⁷.

Revision policy

The policy and procedures related to the revision of official statistics doesn't exist in INSTAT. Also, SBR doesn't produce preliminary or revised publications. For this reason, the analysis in the aspect of timelines and punctuality can be made only for the final publication. In June, is scheduled for release the aggregated data with information of the previous year for enterprises in Albania. So the transitional period of data publication from reference period is six months. The frozen file is ready in April. Despite the fact that there is no international recommendations about a fixed transitional period, INSTAT staff express need to shorter this transitional period as much as possible from relevance and timeliness reasons.

Improvement action:

A revision policy shall be developed and made public, describing principles and guidelines for the producers⁸.

Response Burden

The degree to which a survey respondent perceives participation in a survey as difficult, time consuming or emotionally stressful is known as respondent burden⁹. The respondent burden is important instrument for administering a survey in EES. In the. But BS in INSTAT still not implemented the respondent burden policy.

Report on sector review of the Business statistics in Albania, 2015 states necessity of improvement of using the administrative data to reduce the response burden. Current collaboration of INSTAT with NRC and GDT confirm that there are significant benefits in utilizing administrative data not only for the production of statistical outputs that could not otherwise be produced, but also for the reducing response burden. Increasing response ratio (as effect of the reducing response burden for the other surveys) also provide better efficiencies and reduction of INSTAT's costs.

Improvement actions:

The main improvement actions:¹⁰

⁷ <http://ec.europa.eu/eurostat/web/structural-business-statistics/structural-business-statistics/eurogroups-register>

⁸ LPR 15

⁹ Encyclopedia of Survey Research Methods, Edited by: Paul J. Lavrakas, SAGE Publication, <http://dx.doi.org/10.4135/9781412963947.n477>

¹⁰ LPR 15



- a. Implementation of a device for response burden measurement
- b. Routine wise application of the web form questionnaire
- c. Set a numerical target for the reduction of response burdens in the next five year programme
- d. Regularly measure the response burden of business surveys
- e. Organise a publicity campaign for the promotion of web data collection

In future plans INSTAT are going to put some questions that can contribute to respondent burden in survey¹¹:

- Frequency of being interviewed,
- Interview duration,
- Cognitive complexity of the question,
- Required respondent effort, and the
- Stress of psychologically invasive questions.

NACE Coding on the SBR, SBS, STS and administrative sources

To have a full comparability of the statistical products is one of the main targets to INSTAT. Until now, this is not fully implemented, even though some improvements in this direction are done. During the update of the Business Register there are some automated procedures that check NACE code errors. In the past STS and SBS were separately NACE coding. The new procedure for updating this variable with the correct one was established: a label in the questionnaire with prefilled identification variables (including NACE 2-digit code) are introduced. This procedure has improved the NACE code changing, so better comparability between SBR, STS and SBS.

Even these improvements some incomparability exist¹²:

- Activity descriptions in NRC and GDT datasets are **very difficult to encode**.
- **Incomplete activity description** like pastry products, construction, transportation, carpenter etc.
- **Codification in division level** like 4500, 9100 (not valid 4-digit codes).
- **Erroneous codification** even if there is a clear activity description (about 20% of NRC codes, are corrected by their manual control).
- **Administrative information results with erroneous codification**, while in the NCE Survey even if the activity description is shorter additional information to define the right NACE code is needed.
- **The same activity description in STS and SBS result in different codification.**
 - SBS have additional information about products and they must extend the description details (for example clothing production).

¹¹ MB IPA 2011 Pilot Project: 19 Business Registers, "NACE ad hoc Mission to INSTAT" Tirana, 7 to 9 May 2014, Peter Thomas, GOPA

¹² Statistical Business Register - Quality Report 2013, Drafted by: Ertugrela Curumi, Confirmed by: Flutura Sala, With the assistance of: Flutura Sala and Peter Thomas



- NACE code in the SBS is more accurate, but not updating of the real activity description creates confusion (the same happens with construction activity). The right codification should be accompanied by changing or filling the right activity description.
- Changes to the SBS sometimes don't compare with the SBR and even with the respective year of STS; this is one of the main reasons why, for the same period of time, different codification in SBR exist.
- **Different judgment from staff** that control the activity and codification of the survey.

The comparisons of frozen file 2013 and survey data on NACE codifications are¹³:

- **SBS**: out of 9802 enterprises, 1335 have changed the NACE code from one year to another (13.6 % of the sample and 1% of the register) from the SBR 2012
- **STS**: out of 7743 enterprises, 1638 have changed the NACE code from one year to another (21.15% of the sample and 1.4% of the register)

Improvement actions:

To fully resolve the issue of inconsistency of NACE, coding between the SBR and/or SBS and STS is recommended to INSTAT:

- To determine, who in the organisation is the ultimate arbiter of what is the right NACE code for a business. For this recommendation to work properly it does need to be supported by SBR UG and also by **a well documented procedure**
- To carry out some action in terms of what data is collected in its SBR, SBS and STS surveys concerning business descriptions. At present businesses included in all of these surveys (which will be the case for larger businesses) are providing their business description three times. This uses resources of INSTAT as these business descriptions are coded to NACE, imposes a burden on the businesses as they provide the same data multiple times, and causes issue of comparability in the INSTAT statistical outputs.

¹³ Statistical Business Register - Quality Report 2013, Drafted by: Ertugrela Curumi, Confirmed by: Flutura Sala, With the assistance of: Flutura Sala and Peter Thomas



INSTEAD OF A CONCLUSION: FUTURE USES AND FUTURE ROLES FOR THE SBR

Challenge related with future development or SBR for the 2017-2021 period

Increase cooperation with the other institutions for improving the methods for transferring the economic data from the other institutions to INSTAT and for effectively using the administrative data.

Based on these objectives, the innovations that are expected to be introduced by the Program of Official Statistics for 2017-2021 (OSP 2017-2021) include:

- Economic statistics, including statistics of prices, enterprises, and exchange of goods, which are transparent, reliable, professional, qualitative, and timely;
- Calculation methodologies updated according to Eurostat recent recommendations and reviews;
- New statistical products;
- Tourism Statistics;
- Regional Structural Statistics;
- Statistics on Research and Development, and Innovation;
- Memoranda of Understanding with the ministries and other institutions for exchanging statistics;
- Calculation of the statistical indicators from a better use of the administrative sources for reducing the burden of enterprises;
- New technologies for collecting information from the statistical units;

Almost all of this innovations are related with SBR and they indicate the future direction of development of SBR in a form of priority are:

- Quality maintenance and update of the statistical registers of the economic units;
- Production of quality indicators of the statistical business registers;
- Creation of a statistical register of multinational enterprises according to EU standards;
- Treatment of the demographic events of the economic units;



Challenge related with future development or SBR after 2021 period

For the future period of development of SBR, INSTAT have to follow new experiences and new developments in statistical business registers, going beyond the classical role of serving the producers of business statistics¹⁴. Several factors were advancing new uses and new roles for statistical business registers, including:

- (a) Need for improved efficiency;
- (b) Need to investigate and better understand the effects of globalization;
- (c) Challenges from private producers of information;
- (d) Possibilities offered by new technologies and access to big data.

