

Global Assessment of the National Statistical System of the Republic of Moldova

Final Report
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List of Abbreviations

ASS	Annual Structural Survey
ASELC	Annual Survey on Earnings and Labour Costs
ASYCUDA	Automated System for Customs Data
BoP	Balance of Payment
BPM	Balance of Payments Manual
CAEM	Classification of Activities in Moldovan Economy
COICOP	Classification of Individual Consumption by Purpose
CPA	Classification of Products by Activity
CPI	Consumer Price Index
CIF	Cost Insurance Freight
CIS	Commonwealth of Independent States
CUATM	Classification of administrative-territorial units
CVTS	Continuing Vocational Training Survey
DQAF	Data Quality Assessment Framework
DCFTA	Deep and Comprehensive Free Trade Area
DG	Director General
EFTA	European Free Trade Association
ESCoP	European Statistics Code of Practice
EC	European Commission
ENP	European Neighbourhood Policy
ESA	European System of Accounts
ESMS	Euro-SDMX Metadata Structure
ESSPROS	European System of Integrated Social Protection Statistics
EU	European Union
EU-SILC	European Survey of Income and Living Conditions
FAO	Food and Agriculture Organisation of the United Nations
FDI	Foreign Direct Investment
FISIM	Financial Intermediation Services, Indirectly Measured
FOB	Free On Board
FTE	Full Time Equivalents
GA	Global Assessment
GBAORD	Government budget appropriations or outlays on research and development
GDP	Gross Domestic Product
GFS	Government Finance Statistics
GFSM	Government Finance Statistics Manual
GIS	Geographic Information System

GRP	Gross Regional Product
GSBPM	Generic Statistical Business Process Model
HBS	Household Budget Survey
HICP	Harmonized Index of Consumer Prices
HQ	Head-quarters (of the NBS)
IASD	International Accounts Statistics Division
ICT	Information and Communication Technologies
IEA	International Energy Agency
IIF	Integrated Information Flow
ILO	International Labour Organisation
IMF	International Monetary Fund
IPI	Industrial Production Index
ISCED	International Standard Classification of Education
ISFR	Informational Service for Financial Reporting
ITD	Information Technologies Division
ITRS	International Transactions Reporting System
JSC	Joint-Stock Company
LFS	Labour Force Survey
LLC	Limited Liability Company
LOS	Law on Official Statistics
MCC	Main Computing Centre
MEJS	Mobility of Employees and Jobs Survey
MoF	Ministry of Finance
MoU	Memorandum of Understanding
NBM	National Bank of Moldova
NBS	National Bureau of Statistics
NGO	Non-Governmental Organisation
NSI	National Statistical Institute
NSS	National Statistical System
NUTS	Classification of Territorial Units for Statistics
OECD	Organisation for Economic Co-operation and Development
ONA	Other National Authorities producing official statistics
PAR	Public Administration Reform
PC	Personal Computer
PPP	Purchasing Power Parity
PSA	Public Services Agency
PRODCOM	List of PROducts of the European COMMunity
PSU	Primary Sampling Unit

QSE	Quarterly Survey on Earnings
R&D	Research and Development
RSD	Reporting and Statistics Department
SAQ	Self-Assessment Questionnaires
SBS	Structural Business Statistics
SDDS	Special Data Dissemination Standard
SDGs	Sustainable Development Goals
SDNSS	Strategy for the Development of the National Statistical System
SEIS	Shared Environmental Information System
SIDA	Swedish International Development Cooperation Agency
SNA	System of National Accounts
SRAP	Statistical Register of Agricultural Producers
SRP	State Register of the Population
STATREG	EU project on Improved Regional Statistics in Moldova
STS	Short Term Statistics
SVG	Scalable Vector Graphics
TFQM	Task Force on the implementation of a Quality Management system
TSO	Territorial Statistical Office
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNIDO	United Nations Industrial Development Organisation
UNFPA	United Nations Population Fund
UNSD	United Nations Statistics Division
VTES	Vocational Training of Employees Survey
WHO	World Health Organisation

Preface

The Global Assessment (GA) of the National Statistical System (NSS) of the Republic of Moldova was undertaken within the framework of the Eurostat funded project '*Assessment of the statistical systems and selected statistical areas of the enlargement and ENP countries*'. ICON-INSTITUT in consortium with Statistics Lithuania, contracted by Eurostat, organised all activities and tasks related to the GA. Eurostat initiated the GA following a request by the National Bureau of Statistics (NBS) of Moldova.

The assessment was conducted by the following experts (Assessment Team): Mr Gerry O'Hanlon (independent consultant) who was the leading expert, Ms Bronislava Kaminskiene (independent consultant), Ms Claudia Junker (Eurostat), Mr Steinn Steinsson (Eurostat), Mr Volker Täube (European Free Trade Association [EFTA]), Mr Frank Foyen (SSB Norway, supported by EFTA) and Mr Remi Peltola (United Nations Economic Commission for Europe [UNECE]). Mr Tengiz Tsekvava from the Georgian Statistical Office participated in the assessment as an observer.

The assessment findings are based on an extensive review performed during the assessment missions that took place on 9-13 October 2017 and 19-23 February 2018 in Chisinau.

Prior to the first mission, the NBS staff completed self-assessment questionnaires (SAQ) and returned them with other relevant supporting documents that served as a starting point for the assessment. The results of the assessment are based on the analysis of the documents provided by the NBS, documents available on their website, and information collected and discussed during the in-country missions. Missing documentation was also provided by the NBS after both missions in electronic format.

The collaboration between the assessment experts and the team of the NBS was constructive throughout all phases of the GA.

Executive Summary

The main goal of the GA of the NSS of Moldova is to evaluate the level of conformity with European statistical standards, with particular reference to compliance with the European statistics Code of Practice (ESCoP) and, for specified sectors, with the Eurostat Statistical Requirements Compendium.

Since the previous GA of the NSS of Moldova in 2012, a number of the improvement recommendations issued during that assessment have been implemented and have supported the NBS to increasingly comply with European and international standards in a number of statistical domains. The NBS and other producers of official statistics are confronted with an increasing demand from the Government, the business sector, international organisations and the public at large for timely, reliable, and internationally comparable statistics for monitoring economic, social, and environment policies. The NBS, as the main producer of official statistics and the coordinating body of the NSS, is committed to maintaining trust and public confidence in official statistics by producing them in a professionally independent manner. This report provides an assessment of the state of development of official statistics in Moldova, the progress achieved during recent years and provides recommendations for further improvement in the near and long term.

The results of the GA confirm that the NSS of Moldova complies to a significant extent with international and European standards. The recommendations provided by the Assessment Team will support the NBS on its way to full compliance and aim at further improvement of the NSS, particularly in relation to the activities of the NBS.

Compliance with ESCoP

Principle 1 - Professional independence

In general, the Assessment Team found that there is a good understanding of, and adherence to, the principle throughout the NBS. Furthermore, the legal underpinning of the principle has been strengthened by the adoption of a new Law on Official Statistics (LOS) in May 2017. The new law is modelled on the Generic LOS that was adopted by the Conference of European Statisticians in 2016 and takes on board recommendations put forward in the 2012 GA.

The Assessment Team identified three issues for consideration: The first relates to the location of the NBS within the Moldovan Public Administration. It currently operates as an independent authority under the aegis of the Prime Minister. The Assessment Team is of the opinion that this arrangement emphasises and enhances the institutional and professional independence of the NBS and recommends that it be retained in any future re-organisation of the public administration. The second relates to the need to give explicit legal recognition to the professional responsibilities of the Director General (DG) of the NBS. In particular, he or she should be legally mandated to have sole responsibility for deciding on statistical methods, standards and procedures, as well as on the content and timing of statistical releases in accordance with indicator 1.4 of the ESCoP. The third relates to the appointment and dismissal procedures for the Deputy DGs. The Assessment Team considers that these are somewhat vague and that the holders of the positions have a weak security of tenure compared to other public servants. Accordingly, the procedures should be reviewed to remove the potential for any unintended adverse consequences for the management of the NBS.

Recommendations

1. The Government should maintain the current position of the NBS as an independent agency under the aegis of the Prime Minister, rather than under an individual Minister, in order to emphasise and enhance the professional and institutional independence of the NBS in serving the whole of Government and society.

The NBS is encouraged to:

2. Seek to include an explicit provision in the Government Decision on the functioning of the NBS that the DG of the NBS has sole responsibility for statistical methodology and for the content and timing of statistical releases.
3. Reflect on the provisions in the LOS on the procedure for the appointment and dismissal of the Deputy DGs and to propose changes, where appropriate, in order to avoid any risks to the continuity in, and quality of, the Top Management available to the NBS due to potentially adverse unintended consequences.

Principle 2 - Mandate for data collection

The LOS provides a very strong legal mandate to the NBS and other statistical producers for data collection, both through the conduct of direct statistical surveys and the access of administrative data for statistical purposes. The NBS can make response mandatory and fines can be imposed in the event of non-response or inaccurate returns.

The provisions of the new law should be used to overcome any remaining barriers, including objections by the Data Protection Office, to accessing individual data on natural persons for statistical purposes. Furthermore, the NBS is encouraged to widen its access to administrative data for statistical purposes and to systematically obtain information and metadata on the quality of the source data.