For **newer registers**, the current role was to become the unique survey frame (backbone) for business statistics.

In the case of **more mature statistical business registers**, there was a trend to go beyond providing frames for the traditional users, such as business statisticians, to become service providers, targeting new users and offering new services, including for certain non-statistical purposes.

- A role for statistical business registers as sources of information for analytical purposes.
- Integration with other registers and the creation of more (or less) complex systems, including their integration with social and other administrative registers.
- Using geocoding and testing web-scraping techniques.

Many activities were being undertaken to modernize statistical business registers in order to make them more efficient and more able to meet the different kinds of needs and requirements. Most of these developments deserve further follow-up and, possibly, dedicated sessions at future international forums with the aim of analyzing and mainstreaming relevant trends and providing guidance on best practices.

¹⁴ Report of the Wiesbaden Group on Business Registers, Statistical Commission, Forty-eighth session, 7-10 March 2017



STATISITICAL PERSONS/HOUSEHOLD REGISTER (SPR)

Current status of Population register in INSTAT is that the persons/ household register –statistical population register (SPR) is not established in INSTAT. Instead of SPR, only one data base produced in SAS as result of Population census 2012 is existing. This data base is using as sampling frame for the social surveys in INSTAT.

INSTAT use data from General Directorate for Civil Status (GDCS) on the quarterly basis for the demographics statistics, mainly for the purpose of vital statistics and migration. INSTAT have plan to update enumeration areas on September 2017 in this data base.

The Memorandum of Understanding (MoU) between INSTAT and GDCS, signed in November 2010, allow the building of an interface that enable INSTAT to access the NCR.

The INSTAT – NCR Interface According to the MoU between INSTAT and GDCS, data should be made available to third parties, and government institutions in particular. They should be able to get access to services and data through the online system of NCR, in accordance with the legislation in force. Mol is also committed to provide third parties and government institutions in particular, access to data on addresses in Albania, which will be facilitated by the National Register of Addresses (NRA), when this system will be completed.

Given that, INSTAT, based on the law No. 8669, dated 26.10.2000, "On the general census of population and households" is responsible for conducting the Census in 2011, the MoU ensures the availability to INSTAT of the expertise, technological capacity and necessary information from the Ministry of Interior. They are to do this by contributing to facilitate the work of this institution for the development of an electronic interface, through consultation of the data of the NCR and NRA. The SN project has developed an interface to facilitate the transfer of data.

Technical details of the interface build by the project IT INSTAT needed to compare its own population register with the NCR. The INSTAT population register is created by the 2001 Census, while the NCR database is daily updated by the local CS offices. Matching this information on both registers will serve creating a more reliable source of information.

Statistics Norway developed a web interface in order to allow INSTAT perform matching of its own data with the NCR. At the GDCS's server room, there are two servers configured by SN staff for the purpose of this application. It is one web server that runs the business logic and one database server that runs the stored procedures, matching algorithms and stores the data.

According to the plan, the software should have been ready by the end of June 2011. **The initial plan to final delivery of the product has later been approved by INSTAT never done until now.**



FUTURE STEPS FOR SPR

- Start consultations inside INSTAT related with future strategy for the SPR
- Consider status and functionality of existing software solution developed by Statistics Norway (see Annex 4)
- Consider the existing MoU signed with GDCS
- Evaluate existing data from GDCS civil register
- Preparing the procedures for the establishing SPR in INSTAT



ANNEX 1: ABBREVIATIONS AND ACRONYMS

AAS – Annual Agriculture Survey

AKSHI - National Agency on Information Society in Albania

ASS - Albanian Statistical System

BR – Business Register

BS – Business Statistics

Census - Census of (Non-agricultural) Economic Enterprises

CSO - Civil Status Offices

EDAMIS - Eurostat's system for data exchange with countries

EFTA - Member States: Iceland, Liechtenstein, Norway and Switzerland. Norway and Switzerland

EGR - Euro Groups Register

ES – Economic Statistics

ESS - European Statistical System

EU – European Union

EUROSTAT - Statistical Office of the European Union

FDI - Foreign Direct Investment

GDT - General Directory of Taxation

GDCS - General Directorate for Civil Status - the Drejtoria e Përgjithshme e Gjëndjes

INSTAT - Institute of Statistics of Albania

ID - Identifier, a symbol which uniquely identifies an object or record

IT – Information Technology

IP - Internet Protocol Address

IPA - Instrument for Pre-accession Assistance

LPR 15 - Report on Limited Peer Review of the Institute of Statistics of Albania, 2015

LUS - Local Units Survey (Anketa e NJësive Locale - ANJL)

MB IPA 2011- Multi-beneficiary statistical cooperation programme for 2011



MoI - Ministry of Interior

MoU - Memorandum of Understanding

NA - National Account

NACE - Statistical classification of economic activities in the European Community

NCR - National Civil Register

NIPT - Albanian to English translation of Tax *ID Number*

NRC - National Registration Centre in Albania

OSCE - Organization for Security and Co-operation in Europe

OSP 2017-2021 - Official Statistics Programme for the period 2017-2021

PPI - Production Price Survey

RSO - Regional Statistical Offices in INSTAT

SAS - Statistical Analysis Software - a *software* suite developed by SAS Institute

SBR – Statistical Business Register in INSTAT

SBS - Structural Business Survey

SBR UG - SBR User Group

SIDA – Swedish International Development Cooperation Agency

SN - Statistics Norway

SPR – Statistical Persons/ household Register

STS - Short Term Statistics

ToR - Terms of Reference

VAT - *Value-Added Tax*



ANNEX 2: OVERALL ASSESSMENT OF STATISTICAL BUSINESS REGISTER (SBR) IN INSTAT

Background

The statistical business register (BR) plays a central role in the production of economic statistics, both in terms of the way the statistics are produced and in terms of their content and quality. Traditionally the function of the statistical BR has been to provide a population of statistical units from which frames and samples for economic surveys can be drawn, also to provide the tools for monitoring survey samples and response burden.

Today, however, the statistical BR fulfils two other important roles:

- **First**, it is crucial in the integration and use of data from administrative and other sources.
- **Second**, a well-developed statistical BR with a comprehensive list of enterprises and other statistical units, and information about their characteristics, can be used as a source of economic statistics in its own right. Business demographics can be derived directly.

New statistics can be produced by combining information from the statistical BR with information from other statistical registers and administrative sources. Thus, the statistical BR is the backbone in the production of economic statistics, in ensuring coherence across the various statistical outputs, and in developing efficient statistical production processes.¹⁵

Statistical business register in INSTAT (SBR)

SBR include all legal unit registered to National Registration Centre (NRC) or to Tax offices. All legal units are identified by the unique code, NIPT, carried on economic activity in Albanian territory. The main goal of statistical business register in INSTAT (SBR) is to set up a national business register harmonized and based on BR Regulation¹⁶. SBR has to: permit the collection of information about them via administrative sources, provide a sampling base for surveys, coordination of surveys, and for grossing up survey results¹⁷.