Recommendations

4. The NBS is encouraged to develop a plan for implementing the provisions of the LOS on getting free-of-charge access to all administrative data sources at individual record level. The plan should include the setting-up of formal mechanisms and the addressing of the currently existing barriers to getting full access to individual data for legal entities and natural persons (e.g. from the State Tax Service, Border Police) including objections of the Data Protection Office (based on the latter's interpretation of the privacy provisions of the Data Protection Law).

Principle 3 - Adequacy of resources

Compared to the situation in 2012, the time of the previous GA, the situation in terms of human resources has remained very stable, with approximately the same number of staff in the head-quarters (HQ) of the NBS and in the territorial statistical offices (TSOs). The change in the organisation of the NBS back in 2012 with the integration of the main computing centre and IT staff into the structures of the NBS has led to some efficiency gains but the overall structure and division of staff and responsibilities between the HQ and the TSO has not changed. Despite a growing demand for high-quality statistics, particularly in the framework of implementing the EU-Moldova Association Agreement and Association Agenda, and despite a growing share of electronic data collection and an increased use of administrative data sources, the structure and number of staff in the NBS

are still the same. These changes, coupled with an increased and more sophisticated public demand for statistical information in general, point towards the need for more methodologically and analytically skilled staff in the HQ with lesser numbers required for data collection in the TSOs. Accordingly, the need for changes in the structure, composition, and distribution of staff, coupled with the flexibility to move staff (positions) between the HQ and the TSOs, should be reflected upon.

The NBS will need support from the Government for implementing these reflections into practice. The Assessment Team is convinced that the NBS can achieve significant efficiency gains in its operations but will need resources upfront for investing in development, especially in IT, for the optimisation of its territorial office structure, for offering systematic and strategically planned training, and for being able to offer competitive salaries.

Recommendations

The Government is encouraged to:

5. Recognise the importance of good quality statistics and to increase the salaries of NBS staff to align them with those applying in the Ministries, so that the NBS can attract and retain the highly skilled and competent staff it requires to implement its mandate.
6. Allow the NBS to transfer staff and/or staff positions from the TSOs to the HQ as well as between TSOs in order to facilitate the optimal reorganisation of the NBS.
7. Provide sufficient resources to the NBS so that the entire IT system can be modernised with a view to achieving substantial efficiencies in the production process.

The NBS is encouraged to:

8. Make optimal use of the forthcoming European Union (EU) funded public administration reform (PAR) project on IT in terms of upgrading the IT infrastructure in the HQ and the TSOs, where necessary.
9. Develop an IT strategy/policy that covers: The planned integrated statistical information system; the management of data centres; the future development of the server room; the standardisation of production processes and applications; an optimal split of work between IT experts and statisticians; and the choice of, and focus on, a limited number of statistical applications packages.
10. Further pursue its plans to create a training centre for training on IT and statistical methodology and to include appropriate training in user oriented statistical applications in order to develop the IT skills of statisticians in both the HQ and the TSOs.
11. Consider introducing more flexible working arrangements as a motivation factor for staff, especially younger staff.
12. Survey and identify the training needs of its staff on a more regular basis.
13. Secure and ring-fence the recommended 2% of its budget for training activities.
14. Introduce a staff satisfaction survey, which should be repeated at regular intervals.

Principle 4 - Commitment to quality

The NBS Top Management is committed to quality and is developing a quality management system in line with the European quality standards for statistics. The Assessment team was told that in the forthcoming restructuring more resources will be given to quality management. Currently, the NBS has many systems and checks in place to

ensure the quality of individual statistical processes and products. Major quality indicators are publicly available on the NBS website, a metadata system covers key statistics, and all publications provide information on methodologies and classifications applied.

However, at the moment, there are no documented and standardized overall procedures or guidelines on quality management in place in the NBS. Top Management is therefore encouraged to give priority, and allocate appropriate resources, to developing and implementing a realistic overall quality management framework/system. Specific attention should be given to: developing quality guidelines to enable systematic quality assessment and reporting throughout the NBS; the collection of appropriate information to monitor the quality of administrative data sources; and the adoption of appropriate quality management and assurance procedures by other producers of official statistics.

Recommendations

The NBS is encouraged to:

15. Put procedures in place to obtain more information and metadata on the quality of administrative data sources.
16. Develop an overall quality policy and move towards implementing an overall quality management framework/system with realistic objectives, including the allocation of the necessary human resources, which aims at assuring in a systematic way the quality of its statistical processes and outputs. The system should be based on best practices and should be driven and overseen by the Top Management.
17. Develop, at an early stage, quality guidelines for systematic quality assessment and reporting in line with the European quality standards.
18. Extend quality management and assurance to the other producers of official statistics once they are properly defined and tailor the quality approach to their systems and realities.

Principle 5 - Statistical confidentiality

The legal basis for the protection of statistical confidentiality is well formulated in the LOS of 26 May 2017. In the statistical law, there are several articles dealing with statistical confidentiality, protection of and access to data, and dissemination of statistical information. The law strictly prohibits the disclosure of confidential statistical information. However, no explicit confidentiality policy exists.

The NBS has many procedures and systems in place to ensure that the principle of statistical confidentiality is respected in practice. However, the Assessment Team identified a number of situations where procedures may need to be reviewed, and adapted where necessary, in order to avoid any potential breach of the principle or a perception of the same. Firstly, appropriate data protection procedures will need to be developed to ensure that the principle is fully respected when the NBS starts facilitating access by researchers to statistical micro-data. Secondly, data collected for statistical purposes must be clearly distinguished from the publicly accessible book-keeping reports that are collected by the NBS staff for its subsidiary, the Information Service for Financial Reporting. While the book-keeping reports may be used for statistical purposes, data collected solely for statistical purposes must not be used to validate or correct the individual book-keeping data. Thirdly, the potential implications for statistical confidentiality of the proposal to include statistical reporting within a new centralised Government reporting platform will need to be carefully assessed. Finally, the NBS should

develop and implement a clear policy to govern the storage and protection of hardcopy statistical returns held in the TSOs.

Recommendations

The NBS is encouraged to:

19. Put in place appropriate data protection procedures, in accordance with the Law on Official Statistics, to facilitate access by researchers to statistical microdata for research purposes.
20. Develop a confidentiality policy and the related guidelines and instructions for staff to implement it.
21. Explicitly address any confidentiality issues potentially arising from individual staff in the TSOs handling both statistical reporting forms, which are subject to statistical confidentiality, and book-keeping reports that are made available for non-statistical purposes thus ensuring that data collected for statistical purposes are not used by staff to correct or otherwise influence the administrative information contained in the book-keeping reports.
22. Carefully assess the proposed inclusion of statistical reporting in a centralised Government reporting platform. In particular, the advantages and disadvantages of such a development need to be carefully assessed from the statistical perspective. The following should be included in any assessment:
 - The need to absolutely guarantee statistical confidentiality;
 - The need to maintain a separate profile from other Government agencies such as the tax authority;
 - The ability to maintain the functionality and flexibility of the current e-reporting tool developed by the NBS, particularly in respect of adjusting questionnaires and validating returns; and
 - The need to retain the NBS administrator rights over NBS databases and to ensure the assignment of adequate resources to meet statistical requirements.
23. Review the storage of original hardcopy questionnaires containing personal identification information in the TSOs and develop and implement an appropriate policy with a view to guaranteeing statistical confidentiality in practice.

Principle 6 - Impartiality and objectivity

Many practices are in place to ensure the impartiality and objectivity of the statistical outputs produced by the NBS. The legal framework is defined in the LOS and the Dissemination Regulation (of 24 April 2009). Statistical sources and methods are discussed by the methodological board prior to their application and approval by the DG. Statistical information is disseminated at the same time and free of charge to all users. The dates of release of statistical products are set in the release calendar.

When the NSS is developed to formally include other producers of official statistics, the release calendar should be expanded to include the statistical outputs of these producers.

Changes to the calendar should also be announced publicly by the NBS in advance and there is a need to prepare and publish an explicit revisions policy.

Recommendations

The NBS is encouraged to:

24. Develop a release calendar for the entire statistical system, once the other producers of official statistics are included into the annual statistical work programme.
25. Announce changes in the release calendar in advance.
26. Prepare and publish an explicit revisions policy.

Principle 7 - Sound methodology

The NBS has a clear policy to adopt European and international standards and methodologies in the production of official statistics and significant progress has been achieved over the past five years. National statistical classifications are aligned with international standards while the methodologies used broadly follow international and European recommendations and guidelines.

The Assessment Team agrees with the NBS Management that more resources are required for training and it recommends that priority should be given to the specific needs of the new employees and also to facilitate the move towards a more process-based organisational structure.

The NBS is also encouraged to systematically improve the quality of its questionnaires and to continue to give priority to the adoption of EU methodologies in all statistical domains.

Recommendations

The NBS is encouraged to:

27. Introduce targeted vocational training on methodology issues.
28. Expand the application of EU methodology to all statistical domains.

Principle 8 - Appropriate statistical procedures

The NBS places a priority on ensuring that appropriate statistical procedures are implemented from data collection to data validation in order to guarantee the quality of its statistical outputs. Progress has been made in recent years but it is clear that more needs to be done. A small Methodology Unit makes a significant contribution in many areas but difficulties have been experienced in recruiting and retaining suitably qualified staff.

The use of the central M-Connect platform to transfer administrative data from a number of public authorities to the NBS is a welcome development. It will be important, however, for the NBS to maintain direct contact with the main data holders in order to agree on technical issues and to ensure that full access rights are accorded. It will also be important to ensure that it is informed in a timely manner of any planned changes to the content or format of the source data.