¹⁵ Guidelines on Business Registers, United Nations Economic Commission for Europe, Geneva, 2015

¹⁶ The BR Regulation was adopted by the European Parliament on 25 October 2007 and by the Council of Ministers of the European Union on 21 January 2008, coming into force on 25 March 2008.

¹⁷ Country progress report 2015, Wiesbaden Group on Business Registers, International Roundtable on Business Survey Frames, Tokyo, 2016



Concretely, SBR is used for statistical purposes aiming to identify clearly the economic units in order to¹⁸:

- Make possible the collection of information about them via administrative sources;
- Provide a sampling base for surveys, coordination of surveys and for grossing up surveys results;
- Make possible demographic analysis of the population of enterprises and their associated units.

SBR is a base for the compilation of the statistics needed to provide indicators of both short-term and structural economic developments.

INSTAT first built up Administrative Business Register in 1994 and since 1998 has maintained a Statistical Business Register (SBR). This register for ten years was based on administrative data provided by the General Directory of Taxation (GDT), and from 2007 also on data from the National Registration Centre, (NRC). The main re-engineering of the register was in 2005.

Following the EU recommendations, INSTAT has created and maintains a Statistical Register of Enterprises and a Statistical Register of Local Units¹⁹.

- **The enterprise is the main statistical unit on the SBR.** An enterprise is: “the smallest combination of legal units that is an organizational unit producing goods or services which benefits from a certain degree of autonomy in decision-making, especially for the allocation of its current resources. An enterprise carries out one or more activities at one or more locations (local unit)”. The relationship between an enterprise and a legal unit is therefore defined as: “the enterprise corresponds either to a legal unit or to a combination of legal units”.
- **Legal unit** is not direct statistical unit. Legal Unit can be: Legal person, whose existence is recognized by law independently of the individuals or institutions which may own or are members of him; Physical person, who is engaged in an economic activity in its own right. The Legal Unit is established for a business at the time of its first registration in line with the legal requirements of Albania. In INSTAT each legal unit equates to one enterprise on the SBR. The enterprise data held on the SBR supplements the data of the legal unit with additional statistical data.
- In addition to the Legal Units and Enterprises, **Local Units** are the third type of unit for which data is held on the SBR. The local unit is an enterprise or part thereof (e.g. a workshop, factory, warehouse, office, mine or depot) situated in a geographically identified place. At or from this place economic activity is

¹⁸ Business Register 2015, Prepared by Flutura Sala and Leonora Gjini, INSTAT 2016, http://www.instat.gov.al/media/331402/regjistri_ndermarrjeve_2015.pdf

¹⁹ Statistical Business Register - Quality Report 2013, Drafted by: Ertugrela Curumi, Confirmed by: Flutura Sala, With the assistance of: Flutura Sala and Peter Thomas



carried out for which – save for certain exceptions - one or more persons work (even if only part-time) for one and the same enterprise. The Register of Local Units are mainly used for producing regional statistics, for calculating the regional indicators.

The SBR follows the practice of many European countries in being based on the data requirements set out in the EU's Business Registers Regulation and its supporting Business Registers Recommendations Manual²⁰. Data provided from the administrative sources in Albania (GDT and NRC) feed into the INSTAT SBR. They are supplemented with data collected from INSTAT business surveys, such as Structural Business Statistics (SBS) and Short Term Statistics (STS).

Pursuant to Decision of Council of Ministers No. 320, dated 28/05/2014, the Reviewed Nomenclature of Economic Activities, NACE Rev.2, is applied in the economic statistics and in the entire public administration. The consultation application published on the web page of INSTAT has facilitated the work for using NACE Rev.2 in correspondence with NACE Rev.1.1 by the institutions of public administration and other users. The Reviewed Nomenclature of Economic Activities, NACE Rev.2, is fully applied in the statistical registers of the economic units for 2005-2015²¹.

SBR covers:

- All businesses in Albania registered in NRC;
- Public institutions;
- Non Profit Organizations, and
- International Organizations.

All the businesses in Albania take an identification number from the NRC when they are registered.

The variables of SBR are divided into three main categories:

1. Identification variables:

- ID number (NIPT),
- Legal form,
- Ownership,
- Name,
- Address,
- Communication (Tel, Fax, etc.)

2. Stratification variables:

- Main economic activity,
- Size by employed,
- Geographical location,
- Institutional sector);

²⁰ Business registers, Recommendations manual, 2010 edition, Luxembourg: Publications Office of the European Union, 2010, ISBN 978-92-79-14659-6

²¹ OSP 2017-2021



3. Demographic variables:

- Date of creation,
- Date of cessation.

Users of the SBR

Users of the SBR are classified in four levels²²:

1. Internal users, which are users within the institution of INSTAT:

- National Account Sector
- Methodology
- Indices Sector (especially for the update of VAT file with NACE codification)
- Survey Control Sector
- IT sector
- Regional Statistical Offices (RSO)

2. External users are students, researchers, businesses, governmental institutions and others people that use our data for research purposes. All publications (paper based) are sent to several institutions, especially Ministry of Economy, Trade and Energy which requires information about Small and Medium Enterprises

3. EUROSTAT - fulfill the annual questionnaire in the section Business

4. World Bank. The last two years fulfilled a questionnaire about enterprises data in Albania (Entrepreneurship Survey)

Dissemination

Depending on user's type, INSTAT have different dissemination channels:

For internal users:

- A dataset (microdata) frozen file of SBR in Microsoft Access format, which is enabled in the internal network for each internal user;
- RSO receive an Excel file with micro data for the respective district they belong to.

The main reason why the data from SBR is distributed to RSO is:

1. To verify information especially for the enterprises part of the sample of survey.
2. To prepare data for the statistical yearbook at district level and data for external users.

External users can access aggregated data through INSTAT website, paper publications and they also can send specific requests. Beside data (micro data or

²² Statistical Business Register - Quality Report 2013, Drafted by: Ertugrela Curumi, Confirmed by: Flutura Sala, With the assistance of: Flutura Sala and Peter Thomas



aggregated) according to type of users and user's needs, INSTAT provide a short definition for the main concepts used and some methodological materials. No information of accuracy is provided. Additional support information is given to internal users when needed, but any supporting documentation attached to published data don't exist yet.

In 2016, INSTAT published complex publication named Business Register 2015²³. This publication are available in pdf format on INSTAT web site and contains all the information that can be considered a significant figures from SBR²⁴.

In addition, INSTAT offer tailor made reports (tables) produced from statistical databases realised with a PX-Web user interface for the external users. This opportunity also exist for the SBR (figure 1)²⁵. Users can compile tables by selecting classes from the variable-specific drop-down menus. PX-Web then produce a table with the selected classes and this table can be freely pivoted in the browser and can also be saved in various export file formats.