In its review of various statistical procedures, the Assessment Team identified the following issues for attention: The need to take steps in the organisation and processing of relevant surveys to ensure that key statistics for the six development regions can be provided; the introduction of a standardised approach to the classification of non-response; the need to avoid overlaps in the collection of data in business surveys; and the desirability of evaluating the quality of coding by interviewers in household surveys. More frequent questionnaire testing should also be applied for a larger number of surveys.

Recommendations

The NBS is encouraged to:

29. Make sure in using the M-Connect platform that it is fully consulted in a timely manner by the holders of administrative data on planned changes to the content and format of the data.
30. Notwithstanding the use of the M-Connect platform, conclude parallel agreements with the holders of the main administrative data sources to agree on technical issues and guarantee full access.
31. Produce statistics for the six economic development regions, defined in 2006, in statistical domains where this is relevant (e.g. Labour Force Survey [LFS]).
32. Standardise the classification of non-response in all household surveys.
33. Rationalise its set of business surveys in order to reduce the number of surveys conducted and avoid overlaps in the collection of data.
34. Evaluate the quality of coding by interviewers in household surveys.
35. Apply questionnaire testing on a more frequent basis and for a larger number of surveys.

Principle 9 - Non-excessive burden on respondents

The NBS has taken several actions to reduce response burden, such as implementing sample surveys and electronic data collection and developing standardised questionnaires for Short Term Statistics (STS). It also organises annual meetings with the Employers' Confederation, the Chamber of Commerce and the Economic Council to further improve data collection and maintain and improve relationships with respondents.

The Assessment Team would, however, recommend that a more integrated and pro-active approach be adopted towards reducing the response burden through greater use of sample surveys and administrative data. A methodology should also be developed for measuring the burden on a regular basis and for setting targets for its reduction.

Recommendations

The NBS is encouraged to:

36. Take a more pro-active and considered approach towards minimising the burden on respondents. The actions might include the greater use of sample surveys in collecting data, and an increased use of administrative data for statistical purposes. The NBS could furthermore, encourage other public administration bodies to develop administrative data sources usable and accessible for the production of statistics.

37. Develop a methodology for measuring response burden on a regular basis and set targets for reducing the overall burden on respondents.

Principle 10 - Cost effectiveness

The use of resources is monitored on a general level, according to the general requirements and procedures set down for state-financed institutions in Moldova. The rules in place for requesting budgetary allocations from the Government and for reporting on their use also impose reporting requirements. However, neither the strategy for the development of the NSS for the period 2016-2020 nor the annual statistical work programmes, contain any information on resource allocations or requirements. This reflects the absence of a time recording system to enable the costing of statistical products and hence there is no basis for linking the products of the annual statistical work programme with the needed resources.

The NBS has made some efforts to use the potential of administrative data sources to gain efficiency by concluding agreements with administrative data holders and being actively engaged in the establishment of the Government sponsored M-Connect platform that will become a central storage of all available administrative data in the country. These efforts should be continued and pursued pro-actively. The NBS has also screened its statistical survey questionnaires in order to reduce duplication and redundancy of questions and to introduce electronic reporting. However, further efforts are needed in this regard.

The use of modern Information and Communication Technologies (ICT) tools, such as tablets for statistical surveys, and of a modern IT infrastructure should also help the NBS to benefit from the potential of latest technology developments.

Recommendations

The NBS is encouraged to:

38. Introduce, in the medium term, a time recording system with a view, in the longer term, to systematically costing the production of its individual statistical products.
39. Increase electronic reporting further for enterprise surveys and consider extending it to other surveys.
40. Introduce standardisation of processes through the use of the Generic Statistical Business Process Model (GSBPM) to describe and automate statistical processes.
41. Consider the introduction of CAPI/CAWI in its household surveys.

Principle 11 - Relevance

The NBS provides a good service to users, particularly through its well-developed website. However, it needs to develop a better relationship in general with users and to raise its public profile as a producer of high-quality statistics.

The creation of the National Council for Statistics is a welcome development and it should be convened as soon as possible. In the medium term, the Assessment Team believes that the structure of the Council should be re-balanced to have greater user representation - at the moment its membership profile is heavily weighted towards producers of statistics. The current Management Board of the NBS, which contains two external members, undertakes some functions that may be more appropriate for the Council. In these circumstances, the continued need for a Board with external members should be reviewed when the Council becomes operational in order to avoid overlaps in responsibilities.

Scarce resources are a significant obstacle to meeting the needs of users, particularly in satisfying demands for new statistics. The NBS should therefore, in conjunction with the

Council, put an emphasis on developing a methodology for prioritising user needs, including the identification of lower priority outputs that might be discontinued.

Recommendations

The NBS is encouraged to:

42. Convene the newly created National Council for Statistics as soon as possible and seek to re-balance the membership structure towards having greater user representation in the medium term.
43. Reconsider the continued need for the current Management Board, which contains two external members, once the new Statistical Council is operational in order to avoid overlaps in responsibilities between the two bodies.
44. Introduce a method for prioritising user needs, including the identification of negative or low priorities where the relevant statistical outputs might be discontinued, in the development of the annual statistical work programme.
45. Approach and consult users in a more pro-active and structured way on a regular basis.

Principle 15 - Accessibility and clarity

Overall, official statistics are presented in a clear and understandable form, released in a suitable and convenient manner and made available and accessible on an impartial basis with supporting metadata and guidance. In addition to the availability of metadata based on the Euro-SDMX Metadata Structure (ESMS) standards, the NBS has also developed a list of concepts and definitions for all statistical domains and placed it on the website.

A modern website, with some innovative features, has been developed and is now the main means of dissemination employed by the NBS. Users are enabled to access statistical reports, create their own tables using the PC-Axis tool, and to download data using various data formats. The website of the NBS also has some features to assist people with disabilities (e.g. possibility to increase font-size, subtitles for some videos, background colour, etc.).

The Assessment Team has identified a number of areas where the NBS could further improve its service to users. These include: greater interaction with users; more active engagement with the mass media; the introduction of measures to improve statistical literacy; and the facilitation of access by researchers to microdata.

Recommendations

The NBS is encouraged to:

46. Update and improve its dissemination and communication policies.
47. Develop and publish metadata for all statistical processes and products.
48. Consider holding more frequent press conferences when releasing headline indicators and statistics such as quarterly National Accounts, annual National Accounts, labour market and household expenditure surveys, inflation, etc., and consider inviting economic analysts to participate as appropriate.
49. Include more cross-country comparisons when publishing regional data.
50. Promote the effective use of official statistics by policy makers, business interests, and the public at large through the development of appropriate strategies.

51. Introduce measures to increase statistical literacy in Moldova, in cooperation with educational and other interest groups.
52. Consider tailoring its outputs to meet the needs of different user groups.
53. Endeavour to be more responsive in addressing the concerns of users.
54. Provide training to selected staff on effective media and other communications.
55. Adopt practical measures in the medium term to implement the provisions in the new LOS granting access to microdata for researchers.

Organisation of the National Statistical System and of the National Bureau of Statistics

While the new LOS allows for the formal recognition of other producers of official statistics, only the National Bank of Moldova (NBM) is recognised explicitly at present. It is expected that a small number of other public institutions, notably the Public Health Agency (PHA), will be recognised in the near future and their outputs included in the annual statistical work programme. Accordingly, it may be concluded that the production of official statistics is very centralised in Moldova, with the NBS the dominant producer. This has advantages for a small country such as Moldova but also points to the necessity for guaranteeing the quality and coverage of official statistics as well as of ensuring that the NBS is adequately resourced and enabled to implement a modern national system in an efficient and effective manner.

The NBS is an institutionally and professionally independent administrative authority, established by the Government for the coordination of the NSS and the development and production of official statistics. The autonomous role of the NBS is clearly stated in Article 7 of the new LOS. There is currently a sanction for 894 positions but just 191 of these are located in the central office in Chisinau. Of the remainder, 267 are engaged as interviewers and supervisors in the conduct of household surveys and the collection of agricultural statistics with a further 431 staff dispersed over the 35 TSOs.

An unusual feature of the NBS is that it contains two autonomous units under its remit that are not directly connected with the production of official statistics, namely: the Publishing House “Statistica”; and the Information Service for Financial Reports.

The work of the NBS is undergoing fundamental change driven by greater access to administrative data for statistical purposes and the adoption of modern IT solutions (such as e-reporting) for the collection, validation, and dissemination of statistical data. Management is currently reviewing the organisational structure of the HQ and the need for the current extensive regional structure. The Assessment Team welcomes these initiatives as being both necessary and timely. With regard to the re-organisation of the HQ, it believes that there is an urgent need to adopt structures and management practices that are more attuned to the modern environment for the production of official statistics. In particular, the Assessment Team is of the view that there is a need for a more corporate approach towards strategic management and development, and consideration should be given to the creation of a third deputy director general position to take responsibility for all administrative functions and corporate support. Furthermore, the Assessment Team would recommend that a new central unit be created to coordinate and streamline the approach towards the greater use of administrative data for statistical purposes. Finally, it would recommend that the GSBPM be used as the template for the reorganisation of the NBS.

Recommendations

The NBS is encouraged to:

56. Review its production processes and structures, notably its very decentralised territorial structure, with a view to: centralising data collection in the NBS, making better use of administrative data sources and e-reporting; and introducing a greater process orientation in its HQ.
57. Review its internal corporate governance structures with a view to developing a more corporate approach towards strategic management and direction.
58. Consider the creation of a central unit for dealing with all administrative data sources in order to coordinate the relationship with data holders and to streamline and promote the use of the data for statistical purposes throughout the NSS.
59. Consider the use of the GSBPM as the template for the reorganisation of the NBS and, as a first step, introduce a system to describe all major statistical processes in a structured manner.
60. Reflect on the need for a third deputy director general position in the new organigram of the NBS to take responsibility for all administrative functions and corporate support.

Regional structure

The 35 TSOs are located in the 32 regions of the country, in the municipalities of Chisinau and Balti, and in the Autonomous Administrative Territorial Unit of Gagauzia. Such a dispersed regional structure is a legacy of a now outdated data collection model where exhaustive statistical reporting was implemented at local level through the regional offices. The greater use of e-reporting, the adoption of sampling instead of exhaustive surveys, and the replacement of direct surveys by data from administrative sources have made such heavy regional structures both relatively inefficient and ineffective in the modern context. The trend internationally has been towards greater centralisation within National Statistical Institutes (NSIs). The Assessment Team understands that consideration is being given to consolidating the 35 TSOs into a more manageable five/six regional offices and it would strongly support such a move.

The overall number of staff available to the NBS, at close to 900, compares favourably with NSIs in similarly sized countries. However, the HQ with just 20% of the total is significantly under-resourced. Hence, in any re-organisation, there should be a conscious policy to transfer posts from the TSOs to the central office to achieve a more optimal balance.

Recommendations

The NBS is encouraged to:

61. Further rationalise and optimise its territorial structure by capitalising on electronic reporting, on a more centralised approach and optimal use of human resources.
62. Ask the Government to allow the NBS to transfer staff and/or staff positions from the TSOs to the head-quarters and between TSOs to facilitate the optimal reorganisation of the NBS.

Publishing house “Statistica”

The state enterprise, the publishing house "Statistica", is currently subordinated to the NBS. It performs editing, printing, and other publishing activities for both the NBS and

other Government agencies. It prints and/or publishes, for instance, statistical questionnaires, administrative forms, and statistical and financial reports. This arrangement dates back to an era when the NBS had a large requirement for printed material, so the continuation of the arrangement should be open to review.

Information Service on Financial Reports

The Information Service on Financial Reports (ISFR) is a public institution, subordinated to the NBS, that is authorised to collect, verify, and summarise the financial reports presented by legal entities (with the exception of public institutions). The reports are collected through the TSOs and often the same staff in these offices engages in the collection of data for statistical purposes that is subject to the legal provisions on statistical confidentiality. After processing, the ISFR provides information from the financial reports to all categories of users and has recently been given a mandate to develop a publicly accessible repository that will facilitate direct access to the individual reports.

There is a clear advantage for the NBS in having direct access to the financial reports as it can use the data for statistical purposes, including the validation and correction of individual data collected for statistical purposes. The Assessment Team was assured that data collected exclusively for statistical purposes is not used for the validation or correction of the individual Financial Reports, as this would be in breach of the principle of statistical confidentiality. Nevertheless, the Assessment Team would recommend that the NBS takes appropriate steps, including the adoption of internal procedures and policies, to differentiate itself in the public mind from the ISFR, so that there is no misconception about its treatment of statistical confidentiality.

Recommendations

63. The NBS is encouraged to take appropriate steps to differentiate itself in the public mind from its subordinate body, the ISFR, so that there is no danger of any misconception amongst respondents or the public in general in regard to the treatment of statistical confidentiality by the NBS. This is particularly important in the context of the ISFR implementing its new mandate to provide a publicly accessible repository for the individual financial and book-keeping reports that it collects.

Coordination

Coordination (and programming) of the National Statistical System

The LOS, adopted in May 2017, sets out several legal provisions related to the coordination of the NSS. It defines the scope of official statistics in Article 3 of the law, while Article 4 regulates the organisation of the NSS and stipulates that the NSS consists of the central statistical authority and its territorial subdivisions as well as the institutions subordinated to the latter, the NBM and other producers of official statistics. The same article also provides for the obligation of the NBS to approve and update the list of producers of official statistics based on a regulation approved by the Government. In Article 10, the Law provides the legal basis for the coordination in practice of the NSS by the NBS through a number of tools and instruments. Finally, Article 11 stipulates that the annual statistical work programme contains not only the surveys, studies, analyses, and publications produced by the NBS but also the work of other producers of official statistics.

In summary, the LOS provides a very strong legal basis for the coordination of the NSS. However, only the NBM is currently designated as an official producer and, therefore, the NBS faces a major challenge in formally establishing the NSS and setting up procedures for its effective coordination. Resources will need to be assigned to this task and a systematic plan developed together with a realistic timetable for its implementation. In putting forward a number of recommendations, the Assessment Team would point to the importance of: having a conceptual basis for the definition of official statistics; learning from its existing interactions with the NBM; engaging at an early stage with potential other producers of official statistics such as the PHA and the treasury division of the Ministry of Finance (MoF), with a view to developing a process for formally designating other producers as part of the NSS; and extending the annual statistical work programme to cover all official statistics.

Recommendations

The NBS is encouraged to:

64. Define from a conceptual point of view what should be covered under the banner of official statistics. Based on this concept, the NBS should identify who are the other producers of official statistics and consequently define the NSS.
65. Formalise the assignment of specified official statistics to the other producers, once identified, and include the statistics in an extended annual statistical work programme covering the entire NSS.
66. Develop and set up proper coordination mechanisms for the NSS, including the re-introduction of the prior approval of questionnaires/statistical reporting forms used by other producers of official statistics.
67. Further improve cooperation with the NBM through a combination of an active high-level committee supported by expert level working groups.
68. Together with the NBM, review and update its existing Memorandum of Understanding (MoU) with the NBM at an appropriate time, with a particular focus on clearly identifying the responsibilities and inputs of the two bodies for the production of relevant official statistics.
69. Open discussions with the PHA with a view to formally designating the PHA as a producer of official statistics in line with Article 6 of the LOS. The process agreed for the designation of the PHA, including certification of its compliance with the principles of the ESCoP, should serve as a template for the future designation of other institutions as producers of official statistics.
70. Launch the process of designating the statistics department of the treasury of the MoF as a producer of official statistics in respect of its production of Government Finance Statistics (GFS).
71. Conclude with the statistics department of the treasury of the MoF a MoU on cooperation covering defined responsibilities and areas of cooperation and coordination.
72. Encourage and support other producers of official statistics in producing and delivering proper metadata on their statistical products.

Coordination of international cooperation and donors

The NBS benefits from a significant number of technical assistance projects, expert consultations, and also from the supply of some IT hardware and software. Bilateral cooperation agreements exist with Sweden, Norway, and Romania who have provided substantial assistance over a number of years. More recently, the NBS also benefitted from EU funded projects such as STATREG aiming at developing the NUTS classification and corresponding regional statistics for Moldova. Other assistance projects/consultations are provided by International Organisations such as the European Commission (EC)/Eurostat, the UN/UNECE, the Food and Agriculture Organisation of the United Nations (FAO), the International Monetary Fund (IMF), the International Labour Organisation (ILO), and EFTA.

Due to the severe lack of resources, the NBS is very much dependant on such funding and technical assistance from international donors. Article 28 of the LOS provides the legal basis for international cooperation activities of the NBS and assigns the responsibility of representing official statistics of Moldova to the DG of the NBS. The Assessment Team welcomes this legal recognition and would encourage the NBS to take a strategic and coordinated top-down approach in seeking such assistance in order to derive maximum benefit for the statistical system.

Recommendation

73. The NBS should take a more strategic and planned approach to seeking technical assistance and initiating projects funded by development partners. Top Management should take the initiative in this regard and should consider establishing a central unit to assist it in coordinating donor activities and preparing strategic decisions on donor funded projects, using a top-down approach.

Sustainable development goals and indicators

The NBS has actively supported the process of nationalising the Sustainable Development Goals (SDGs) indicators for the Agenda 2030, in close cooperation with other ministries and under the supervision of the Chancellery of Moldova. A significant number of indicators are to be produced by the NBS while, for other indicators, the NBS is prepared to act in an advisory capacity on methodology and data collection. The Assessment Team is of the view that the opportunity of more active engagement in the production of the SDG indicators should also be used by the NBS to strengthen its cooperation in general with other public institutions and its overall coordination role in the NSS.

Recommendations

The NBS is encouraged to:

74. Explore with other relevant institutions (e.g. the State Chancellery) how they might jointly coordinate in partnership the production and reporting of SDG indicators in Moldova.
75. Use the SDGs as a catalyst and mechanism to increase its coordinating role in the provision of official statistics in the country and to international bodies.

Macroeconomic statistics

National Accounts

The National Accounts and Macroeconomic Synthesis Department of the NBS is responsible for the compilation and dissemination of national and regional accounts. Ten

posts at the HQ are allocated to these tasks. Currently, four of those posts are not filled. The sequence of accounts up to capital accounts are compiled and published. Financial accounts are not yet compiled.

National Accounts are compiled in accordance with the 1993 System of National Accounts (SNA), which is compatible with the European System of Accounts (1995 ESA). Calculation of quarterly accounts follows the guidelines of the Quarterly National Accounts Manual (IMF, 2001).