²³ Business Register 2015, Prepared by Flutura Sala and Leonora Gjini, INSTAT 2016,
http://www.instat.gov.al/media/331402/regjistri_ndermarrjeve_2015.pdf

²⁴ http://www.instat.gov.al/media/331402/regjistri_ndermarrjeve_2015.pdf

²⁵ General user instructions for INSTAT PX-Web Statistical Database,
<http://databaza.instat.gov.al/pxweb/en>

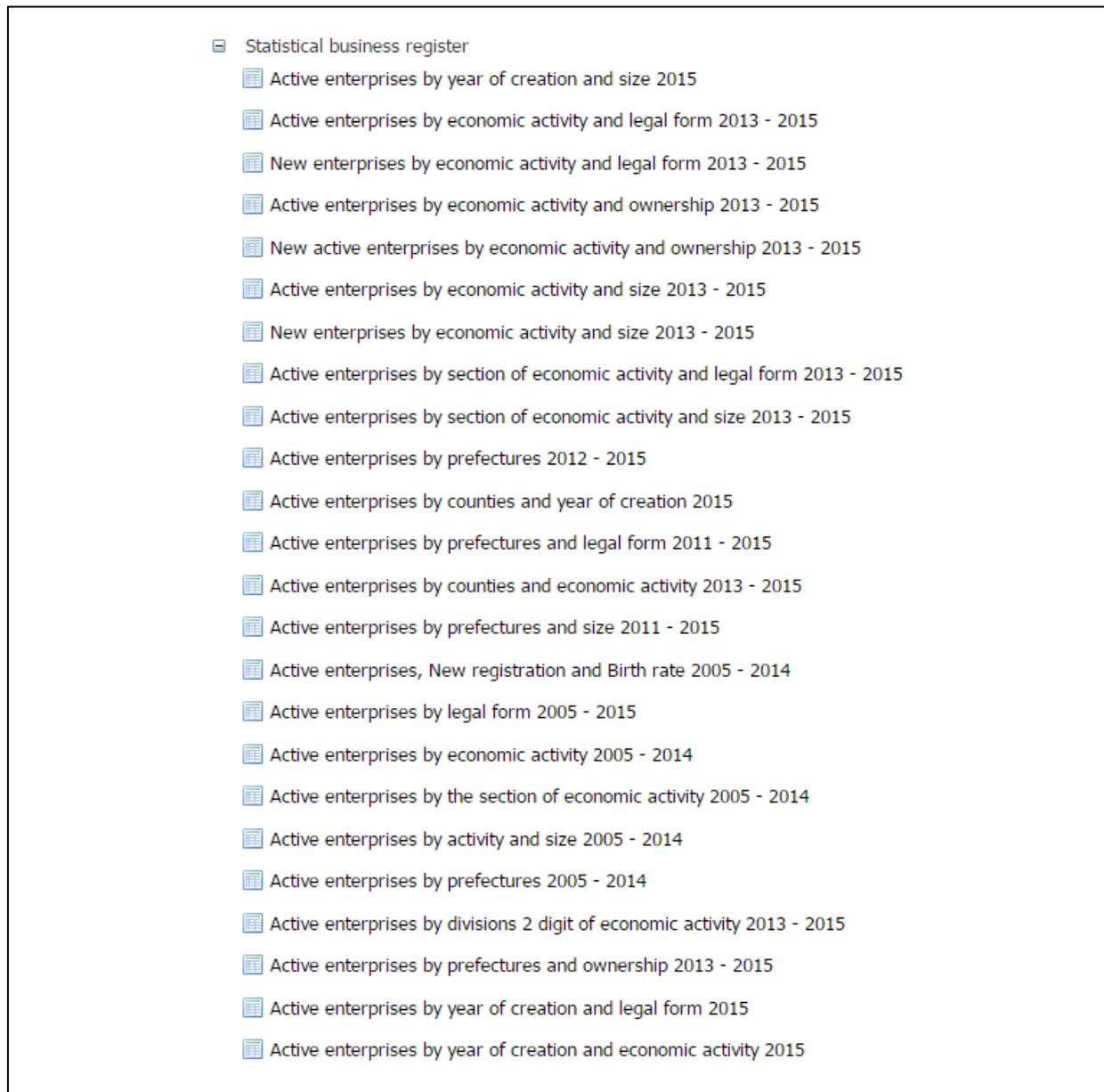


Figure 1. PX-Web user interface for the SBR

Indicators and figures produced from SBR²⁶

- Statistical business register at the end of 2015 counts 152.288 active companies.
- Compared with year 2014 where SBR counted 112.537 active companies at the end of 2014, increasing by 26% (Figure 2).
- Enterprises with main activity “Trade” and “Accommodation and food service activities” dominate with 50.0 % of total number of active enterprises.

²⁶ Business Register 2015, Prepared by Flutura Sala and Leonora Gjini, INSTAT 2016, http://www.instat.gov.al/media/331402/regjistri_ndermarrjeve_2015.pdf

- Enterprises with 50 and more employed in the group of producers of goods are concentrated in manufactured activities.
- Producers of services continue to dominate in economy and mainly wholesale and retail trade.
- Trade activity continues to be the most favourites when deciding for a new business and represent 27.3 % of total enterprises registered in 2015.
- Approximately 90 % of enterprises are at group from one to four employed.
- The major part of them, 61.8 % have only one employee.

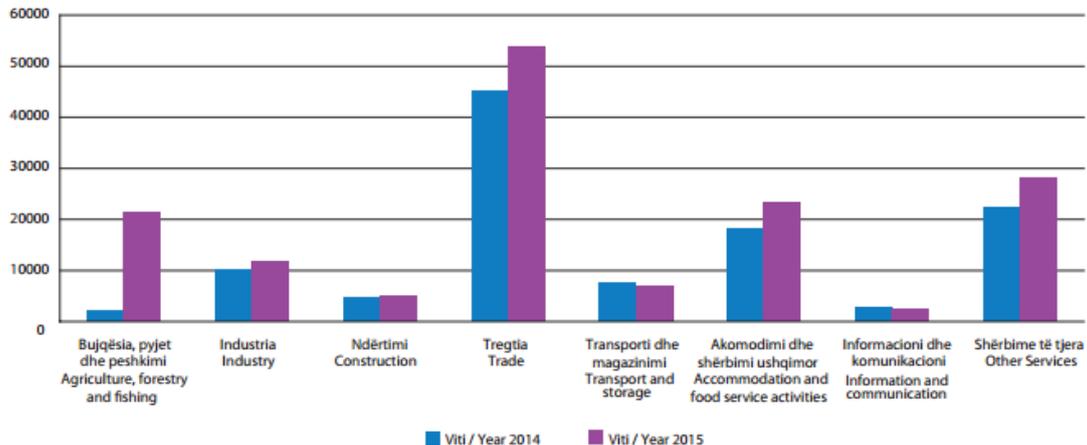


Figure 2: Active enterprises by economic activity, 2014-2015 (Ndërmarrjet aktive sipas aktivitetit ekonomik, 2014-2015)²⁷

INSTAT includes some additional data items on its SBR for the national purposes. For example is the role of woman in business (like entrepreneur, managers and administrators). For instance:

- 31.3 % of enterprises are directed by female.