Both annual and quarterly accounts include estimates for the non-observed economy. The corrections are based on the 1993 SNA and Organisation for Economic Co-operation and Development's (OECD) Recommendations on the Measurement of Non-Observed Economy (2002). The recently developed regional accounts refer to Eurostat's Manual on regional accounts methods (2013).

In recent years, the changeover from the 1993 SNA/1995 ESA to the 2008 SNA/2010 ESA has been the main priority of work. The first publication following the revised methodology will coincide with the publication of data for the first quarter of 2018.

Recommendations

The NBS is encouraged to:

76. Implement carefully but without delay the concepts of SNA2008/ESA2010 and start publishing the data with time series back to 2010 and inform users well in advance of the upcoming revision.
77. Develop estimates for imputed rent of owner-occupied housing (based on results of the population and housing 2014 census) and for illegal activities and to incorporate them into the National Accounts.

Government Finance Statistics

The sub-division responsible for GFS compilation is located under the treasury in the MoF. Currently, six persons are involved in the GFS production.

The statistics are compiled in accordance with the recommendations of the IMF's GFS Manual (GFSM) 2001 and time series are available from 2002. The implementation of the GFSM 2014 will take place after the new public sector accounting standards have been introduced in 2020. The operations of the Government budget are recorded on a cash basis and there are no plans for recording data on an accruals basis.

There are some challenges to be addressed in the delineation of the general Government sector, mainly in relation to the classification of entities that are not fully financed through the national budget.

Recommendations

The statistics department of the treasury of the MoF is encouraged to:

78. Apply the GFSM 2014 guidelines for the production of Government finance statistics by 2021 when the new public sector accounting standards have been introduced.
79. Apply the accrual accounting principle for data recording.

80. The NBS and the statistical department of the treasury of the MoF are encouraged to set up a working group to develop guidelines for the delineation of the general Government sector and the correct classification of entities.

External Trade Statistics

Currently, five employees from the HQ are working on the production of merchandise trade statistics. The source data are provided by the Moldovan customs authority and a Memorandum of Cooperation has been signed between the NBS and the authority to formalise arrangements. International recommendations are followed and value and volume statistics, by commodity and partner country, are produced on a monthly, quarterly, and annual basis.

The compilation of figures related to Moldovan external trade in services is undertaken by the NBM who compiles the necessary information on financial transactions on the basis of the sixth Manual for the calculation of the Balance of Payments (BPM6). The NBS contributes to this, delivering information about trade in services in the fields of transport and tourism.

Recommendations

81. The NBS should consider producing unit values indices on a monthly basis.
82. The NBS and the NBM are encouraged to continue their close cooperation in producing and improving statistics on external trade in services as part of the BoP and to consider introducing appropriate e-reporting forms.

Balance of Payments Statistics (BoP)

The Law on the NBM, Article 5, stipulates that the NBM is responsible for compiling the Balance of Payment (BoP) statistics of Moldova. The new LOS reinforces this by formally identifying the NBM as a producer of official statistics. The responsible unit for compiling and disseminating BoP statistics is the International Accounts Statistics Division (IASD), which is located in the Reporting and Statistics Department (RSD).

The compilation of BoP statistics is largely in accordance with the IMF's BoP and the BPM6. The NBM additionally compiles BoP according to the IMF's BoP Manual, 1993 (BPM5). Classifications by institutional sectors and financial instruments are fully consistent with international standards. Data are also consistent or reconcilable with merchandise trade, National Accounts, and monetary statistics.

BoP statistics are disseminated by means of an interactive database on the NBM's website. Statistics are also reported to the IMF, the World Bank, United Nations Conference on Trade and Development (UNCTAD), and other organisations and can be found on their websites. Related metadata are also available e.g. on the NBM's website and on the country's Special Data Dissemination Standard (SDDS) webpage (IMF). Statistical releases of the NBM are issued regularly according to the release calendar and separately from any political statements.

The RDS is willing to evaluate the possibility to produce financial accounts at national level in the future. Joint meetings with all interested institutions will be organised to define responsibilities.

Recommendation

83. The NBS is encouraged to develop financial accounts in close cooperation with the NBM.

Consumer Price Index (including PPP and house prices)

The Price Statistics Division of the NBS has responsibility for compiling the Consumer Price Index (CPI) and five posts are dedicated to this task at the HQ.

The CPI is calculated on the basis of the methodological principles, concepts and definitions specified in the Manual on the Consumer Price Index: Theory and Practice (ILO, IMF, OECD, Eurostat, UNECE, World Bank 2004). The CPI product classification has been aligned with the Classification of Individual Consumption by Purpose (COICOP) classification since January 2008.

Future plans include the alignment of the CPI with the EU's Harmonised Index of Consumer Prices (HICP) and the development of a methodology to compile a house price index.

Recommendations

The NBS is encouraged to:

84. Commence work on introducing the HICP in line with EU standards, including work on explicit quality adjustments.
85. Consider developing a house price index.

Business statistics

Statistical Business Register

The NBS maintains a Statistical Business Register that contains economic information (e.g. annual turnover and number of employees) for every enterprise as well as demographic information (such as date of registration, liquidation, activity termination, and reorganisation). Administrative data (e.g. from tax authorities) as well as information from statistical surveys are used in order to continuously update the Business Register at the NBS. Information about the structure of enterprises comes mainly from the Structural Business Survey (SBS), which has been carried out by the NBS since 1997 on an annual basis. Further development work is required to improve the quality of the Statistical Business Register and to produce statistics on business demography.

Recommendation

86. The NBS should continue developing the Statistical Business Register with a view to fully applying European/OECD recommendations and with a view to producing and publishing business demography statistics.

Structural Business Statistics

There are currently four employees (within the Industry, Energy, and Construction Division) engaged at the HQ with responsibility for the SBS and STS.

The methodology used for the SBS complies with EU standards as specified in the respective guidelines. Data is collected by means of a paper questionnaire or, more recently, through e-reporting directly to the NBS. The e-reporting aims at reducing the response burden on enterprises. The TSOs collect questionnaires from the enterprises in their regions and are responsible for the control of related documentation from the enterprises, the coding of economic activity, data entry, and transmission to the NBS. The NBS Statistical Methods Unit is responsible for finalizing the data files including sampling, calculation of weights, and data validation.

There is a need to further develop quality reports and metadata on the surveys and to explain differences between the SBS data and statistics based on the financial reports collected by the ISFR. The current classification system does not allow for the production of statistics on the self-employed and this should also be addressed.

Recommendations

The NBS is encouraged to:

87. Further develop quality reports and metadata for the SBS.
88. Extend the metadata on the SBS to explain the differences between the SBS data and the financial (book-keeping) reports collected by the ISFR.
89. Consider extending the employment size classes for businesses in order to produce statistics on the self-employed.

Short Term Statistics (including PPI)

The methodology used for calculating short term statistical indicators follows the “International Recommendations on Industry Statistics 2008” and the “International Recommendations on the Industrial Production Index 2010”, edited by the United Nations (UN) Statistical Section, and the “Short-Term Statistics Methodology Eurostat 1998” manuals.

In addition to the production of more quality reports and metadata, the Assessment Team would also recommend the NBS to give some priority to producing seasonally adjusted indicators and statistics on hours worked.

Recommendations

The NBS is encouraged to:

90. Produce seasonally adjusted STS for all industries as well as adjustments for working days and to consider producing the indicator “hours worked” in some industries, like construction.
91. Further develop quality reports and metadata for STS and improve the comparability between the monthly and annual indicators.

Production of manufactured goods statistics

The statistics on manufactured goods are based on an exhaustive annual survey. Enterprises have to report the production in physical units and values according to a specified list of products. New products are declared in the survey report on an open product list and then coded by the NBS staff. Only production in physical units of the main products is currently published. Confidentiality checks are applied to decide which products can be published.

Recommendations

92. The NBS is encouraged to publish all available data on PRODCOM on its website, including both volume and value data.

Social and demographic statistics

Population register

A State Population Register is maintained by the Public Services Agency (PSA) in Moldova. However, updates of the register depend largely on the initiative of individuals to report changes (e.g. change of residence) but for many of those actions, there is little or no incentive to report. This holds true particularly for movements within and outside of the country as well as for reporting child births. The NBS is provided with aggregated data from the Register but does not have access to individually identifiable records. The new LOS provides for such access and the NBS is encouraged to take appropriate steps to obtain access while satisfying any concerns the PSA may have regarding the security of the individual data.

Recommendations

93. The NBS is encouraged to develop a plan/roadmap to obtain access to the state population register held by the PSA, and to the Border police databases, at individual record level, while guaranteeing data security, with a view to developing a statistical population register.

Demographic statistics

The 2014 Population and Housing Census revealed a huge discrepancy of approximately 600,000, or close to 20 per cent, between the adjusted census figure (2.9 million) and the annual intercensal population estimate for 2014 (3.5 million). Part of the overestimation is explained by the use of the “legal residence” concept for the annual estimates, which differs from the internationally recommended “usual residence” concept used in the census through the continued inclusion of around 200,000 Moldovan citizens who have moved permanently abroad. The remaining discrepancy reflects the poor quality of the statistical estimates of migration, both internal and external, which are based on an incomplete analysis of relevant administrative data.