Since 2005 some kind of metadata exists in SBR databases and provided to external users in web through the system Pc-Axis. Actually in INSTAT, metadata system "META PLUS" are implemented, supported by SIDA project. In the near future, metadata of SBR will be provided to external users through web and for internal users as well.

Excepting internal users, INSTAT do not publish anonymous micro data. Aggregated data is the only type of data that SBR team provide to our external users.

Maintenance of a SBR

²⁷ Business Register 2015, Prepared by Flutura Sala and Leonora Gjini, INSTAT 2016, http://www.instat.gov.al/media/331402/regjistri_ndermarrjeve_2015.pdf



The production and maintenance of a SR is a complex, ongoing process involving data collection and integration of data from different sources, including subject area surveys, censuses and administrative registers. The key objective of maintenance SR is to update the coverage and content of the SR, taking into account continuity and stability rules, according to a well-defined calendar, and in as timely a fashion as the information sources allow. The basic aim is to provide economic surveys with sampling frames that are accurate and as up to date as possible.

The maintenance of SR should not be regarded as an isolated operation but as part of a coordinated approach towards the joint development of statistical and administrative registers, although care must always be taken that the interests of a business will not be harmed by the transfer to other authorities of information it has given to the statistical institute. The document ‘Fundamental Principles of Official Statistics in the Region of the Economic Commission for Europe’ adopted by the Member States of the Economic Commission for Europe contains the following two principles that are relevant in this context:

- Principle 5. Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.
- Principle 6. Individual data collected by statistical agencies for statistical compilation, whether it refers to natural or legal persons, is to be strictly confidential and used exclusively for statistical purposes.

According to INSTAT’s organisational structure, SBR is organised as Business Register Unit under the Economic Statistics Directory and has 3 of employees. SBR hold all non-agricultural legal units (enterprises and institutions) that perform their economic activity inside Albanian territory.

SBR is managed from the specialists of „Management of Databases and Metadata” Sector. The staff is involved in the procedure of data collection, data control, register update and maintenance is both permanent and temporary (table 1).

Number of staff involved in SBR are presented in table 1.

Position	Number of employee/s
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Managerial staff	1
Specialist staff	2
Surveyors	55
Supervisor staff	1
Operator staff (5months employee/s)	1
Total	60

Table 1. Staff involved in SBR²⁸

The surveyors are hired four times a year for the respective surveys:

- Newly Created Enterprises with the total sample of 3596 enterprises for 2013 (quarterly survey).
- Local Unit Survey (LUS) with the sample of 2068 enterprises for 2013 (yearly survey).

Business Register updating procedure starts at the beginning of the year and in April of every year, a frozen file of the register is prepared with data for the previous year.

The updating variables are:

- Enterprise status;
- Number of employed;
- Main activity description;
- Four digits NACE;
- Ownership;
- Legal Form;
- Identification variables (name of enterprise, name of the president, phone no. fax, e-mail and web);
- Address.

For updating SBR INSTAT using:

- **External** (administrative) data sources: National Registration Centre (NRC) - since 2007, General Directory of Taxation (GDT), Ministry of Finance, etc.
- **Internal** (statistical) data sources: Short-Term statistics (STS), Structural business statistics (SBS), Annual Structure Survey, Quarterly Survey, Production Price Survey (PPI), Local Unit Survey (LUS) ; etc.

²⁸ Statistical Business Register - Quality Report 2013, Drafted by: Ertugrela Curumi, Confirmed by: Flutura Sala, With the assistance of: Flutura Sala and Peter Thomas



External source - administrative data sources:

NRC and GDT are the primary sources for updating the enterprise status. VAT file and annual financial statements of enterprises are the main administrative data sources. INSTAT treat as active all the enterprises that for minimum one month of the respective year have reported turnover, import or export to the Tax Authority.

Memorandum of understanding (MoU) between INSTAT and GDT was signed in 2015 includes more information from Tax, especially for local unit and employment²⁹. INSTAT receives enterprise level data from General Directorate of Taxes (GDT) including the NACE classification of each enterprise. This data allowed INSTAT to increase coverage of enterprises with multi-locations and coverage of local unit updating local unit register with administrative source. In this manner is improved quality of SBR.

Despite legal provisions and MoU with GDT, the use of these administrative data is scarce, mainly because enterprises submit their financial statements on paper. Hence, additional work to edit submitted data would be needed to use these data. INSTAT receives hard copies of enterprises “annual financial statements” (profit and loss accounts, etc.) from the GDT and / or NRC. Additional work is needed to edit this information and convert it into electronic files. Additional administrative data sources (e.g. social security data) are identified and being used. This makes it difficult and slows down the use of administrative data for statistical purposes. INSTAT has to spend its own resources in rearranging the information in a format that is suitable for statistical production. In many cases INSTAT has to correct these, using its own information.

While INSTAT would find it helpful to pass the information it holds back to the GDT to enable it to improve the data, INSTAT is not permitted by the Law³⁰ to supply identifiable microdata from SBR (names, addresses and NACE codes) to other state agencies.

The identification code used in administrative sources is the same as the one used in SBR for BS surveys (NIPT code).

Internal source - statistical data sources

For updating procedure, three main comparable statistical data sources are using for updating SBR in INSTAT. Based on the priority list: Local units survey (LUS), which provides corrections for most fields in the SBR (identification characteristics, activity code and employment). This source is also the only source used for updating the Local Unit Register. The second statistical data source used to improve the SBR is the STS, and the third one is the SBS.

²⁹ Memorandum mirëkuptimi ndërmjet Instituti i Statistikave dhe Drejtoria e Përgjithshme e Tatimeve – there is only in Albanian

³⁰ Law no. 9180, dated 05.02.2004 "official statistics",



For the some updating procedure INSTAT compare information from administrative sources and statistical information:

- All the enterprises that result dead from the administrative dataset, but have declared activity from INSTAT information will remain active for the current year.
- Updating procedure of the employment data INSTAT use information from surveys and administrative sources like Social and Health Insurance file.
- Activity code NACE Rev. 2 is updated for all enterprises that change their main activity and even for the new enterprises.
- For updating the ownership INSTAT use information from FDI survey (Foreign Direct Investment) and SBS.
- For Public Institution INSTAT use the data provided by the Ministry of Finance. Contact variables are updated from aforementioned sources according to the priority.

As one of the ad-hoc activity for the ensuring comprehensiveness and accuracy of business data for the SBR was related with the Census of (Non-agricultural) Economic Enterprises (Census) in Albania³¹. The Census was one of the main activities supported by the European Commission within the framework of IPA 2007 Project. The Technical Assistance for improvement of INSTAT statistical capacities is present from 2010. With their support this Census was able to significantly improve the quality of SBR³².

The objective of the Census was to develop an updated statistical register according to the EU recommendations and standards. Through this register, INSTAT would be able to produce more reliable, accurate and comparable economic statistics for its users.