The Assessment Team would urge the NBS, as a matter of the highest priority, to address the shortcomings in its population and migration statistics and to produce revised annual series that are fully in line with international recommendations. The Assessment Team also notes that it will be necessary to review, and revise where appropriate, other statistical series that are linked to the population estimates (e.g. employment, income, National Accounts, etc.).

Annual statistics on births and deaths are considered to be of acceptable quality and in line with international recommendations. No national population projections are currently produced in Moldova and the NBS is encouraged to develop an appropriate methodology in conjunction with other national and international experts.

Recommendations

The NBS is encouraged to:

94. Improve its internal migration statistics as a critical input to the preparation of credible sub-national population estimates. Failure to do so will put the publication of such estimates into doubt in non-census years.
95. Set up an expert working group with the Border Police Department and the Migration and Asylum Office to develop methodologies for producing fit for purpose migration statistical estimates for Moldova that take account of all relevant information sources.
96. Revise without delay its current population estimates to align them with the results of the 2014 Population and Housing Census. Ideally, the current population estimates should be based on the European and internationally accepted concept of usual residence and back-casted annual estimates, for the intercensal period from 2004 to 2014, should also be prepared and published.
97. Develop a work plan and related time schedule for the revision of all statistical series that will be affected by the availability of revised population figures (e.g. employment, income, National Accounts, etc.).
98. Develop a methodology for the production of population projections.

Population and Housing Census

There were several issues in planning and implementing the 2014 Population and Housing Census in Moldova as well as with the processing and publication of its results. A very comprehensive report¹ has been prepared by an external expert on the conduct of the 2014 Population and Housing Census.

For the next census planned for 2022 (date not yet confirmed), which will be part of the 2020 international wave of censuses, it will be important to learn from the 2014 experience and make appropriate improvements. Financial resources need to be ensured well in advance as well as the addressing of legal matters and other practical and technical issues such as the use of tablets and other technical devices. The concept of "usual residence" must be applied in the next census as it was in the last one. It remains a highly relevant issue in Moldova as the concept is not consistently applied within the statistical system of the country.

The Assessment Team would strongly recommend that a costed strategic plan for the 2022 Population and Housing Census should be prepared without delay. Adoption and funding of such a plan would enable the necessary preparations to be undertaken in a timely manner so that the problems that arose with the 2014 Population and Housing Census might be avoided. Such a plan should consider issues such as the use of a Geographic Information System (GIS), the link to the population register, the conduct of a larger pilot survey, the need for better training of interviewers, and the use of tablets to collect the data. The Assessment Team is of the view that failure to undertake adequate preparations could put the date of the census in doubt.

Recommendations

The NBS is encouraged to:

¹ Evaluation Report of the 2014 Population and Housing Census in the Republic of Moldova, Mr Eliahu Ben Moshe, UNFPA, Chisinau, 2017.

99. Develop without delay a costed strategic plan for the population and housing census scheduled for 2022.
100. Apply the internationally recognised concept of usual residence as the primary statistical unit in the 2022 census. Additional information can be collected to facilitate analyses according to different population concepts, but such concepts should be given a lower status in the presentation of the results.
101. Seek and secure, on the basis of the strategic plan, a guarantee of funding in advance from the Government and development partners/donors to cover the entire cost of the census operation - from preparatory work to the dissemination of results.
102. Start developing the law on the population and housing census but limiting it to the level of detail required for legal purposes - unnecessary restrictive provisions that might impact on the conduct of the census fieldwork should be avoided.

Labour market statistics

Labour market statistics are generally of good quality in Moldova. The NBS actively adheres to international standards and produces the main international labour market indicators accordingly. However, there are a few discrepancies between definitions in different categories of the labour market statistics and it is recommended that the NBS addresses these discrepancies. Two more general issues affect the quality and efficiency of production of labour market statistics in Moldova, namely: the urgent need to take account of the revised population count in estimating the size of the labour force and the need to make greater use of administrative data.

The Labour Force Survey (LFS) is the main source of information on employment and unemployment. The methodological framework for the LFS is based on the ILO standards (13th International Conference of Labour Statisticians). Over 7,000 households are surveyed quarterly, in face-to-face interviews using paper questionnaires, by a field force of 150 interviewers. The methodology for grossing the survey results needs to be improved to handle non-response and other survey biases. The NBS is also encouraged to extend the survey to cover all variables specified in EU regulations on the labour force survey.

Greater use of administrative data should also be considered in the production of data on earnings and to facilitate greater analysis of the gender pay gap and other important differences between demographic and socio-economic groups.

Recommendations

The NBS is encouraged to:

103. Consider using relevant external sources (e.g. data on the final energy consumption of households) for non-response adjustment and the calibration of its household surveys.
104. Revise as a matter of some urgency the series of estimates from the LFS to take account of the recently published 2014 population and housing census.
105. Develop and implement a plan to collect all variables requested in the EU regulation on the LFS.
106. Align the job vacancy survey to a greater extent with European standards and recommendations.
107. Take further advantage of administrative sources in the production of statistics of earnings and use them to produce more detailed analyses.

Living conditions statistics

Living condition statistics in Moldova are produced from the Household Budget Survey (HBS). In general, the survey is a well-established project based on a sound methodology. The NBS has recently improved the sampling and questionnaire designs and added material deprivation questions in accordance with European guidelines. The NBS aims to further align its living condition statistics to European standards in the coming years by introducing the European Survey of Income and Living Conditions (EU-SILC) survey in Moldova.

Results from the HBS are produced quarterly. Generally, European countries produce them on a yearly basis. The sample size is 9,768 dwellings and the response rate is 60% which leaves a rather small sample for producing detailed quarterly estimates. This is reflected in some rather large differences and variations over time in the published quarterly indicators.

Recommendations

The NBS is encouraged to:

108. Reconsider the publication of detailed quarterly household budget survey results, considering the high sampling variability attached to such estimates.
109. Progress with the introduction of the EU-SILC in line with its plans, including looking at synergies with other household surveys, in particular the HBS.

Education statistics

The NBS generally produces educational statistics according to international standards although there are some gaps at present. The NBS is aligning its national educational classification system to International Standard Classification of Education (ISCED) 2011 - the work is progressing but not yet finalised. Data on life-long learning is collected through the LFS but there is a reason to believe that the LFS module underestimates life-long learning in Moldova and the NBS needs to address the matter.

Recommendations

The NBS is encouraged to:

110. Fully implement ISCED 2011.
111. Study best practice/experience for measuring life-long learning in the framework of the LFS (ad-hoc modules) in order to avoid the inconsistency between the LFS and the enterprise surveys and the resulting bias in the estimated number of people benefitting from life-long learning.
112. Take further steps to align variables collected in education statistics in general, including education expenditure, lifelong learning and the VTES, with EU/international standards.

Health statistics

The National Health Management Centre, now part of the PHA, is responsible for the collection, processing, validation, and dissemination of health statistics in Moldova. Similarly, statistics on disability have been traditionally produced on the basis of data compiled from administrative sources. The NBS publishes health and disability statistics on the basis of data provided to it by the Centre and by the administrations concerned with disability. It also periodically collaborates through the inclusion of questions on disability

and health status in the Population and Household Census and in surveys such as the LFS and HBS. In general, European and international standards are followed but further work is required to fill some data gaps. The collection of data on accidents at work has been discontinued because of changes in administrative procedures and new approaches need to be developed.

Recommendations

The NBS is encouraged to:

113. Discuss with the PHA ways to produce data on access to health, health status, and disability, in line with European/international standards. Where household surveys are required, they should be under the responsibility of the NBS.
114. Consider ways to reinstate the collection of data on accidents at work, which has been discontinued for administrative reasons.
115. Continue implementing its plans for the introduction of ESSPROS.

Agricultural statistics

Census of agriculture

The first General Census of Agriculture was conducted in 2011 and involved the enumeration of over 900,000 holdings with some agricultural activity. The vast majority of the holdings in Moldova are small, with over 85% producing for own consumption only and, in terms of size, around 70% having less than one hectare of agricultural land. The size threshold for inclusion in the census was 10 ares, which is considerably lower than the international recommendation. The inclusion of such a large number of small holdings in the census was necessary because of their importance in terms of their share in the overall agricultural production.

It is planned to hold the next Census of Agriculture in 2021 as part of the FAO 2020 World Round, but the year has yet to be confirmed. This will be important in order to update the information on agricultural activity and also to collect necessary information to facilitate the updating of the farm register from administrative and other sources. The success of the 2011 census was due to it being well planned and well-resourced and it will be essential to replicate these conditions in the conduct of the next census.

Recommendation

116. The NBS should hold the next General Census of Agriculture in 2021 and should approach the Government and potential development partners/donors to provide the necessary funding and support.

Farm register

The Statistical Register of Agricultural Producers (SRAP) was created by the NBS in collaboration with FAO experts and is based on the 902,000 holdings enumerated in the

2011 General Census of Agriculture. The main objectives of the SRAP is to establish and maintain, through periodic updates from various sources, a database of key indicators of agricultural activity and to provide a population framework for the ongoing surveys of agricultural activity.

The sources for updating the register include the ongoing statistical surveys and various administrative sources. The next General Census of Agriculture will be used to collect personal and unique registration information from agricultural producers in order to improve the linkages between the SRAP and administrative registers.

Recommendation

117. The NBS is encouraged to organise the General Census of Agriculture in such a manner as to ensure that the linkages with the SRAP are optimised with a view to improving the quality and coverage of the register.