The particular aims of the Census were to:

- Improve the quality of the existing SBR variables and adding new variables (turnover, etc.) for existing Legal Units and Enterprises;
- Set up double classification of the activity according to the existing classification/nomenclature NACE Rev. 1.1 and the new one NACE Rev. 2
- Establishment of the Local Units Register. Among other uses, these local unit data will serve as basis to calculate the Albanian regional statistical indicators;

In order to collect information for the local units according to EU requirements, a special section in the Census questionnaire was introduced. To keep this structure of local units up to date, in 2012 INSTAT started a new annual survey. In this multi-

³¹ Census of non-agriculture economic enterprises, 2010, INSTAT, 2012, http://www.instat.gov.al/media/154917/census_2010.pdf

³² Statistical Business Register - Quality Report 2013, Drafted by: Ertugrela Curumi, Confirmed by: Flutura Sala, With the assistance of: Flutura Sala and Peter Thomas



location enterprise survey are included all the enterprises with multi local units, as well as any other enterprise with more than 50 employed (big enterprises). The questionnaire is prepared with pre-printed information from Local unit register for the previous year. The addition of a question to the SBS for reference year 2013, asking for businesses to say if they have more than one local workplace is going to help for the future. It is to be hoped that INSTAT will move to a position, whereby will be Local Unit data of acceptable quality on the INSTAT BR in a year or two.

In 2014 new territorial division was approved in Albania. The new territorial division was implemented to SBR 2014 as well as frozen SBR 2010-2013.

Although SBS provide turnover and employment breakdowns, these data are of low priority because data collected through SBS on main economic activity are based on the previous year. In order to avoid this INSTAT has created an SBR of internal users group (SBR UG) in 2014 for identifying and determining the important list of enterprises (1500) for which the economic activity code should be fixed and consistent.

The leader of SBR UG is Director of Economic Statistics and members are:

- Heads of Economic Statistic (ES) Directory;
- Heads of National Accounts(NA) Directory;
- Head of Labour market and salary Statistics Unit.

The SBR UG meets regularly to share experiences, plans and issues on the SBR.

Under the Project IPA 2011 Multi-Beneficiary Programme on Statistical Cooperation, "Improvement of Quality of NACE Rev2 Coding in Albania" lot of things are done³³:

1. Identified the level of quality of NACE Rev. 2 coding on the SBR;
2. Corrected NACE Rev. 2 codes - particularly for the larger businesses;
3. Identified the issues that are contributing to inaccuracies in the NACE Rev. 2 codes on the SBR, and
4. Provided guidance and training as necessary to address issues identified.

To control the accuracy of NACE Rev.2 on the SBR was inspected all the enterprises 4-digit NACE code and their correspondent activity description. The results of the check the enterprises with 10 or more employed as the most sensitive information they carry about the Albanian economy showed a very good quality position for the SBR. For larger units on the SBR, the NACE code allocated is consistent with the business description in 99.5% of cases at the 2-digit level, and

³³ MB IPA 2011 Pilot Project: 19 Business Registers, "NACE ad hoc Mission to INSTAT" Tirana, 7 to 9 May 2014
Peter Thomas, GOPA



98% at the 4-digit level. Additional benefit was to identified and corrected the erroneous NACE codes

In the frame of implementing the new NACE Rev2, in INSTAT was build a consultative application. The aim of this application was to facilitate the process of codification for all the staff that works on nomenclature and codification of the activity. This application was really useful in the transitional period from NACE 1.1 to NACE Rev.2. A new web application with the same functionalities is developed from INSTAT IT staff.

In 2015. SBR team analysed a list with 4900 enterprises and proposed NACE (4digit) for each of them to SBR UG. The list was consulted with expert from SBS, STS, PPI and National Account and was approved by NA and ES Directors. The list will be frozen and if some information is coming for changing economic activity, the group will study and approved or not changes in NACE. The list includes 4.3% of total active enterprises, but covers 57% of total number of employed in SBR. The SBR is updated regularly, yet staff members have expressed concerns regarding the quality and sources used for these updates because use of these sources prevents proper identification of births and deaths of enterprises. However this approach can cause errors in the codification of enterprise activity and inconsistency between SBS and business demography data. This leads to bias in the coverage of the SBR and to concerns within INSTAT regarding the compilation of business demography data³⁴.

INSTAT prepared the first tables related to Business Demography in line with the requirements set out in the SBS Regulation Annex IX. The requirements of Annex IX look quite complex but the greatest part of the detail is the complexity of the NACE breakdown that has to be set up – but once this is done for one Annex IX BD table it applies to the others.

For the moment INSTAT produced only some of these tables. Future plans are depending of using the administrative sources on proper way to fulfill INSTAT requirements and international standard, to substitute the newly created enterprise survey with another survey that treats business demography issues.

In terms of punctuality, the release date of data is the same as scheduled date for release as announced in the official release calendar. This timeline is important for internal users of SBR as a source for sampling frame for their surveys. The frozen file is used for preparation of the business survey samples; for coordination of different business surveys; calculation of GDP; updating information about enterprises; calculating aggregated data for external users etc.

In collaboration with Swedish experts from under SIDA project an IT application is set up for updating and managing the registers of economic units and the production of their statistical indicators, which will enable the automatic update of the registers,

³⁴ Sector Review – Business Statistics – Albania, 2016



and the creation of a “life register”. This application will simplify and optimize the work done on the requests coming from other sectors. The interface is for internal use, and information in the SBR will be accessible for different INSTAT sectors.

Quality:

Data sources and data collection methods are crucial for the coverage and quality of the statistical business register, including its timeliness. The quality of the statistical business register has direct implications for the statistics that draw on the information of the register, up to the gross domestic product of the national accounts. The Wiesbaden Group discusses all dimensions of quality in relation to statistical business registers, including relevance, accuracy, timeliness, punctuality, accessibility, comparability and coherence. The Group shares experiences and best practices on how to measure and improve the quality of the registers, including the development of indicators for the different quality dimensions, the use of new information technology and software to improve quality, the implementation of quality assessment frameworks and associated resource and cost implications³⁵.

Within the framework of European Statistics, quality reporting represents an important process in providing users of these statistics with information relating to matters such as the relevance, accuracy and comparability of the statistics being reported on. INSTAT produced the quality report for 2012 and 2013, following the role of quality reporting in official statistics and the forthcoming revision of the basic legal framework for European Statistics.³⁶

One of the strategic objectives in INSTAT for the future period is developing the economic statistics is to continuously improve the statistical indicators both in terms of quantity and quality in order to meet the need of the decision-makers for statistical information in developing policies for certain economic areas, the need of the users for studies, research and scientific analysis, and for enhancing the professional knowledge in the area of statistics for their accurate interpretation. Compliance with the European standards in terms of statistical completeness and quality, transparency and deadlines, methods of collection and professionalism, remain ongoing objectives and challenges³⁷.

User satisfaction is one of the most important requirements for a qualitative statistical product. Through users feedback INSTAT could identify weak points and improve SBR quality. With the internal users SBR team are always in contact (user group), so they have in time feedback. This process is more difficult with the external users. Obviously, it is difficult and impossible to be in contact with all users. For this reason

³⁵ Report of the Wiesbaden Group on Business Registers, Statistical Commission, Forty-eighth session, 7-10 March 2017

³⁶ Statistical Business Register - Quality Report 2013, *Drafted by:* Ertugrela Curumi, *Confirmed by:* Flutura Sala, *With the assistance of:* Flutura Sala and Peter Thomas

³⁷ OSP 2017-2021



INSTAT give possibility for their external users to send a feedback for the data received and all other questions.

In March – April 2017 INSTAT was conducting the User Satisfaction Survey. The purpose of this survey was to determine user satisfaction with the quality of data and services of INSTAT and determination of their needs. Question of SBR is included.

There is no specific SBR quality policy following either the overall quality policy or a specific one related to SBR at this moment in INSTAT. The other quality reports (SBS, SBR) have also been drafted but more work should be done in this direction. Quality report of SBR, are prepared for year 2012-2013 by INSTAT SBR staff followed the steps on Business Register Recommendation manual.



ANNEX 3. IMPROVEMENT ACTION PLAN FROM LPR 15

INSTAT have to take actions to formalize answers for the improvement SBR in INSTAT, according the Improvement Action plan from LPR 15³⁸ (see table below)

No.	Improvement action	Time table
1.	INSTAT shall achieve agreements with data custodians on the procedures for access to administrative data and to influence the future development of administrative register to facilitate better statistical use	4Q2017
2.	INSTAT shall improve data sharing practices through the implementation of two-way exchange of data between INSTAT and other national authorities implemented through: <ol style="list-style-type: none"> Agreements about definitions and formats, Establishing a repository of available data, Enabling web services, and Creating common databases. 	4Q2017
3.	INSTAT should propose to the Government the introduction of legislation which: <ol style="list-style-type: none"> Requires other state agencies to provide INSTAT with administrative and register data required to implement the 2017-21 Work Programme, making consequent changes to other agencies' legislation where necessary. Enables INSTAT to receive data from non-state agencies, for statistical purposes. Enables INSTAT to supply identifiable business register data to other state agencies for the sole purpose of improving the quality of other agencies' registers. Makes provision for Memoranda of Understanding to address operational issues 	3Q2016
4.	INSTAT should discuss with the Statistical Council and the Bank of Albania the scope to enable the Bank to access administrative data for statistical purposes, as part of the forthcoming change to Bank's law	3Q2016
5.	A memorandum on data exchange between INSTAT, the Bank of Albania and the Ministry of Finance should be signed by the three statistical producers. This memorandum should specify data sources of common interest and the responsibility of each producer towards the other two.	4Q2017
6.	INSTAT shall develop, in cooperation with other agents within the NSS, appropriate statistical procedures for other producers of official statistics. A first step in this action is the establishment of a programme that comprehensively covers the needs of all statistical agencies of the NSS.	3Q2016
7.	INSTAT should develop a plan for the further use of administrative	2Q2016

³⁸ LPR-15



	data together with relevant authorities, and gradually replace survey data by administrative data where it is feasible. The limitations of sectoral legislations should be eliminated.	
8.	INSTAT should lead a review to streamline the use of formal MoUs regarding the formats and frequencies for data transmission to INSTAT for statistical purposes	3Q2016
9.	INSTAT should work with other authorities to ensure that data needed both for administrative and statistical purposes are entered into computer-readable format at one point only in order to avoid duplication of work.	2Q2016
10.	Quality reports containing all relevant metadata and quality indicators shall be produced for all statistical products and made publicly available on the website.	4Q2017
11.	A revision policy shall be developed and made public, describing principles and guidelines for the producers.	3Q2016
12.	The response burden shall be reduced by all means available by cooperating with businesses, by exploring and using administrative data. The development of a web form questionnaire is welcomed. First actions: a. Implementation of a device for response burden measurement b. Routine wise application of the web form questionnaire	4Q2017
13.	a. Set a numerical target for the reduction of response burdens in the next five year programme b. Regularly measure the response burden of business surveys c. e. Organise a publicity campaign for the promotion of web data collection	4Q2016

Table 1 Improvement Action plan for SBR³⁹

³⁹ LPR-15



ANNEX 4. POPULATION REGISTER IN INSTAT

Background

When operating effectively, a population registration system can provide reliable information that can be used for various purposes. Information gathered through regular population registration systems is used for planning, budgeting and taxation; issuing identification documents; establishing eligibility to vote and to access education, health care, social insurance, welfare and pension systems; determining liability or eligibility for military service and statistical purpose⁴⁰.

In many countries population registration has formed the basis for the establishment of a number of citizen-oriented computerized services, also known as “e-services” and “e-government”.

Population registration should not be confused with civil registration. Civil registration is primarily carried out for the provision of legal documents and statistical purposes, and is limited to the collection and registration of live births and fetal deaths, marriages, divorces, marriage annulments, judicial separations, adoptions, legal changes of name and recognition of children. Population registration includes some (or all) of the events covered by civil registration, but also includes a wider range of events, such as the establishment of a place of residence and change of address.

Albanian authorities and Statistics Norway (SN) have cooperated with Albanian government institutions on modernising the Albanian civil registration system since 2001 through the projects “Technical Assistance for the Modernisation of the National Civil Register in Albania” and “Developing Register Based Statistics in Albania” (Project)⁴¹.

The former register was based on hand written books. In this project two main local actors was recognized: Drejtoria e Përgjithshme e Gjëndjes Civile (General Directorate for Civil Status – GDCS) have played an important role in modernising the Albanian civil registration system and have contributed substantially to the recourses needed to complete the work. Also, INSTAT had important role with experienced statisticians that could take the task of building register-based statistics further. In 2009 colleagues from INSTAT and Statistics Norway started cooperating, primarily on preparing for the production of register-based statistics in Albania.

The year 2008 marked a milestone for the National civil register (NCR) project. At the end of the year, based on the register books, all resident persons in Albania were entered into a digital national register. With an online connection to all civil status offices throughout Albania, the register is used as the basis for providing voters’ list, processing biometric passports and producing national ID cards.

⁴⁰ Guidelines on Population Registration, Published by the OSCE’s Office for Democracy and Human Rights (ODIHR), OSCE/ODIHR, 2009

⁴¹ How to modernize a Civil Registration System, The case of Albania, Statistics Norway, 2012



During 2009 SN in Tirana developed a scanning tool based on camera technology together with a web distribution software, enabling transfer of scanned images to local CSOs and archives throughout Albania.

By the end of 2010 SN, together with the OSCE (financial support) and GDCS (logistic support), completed the digitalisation of these books, about 12.000, and created an important historical digital archive, accessible through the actual local Civil Status Offices (CSOa) for all residents throughout Albania.

During the implementation the NCR project had shown that it is important to continue to invest in building and maintaining registers and underlined that the giving the Nation's Statistics Office access to the data should always be a part of building a NCR.