Agricultural statistics

A broad range of current information on agricultural activity is produced by the NBS. This includes quantitative information on crop areas, livestock numbers, prices paid and received, agricultural machinery used, etc. In addition, the NBS compiles economic accounts for the agricultural sector, price indices, and food balance sheets. In general, the NBS follows EU and FAO guidelines and recommendations in the production and dissemination of its agricultural statistics.

A wide range of surveys are conducted annually and sub-annually to collect the basic data from agricultural producers. In the case of the larger units (i.e. those with 10 hectares or more), exhaustive surveys are conducted in which the producers complete the questionnaires and submit them to the respective TSO. For the smaller producers, relatively small-scale sample surveys are undertaken in which the producers are surveyed directly by the 106 interviewers retained for this purpose. One of the purposes of the SRAP is to provide a survey reference framework that will allow a more structured approach to be adopted for the design and implementation of the surveys. The Assessment Team would recommend that the NBS methodology unit should be involved in this work.

Recommendation

118. The NBS is encouraged to involve its methodology unit in reviewing the sampling methodologies used for the regular agricultural surveys.

Multi-domain statistics

Transport Statistics

A broad range of statistics is published on goods and passenger transport by road, rail, inland waterway, and rail. In addition, annual data are published on the transport infrastructure and on the structure and operations of transport companies. Data sources include sample surveys, returns from transport companies and administrative data. In general, international and EU guidelines are followed but there is a need for some further alignment with EU standards.

Recommendation

119. The NBS is encouraged to expand the use of the EU standards for the production of transport statistics (variables, coverage).

Tourism statistics

Tourism statistics include annual data on the capacity of tourist accommodation, quarterly data on the use of tourist accommodation, and on the activity of travel agencies and tourism operators. The NBS intends to start working on the coverage of tourists accommodated in private households in 2018.

Some consideration is being given to the preparation of a satellite tourism account but the Assessment Team would not consider this to be a priority in view of the relatively small scale of the tourism industry and the work that would be required - e.g. tourist movements are estimated to account for just 4% of all cross movements at present and accurately identifying these movements would pose practical difficulties.

Recommendation

120. The NBS is advised not to produce a satellite account for tourism in the short/medium term as this is not a high priority, given the current size of the tourism industry in Moldova.

Energy statistics

Energy statistics include monthly indicators on energy supply and utilisation, prices of electricity and natural gas together with more detailed annual energy statistics. For the compilation of energy statistics, the NBS follows the methodologies developed by the International Energy Agency (IEA) and Eurostat. Starting from 2010, the energy balance of the Republic of Moldova has been presented in accordance with the international standards (IEA, UN) in conventional energy units.

Further development work is envisaged for the preparation of statistics on the consumption of energy by enterprises and for the compilation of energy balances.

Recommendations

The NBS is encouraged to:

121. Introduce sample surveys for the production of data on energy consumption by enterprises.
122. Continue work on improving the compilation of energy balances.

Environment statistics

The published environmental statistics are mainly based on monitoring and other data provided by the Ministry of Agriculture, Regional Development and Environment and on statistical data reported by enterprises. International recommendations and guidelines are followed but more work will be required to meet EU standards and to implement the strategy for the development of the NSS 2016-2020.

Recommendation

123. The NBS is encouraged to continue developing environmental economic accounts.

Research and Development statistics

In the field of Research and Development (R&D), innovation and patent statistics, the NBS collects data on research and development expenditure and R&D personnel based on the Organisation for Economic Co-operation and Development (OECD) Frascati-manual (version 2002). An updated version, Frascati-manual 2015, is now available and the NBS needs to take this into account. Currently, the data are only published in a press release. The NBS recently conducted an innovation survey for the first time, based on the Oslo manual. The results were published in January 2018. Statistics in this area are very much at a developmental stage and the Assessment Team would put forward a number of suggestions for consideration in this context.

Recommendations

The NBS is encouraged to:

124. Start using the latest version of the Frascati-manual (2015) for methodological guidance.
125. Review its approach towards R&D statistics with a focus on: Revising its sampling plan; identifying synergies with the innovation surveys; and covering industries other than NACE 72.
126. Take the necessary measures to produce statistics on Government budget appropriations or outlays on research and development (GBAORD) in compliance with European standards.
127. Consider the continued usefulness of the patent survey.

Information and Communication Technologies (ICT) statistics

The concepts and definitions used in statistics on information technologies as well as the concepts and definitions used in statistics on electronic communications seem to reflect national provisions that lack conformity with international concepts and definitions such as the European “Digital economy and society glossary”. The same holds for the indicators published on ICT by the NBS which are only partially comparable or totally non-comparable with the EU ICT indicators, either due to diverging definitions or because of the different composition of the sample (e.g. only entities possessing ICT are considered in the exhaustive statistical ICT survey in Moldova).

The NBS is therefore encouraged to take steps to align its surveys and procedures to a greater extent with EU standards and requirements.

Recommendations

The NBS is encouraged to:

128. Review its current approach of surveying only enterprises with internet connections for the purposes of undertaking the ICT surveys required under EU regulations. Instead, it should survey all enterprises, with or without an internet connection, on a sample basis.
129. Further align its surveys on ICT usage in all areas (including: households, enterprises, and schools, etc.) with EU recommendations.

130. Make use of the European standard questionnaires for the surveys on the usage of ICT by households and enterprises.

Main Report

Chapter 1: P1 - Professional independence

General assessment

In the Global Assessment (GA), the extent to which the National Bureau of Statistics (NBS) of Moldova is compliant with the principle of professional independence was assessed in detail by reference to the individual indicators for the principle set down in the European Statistics Code of Practice (ESCoP).

In general, the Assessment Team found that there is a good understanding of, and adherence to, the principle throughout the NBS. Furthermore, the legal underpinning of the principle has been strengthened by the adoption in May 2017 of a new Law on Official Statistics (LOS). The new law is modelled on the Generic LOS that was adopted by the Conference of European Statisticians in 2016 and takes on board recommendations put forward in the 2012 GA.

The Assessment Team identified three issues for consideration: The first relates to the location of the NBS within the Moldovan public administration. It currently operates as an independent authority under the aegis of the Prime Minister. The Assessment Team is of the opinion that this arrangement emphasises and enhances the institutional and professional independence of the NBS and recommends that it be retained in any future re-organisation of the public administration. The second relates to the need to give explicit legal recognition to the professional responsibilities of the Director General (DG) of the NBS. In particular, he or she should be legally mandated to have sole responsibility for deciding on statistical methods, standards, and procedures, and on the content and timing of statistical releases in accordance with indicator 1.4 of the ESCoP. The third relates to the appointment and dismissal procedures for the Deputy DGs, which the Assessment Team considers are not ideal and should be reviewed to remove the potential for any unintended adverse consequences for the management of the NBS.

Assessment per indicator

ESCoP indicator 1.1: The independence of the National Statistical Institutes (NSIs) and Eurostat from political and other external interference in developing, producing and disseminating statistics is specified in law and assured for other statistical authorities.

The professional independence of the NBS is very well specified in the recently adopted LOS, no. 93 of 26 May 2017, which was drawn up to be in line with the Generic LOS that was adopted by the Conference of European Statisticians in April 2016. Article 7, paragraph 1 of the LOS states that the NBS is established as “*an institutionally and professionally independent administrative authority*”. The LOS recognises the NBS as the main producer of official statistics in Moldova and as having responsibility for the coordination of the National Statistical System (NSS). To reinforce the independence of the NBS, Article 7, paragraph 11 states that it “*shall be independent of any legal or natural person when exercising its functions and powers*”, while Article 7, paragraph 12, states that any interference, as well as hindering in any way, shall “*involve liability under the legislation*”.

The NBS and other producers of official statistics, of which only the National Bank of Moldova (NBM) is formally recognised under the LOS at present, are required to produce and disseminate official statistics “*according to the fundamental principles of statistics*” (Article 4, paragraph 2). The fundamental principles are defined in Article 5 to include professional independence, which is defined in line with international guidelines.

At present, the NBS operates as an independent authority under the aegis of the Prime Minister. However, it is understood that proposals for public administration re-organisation, currently under consideration by the Government, would involve the Minister for Economy being assigned political responsibility for the NBS. The Assessment Team considers that the current arrangement serves to emphasise and enhance the institutional and professional independence of the NBS in serving the whole of Government and society. Accordingly, the Assessment Team would encourage the Government to retain the NBS as an independent authority under the aegis of the Prime Minister.

ESCoP indicator 1.2: The heads of the National Statistical Institutes and of Eurostat and, where appropriate, the heads of other statistical authorities have sufficiently high hierarchical standing to ensure senior level access to policy authorities and administrative public bodies. They are of the highest professional calibre.

The position of the DG of the NBS is ranked as one of the highest-level positions in the civil service structure and, while not a Cabinet Minister, the holder attends the weekly meetings of the Cabinet. The DG can therefore be considered to have sufficiently high hierarchical standing to ensure senior level access to policy authorities and administrative public bodies. The LOS requires that candidates for the position should have higher education qualifications in statistics or related disciplines and relevant work experience in the field of statistics.

ESCoP indicator 1.3: The heads of the National Statistical Institutes and of Eurostat and, where appropriate, the heads of other statistical authorities have responsibility for ensuring that statistics are developed, produced and disseminated in an independent manner.

In practice, it is clear that the NBS is organised and managed by the DG and his senior managers in such a way as to ensure that statistics are developed, produced, and disseminated in an independent manner.