In this regard memorandum MoU between INSTAT and GDCS was signed 2010 but not fully implemented until now. How this best can be done is a question that deserves attention.

Cooperation between SN and INSTAT on Project

During the last 2–3 years of the project, SN re-established a co-operation on statistical production with INSTAT. Some co-operation with INSTAT was established as early as 2002. To improve periodicity, quality, reliability and comparability of data and indicators, especially on demography and vital statistics, SN has strongly recommended that INSTAT should start to use the NCR already available in the production of statistics.

The new civil register (NCR) enables Albanian authorities to build a modern IT infrastructure where the NCR will be one of the cornerstones of the public administrative IT systems. With the implementation of a proper distribution system, the NCR provided real time access for different external users. Furthermore, this project was another step to increase the transparency in the economy and simplify the interaction between public administration, the country's residents and the private sector.

During the last months of the project period SN was able to facilitate the transfer of data from NCR to INSTAT. INSTAT certainly welcomed the efforts and new ideas within the limited assistance given by SN during 2009. The most important contribution was the drafting of a system specification for distributing data from NCR to INSTAT, including additional information for vital statistics. These efforts made by the project during 2010–2011 have resulted in a successful distribution of NCR to INSTAT. In addition, the project has been working to enable INSTAT to use the data in the production of register-based statistics, through short term missions on registers and SAS training.

It was planned for INSTAT to compare the data collected during the Population and Housing Census of October 2011 with the civil register data from NCR. Based on the



combination of the census data and civil registration data, INSTAT aims to create a statistical Population Register, which is a continuous recording of demographic and socio-economic characteristics of a population. During several discussions with civil register representatives at GDCS they initially agreed to give to INSTAT only the variables needed for data comparison.

The final decision of data to be distributed rests with GDCS and the Ministry of Interior. After many hesitations from the deputy minister of Ministry of Interior (Mol), finally a Memorandum of Understanding (MoU) was signed between INSTAT and GDCS in November 2010.

A solution for the transferring of data was discussed with Ministry of Interior and XION/BMI Austria, the supplier of the civil register to GDCS. A final proposal for distribution was sent to the company XION/BMI from GDCS, by means of which data could be transferred to INSTAT.

Forms filled in by local CSOs were approved by INSTAT in 2004 based on the Law on Official Statistics, no. 9180, dated 05.02.2004. One of the duties of the Regional Branch of Civil Status is to provide data to state institutions and private legal persons, in the manner specified by law.

Earlier INSTAT got paper forms from civil register offices on vital events such as births, deaths and marriages. INSTAT could not get these data in an electronic way because they were not part of civil register database. The SN project and INSTAT judged that there was an immediate need to have a system for data capturing in the civil register offices and an interface for data transferring to INSTAT. This system should be developed by the Austrian company XION/BMI which has developed the civil register NCR and has a contract of maintenance with the Mol of Albania for three years.

The SN project staff has held many meetings with GDCS explaining that is very important that INSTAT can get the identification data (such as name, surname, ID etc.). These data are very important for having an updated database on demographic events, and thus a valuable source for demographic statistics.

According to the Law on Official Statistics, 356 Civil Status offices throughout the country are obliged to report to INSTAT every month. Every 7th of each month these offices must send information regarding births, marriages, deaths and deaths during the first year of life to INSTAT. The information to be reported includes all the vital events happened each month received at the respective CS offices.

There are four models/forms to be filled up by the CSOs employees and send to INSTAT:

- Form of birth D-2
- Form of marriage D-3



- Form of death D-4
- Form of death within the first year D-5

These forms are all individual forms, filled for each vital event (birth, marriage, death).

The books of acts (birth, marriage, death) are used as source information for completing all these forms. The majority of this information was already available on the NCR. The missing variables/fields were:

1. Form of birth D-2

- a. Pregnancy duration (week)
- b. Weight of child
- c. Order of birth
- d. Education level of parents
- e. Parents' source of income

2. Form of marriage D-3

- a. Education level
- b. How many marriages (marriage order)
- c. Source of income
- d. Children from previous marriages

3. Form of death D-4

- a. Initial reason
- b. Code of disease
- c. Place of accident
- d. Source of income

4. Form of death D-5

- a. Initial reason Code of disease
- b. Place of accident
- c. Object that caused the death
- d. Time of accident

Statistics Norway developed a web interface in order to allow INSTAT perform matching of its own data with the NCR. At the GDCS's server room, there are two servers configured by SN staff for the purpose of this application. It is one web server that runs the business logic and one database server that runs the stored procedures, matching algorithms and stores the data.



This software is designed to perform these basic operations:

Step 1. - Allow the INSTAT operator to upload a text file into the server for matching purposes. This file should contain information regarding Albanian residents sorted in the proper format. Each file can contain up to 5.000 (VARIABLE) records per file and not exceed a maximum upload size limit. All this information is INSTAT's property and is handled with care without being stored anywhere in the server or database. It is kept temporarily, and is deleted after finishing. Every uploaded file is garbage collected after three minutes if not used.

Step 2. - Analyse the file contents, and display any error. All records that do not match the requested pattern or contain inappropriate data, will not be matched. The operator can download during this step the 'bad records found', if any.

Step 3. - Perform data matching and get the results.

The software runs on a secure governmental network that is maintained by The National Agency on Information Society (AKSHI). Although there is good security offered by the network infrastructure, this application is built with security in mind, given the information's sensitivity. Here are some security details:

Properly configured Apache web server, with hatches and rewrite rules.

- Apache allows only INSTAT's IP as a host that can access the software.
- Allowed hosts are checked also in software level. They can be easily configured.
- Username/password authentication.
- User sessions are stored in the database. This allows for much more control.
- Each user can login only from one location at a time; no multiple logins with same user.
- Session expiry is set to 10 minutes after login. It can be easily configured.
- Encrypted user passwords in database.
- Automatic file deletion and garbage collection after each INSTATs transaction.
- Limited access to the temporary folder where the uploaded files reside.
- Every action is stored in a log table, with the user ID and remote IP.

The operation of collecting information through the NCR on births, marriages, deaths and, in particular infant deaths, has not been very effective during the last years. Also, the information collected by handwritten forms from INSTAT has not been very accurate. On the other side collecting and entering of such information by INSTAT operators in its own database is an expensive and time-consuming operation.

After the NCR was established, INSTAT has asked Mol and GDSCS to provide such information electronically. This was not possible because these fields included at the



forms D-2, D-3, D-4 and D-5 were not collected and entered to NCR by civil status employees. This information is not considered part of the CS components.

The only available solution was to ask the Austrian company XION/BMI (responsible for the maintenance of NCR), to make some changes to NCR and add these extra vital fields needed requested by INSTAT. The cost for development for the transfer of NCR data to INSTAT, including additional vital statistics fields (these fields will also be used to check the census file), was 40.000 EUR

According to the offer received from XION/BMI, the product should have been ready by the end of June 2011. XION/BMI was still working on the final solution the project ended one month later.