However, there is no explicit legal underpinning of the DG’s responsibility in this regard. The LOS simply states that the NBS shall be managed by the DG (Article 8, paragraph 1). The Government Decision, no. 1034 of 29 December 2011, on the re-organisation and functioning of the NBS sets down the duties of the DG in some detail. However, the focus in the Decision is not specific in regard to setting down the professional responsibilities of the DG. Instead, the focus is on the more generic functions of directing the work of the NBS and managing staff and financial resources.

ESCoP indicator 1.4: The heads of the National Statistical Institutes and of Eurostat and, where appropriate, the heads of other statistical authorities have the sole responsibility for deciding on statistical methods, standards and procedures, and on the content and timing of statistical releases.

As mentioned above in respect of indicator 1.3, there is no mention of the professional statistical responsibilities of the DG, neither in the LOS nor in the Government Decision on the functioning of the NBS.

The assignment in law of sole responsibility to the head of an NSI for deciding on statistical methodology and on the content and timing of releases has been given a higher priority in many countries in recent years. For example, in all European Union (EU) countries the heads of NSIs are assigned such responsibility in respect of the production of European statistics under the provisions of Regulation (EU) 2015/759 of the European Parliament and of the Council (which amends Regulation (EC) 223/2009 on European statistics). Accordingly, the Assessment Team would recommend that the DG of the NBS be explicitly assigned sole responsibility for statistical methodology and the content and timing of statistical releases. In the first instance, this might be done through a suitable amendment of the Government Decision on the functioning of the NBS. The amendment might be drafted in such a way that the requirement of indicator 1.3 is also legally underpinned.

ESCoP indicator 1.5: Statistical work programmes are published and periodic reports describe progress made.

This requirement is fully met by the NBS. A five-year Strategy for the Development of the National Statistical System (SDNSS) is prepared. The most recent, relating to the period 2016 to 2020, was published on the NBS website together with an action plan for its implementation following adoption by the Government.

Detailed annual statistical work programmes are also prepared by the NBS and published on the website following approval by the Government. The annual statistical work programme provides information on all statistical outputs produced by the NBS as well as on information provided by public authorities and other bodies to the NBS for the production of official statistics. For the statistical outputs, the information provided includes: The scope of the survey; the type of survey; the frequency of data collection; the number of respondents; the legal basis; the publication of results deadline; and the means of publication. In the case of information provided to the NBS, the programme details: The method of data transfer; the deadline for data transmission; and the statistical outputs for which the data will be used. The NBS also publishes an annual report on its activities.

ESCoP indicator 1.6: Statistical releases are clearly distinguished and issued separately from political/policy statements.

All statistical releases bear the NBS logo and are published separately on the NBS website. The timing and content of releases are decided solely by the NBS and advance release calendars are published. Political involvement is not allowed in the dissemination of results or in any events relating to statistics (e.g. press conferences) organised by the NBS. Under the provisions of the LOS (Article 8, paragraph 12) the DG and his deputies must disengage from any political activity during their tenure.

ESCoP indicator 1.7: The National Statistical Institute and Eurostat and, where appropriate, other statistical authorities, comment publicly on statistical issues, including criticisms and misuses of statistics as far as considered suitable.

The NBS is able to comment publicly on statistical issues, including criticisms and misuses of statistics. There is no policy as such, instead appropriate actions are taken on a case by case basis.

ESCoP indicator 1.8: The appointment of the heads of the National Statistical Institutes and Eurostat and, where appropriate, of other statistical authorities, is based on professional competence only. The reasons on the basis of which the

incumbency can be terminated are specified in the legal framework. These cannot include reasons compromising professional or scientific independence.

Article 8 of the new LOS contains detailed provisions on the appointment of the DG of the NBS. These include:

- The specification of the term of office - five years, renewable once;
- The appointment process will be by way of an open competition - the details of which will be decided by Government Decree;
- The candidate requirements - candidates must have a relevant academic qualification and have some work experience in the field of statistics;
- Reasons for the early termination of the incumbency - these exclude any that could be construed as compromising professional or scientific independence.

The Assessment Team is of the view that the above provisions are fully in line with best practice in regard to the appointment and dismissal of the Head of the NBS.

Article 8 also contains provisions relating to the appointment and removal of the Deputy DGs. These provisions include the candidate requirements, which are similar to those set down for the DG. However, no term of office is specified and the appointment and removal provisions are somewhat vague in that Article 8, paragraph 4, merely states that the Deputy DGs are appointed and removed by the Government “*under the conditions of the law, upon the suggestion of the Director General*”. This formulation provides a weak security of tenure for the holders of these senior positions within the NBS. The Assessment Team was further informed that the provisions of Article 8, paragraph 4, actually imply that holders of the position of a Deputy DG do not enjoy the same security of tenure applying more generally to members of the staff of the NBS who are classified as civil servants. The Assessment Team is of the opinion that these provisions are not ideal and could potentially have some unintended adverse consequences for the continuity in, and the quality of the Top Management available to the NBS. Accordingly, it is recommended that the situation be examined with a view to finding alternative arrangements that would strengthen the tenure of the Deputy DGs and ensure, in particular, that they can always act in a professional and independent manner.

Recommendations

1. The Government should maintain the current position of the NBS as an independent agency under the aegis of the Prime Minister, rather than under an individual Minister, in order to emphasise and enhance the professional and institutional independence of the NBS in serving the whole of Government and society.

The NBS is encouraged to:

2. Seek to include an explicit provision in the Government Decision on the functioning of the NBS that the DG of the NBS has sole responsibility for statistical methodology and for the content and timing of statistical releases.
3. Reflect on the provisions in the LOS on the procedure for the appointment and dismissal of the Deputy DGs, and to propose changes as appropriate in order to avoid any risks to the continuity in, and the quality of the Top Management available to the NBS due to potentially unintended adverse consequences.

Chapter 2: P2 - Mandate for data collection

General assessment

The LOS provides a very strong legal mandate to the NBS and other statistical producers for data collection, both through the conduct of direct statistical surveys and the accessing of administrative data for statistical purposes. The NBS can make response mandatory and fines can be imposed in the event of non-response or inaccurate returns.

The provisions of the new LOS should be used to overcome objections by the Data Protection Office to accessing individual data on natural persons. Furthermore, the NBS is encouraged to widen its access to administrative data for statistical purposes and to systematically obtain information and metadata on the quality of the source data.

Assessment per indicator

ESCoP indicator 2.1: The mandate of the statistical authorities to collect information for the development, production and dissemination of European Statistics is specified in law.

Article 13 of the new LOS provides a comprehensive mandate to the NBS, and other producers of official statistics, to obtain and collect data necessary for statistical production. In particular, the NBS is entitled to obtain data from natural and legal persons using whatever means of collection (e.g. paper, magnetic equipment, internet, telephone, post, etc.) that it deems appropriate. The NBS is also allowed to employ statistical agents (e.g. interviewers and enumerators) to collect data.

ESCoP indicator 2.2: The statistical authorities are allowed by law to use administrative data for statistical purposes.

Article 16 of the LOS covers the access to administrative data for statistical purposes. Article 16, paragraph 2, provides for access as follows:

“The owners of administrative data sources, other legal entities managing databases on natural and legal persons shall present, free of charge, to the central statistical authority aggregated and individual data, including metadata related to them. The special confidentiality provisions from other laws cannot be invoked in this case, except the cases when that legislation excludes explicitly the use of data for statistical purposes.”

This is a very comprehensive provision that is in accordance with international best practice. It is of particular note that access is allowed not only to administrative data held by public authorities but also to databases on natural and legal persons held by other legal entities. Furthermore, the above provision makes it clear that other legislation cannot be used to impede access for statistical purposes unless such access is specifically excluded.

Notwithstanding the new legislation, the Assessment Team was informed that the NBS is still experiencing difficulty in getting access to individual data on natural persons held by the State Tax Service. The Data Protection Office has ruled that granting access to such data would be in breach of data protection legislation. The Assessment Team would point out that access to such data is commonplace in most other countries, despite similar data protection legislation being in place. In addition, the Assessment Team was informed that the NBS could not get access for legal reasons to individual data held by the Border Police Department despite the critical importance of such data to the preparation of high priority

migration statistics. Accordingly, the Assessment Team would urge NBS to continue, as a priority issue, its efforts to address and remove the remaining barriers to it gaining full access to individual data on natural and legal persons.

The use of administrative data for statistical purposes is still relatively underdeveloped in Moldova. Accordingly, the NBS is encouraged to develop a formal mechanism, and undertake appropriate further steps, to widen its access to administrative data sources.

ESCoP indicator 2.3: On the basis of a legal act, the statistical authorities may compel response to statistical surveys.

Under the LOS (Article 15), the NBS can make response to statistical surveys mandatory. Fines can be applied for failure to respond, or for providing inaccurate data, in accordance with Article 330 of Contravention Code no. 218 from 24 October 2008.

Recommendation

4. The NBS is encouraged to develop a plan for implementing the provisions of the LOS on getting free-of-charge access to all administrative data sources at individual record level. The plan should include the setting-up of formal mechanisms and the addressing of the currently existing barriers to getting full access to individual data for legal entities and natural persons (e.g. from the State Tax Service, Border Police) including objections of the Data Protection Office (based on the latter's interpretation of the privacy provisions of the Data Protection Law).

Chapter 3: P3 - Adequacy of resources (including staff resources, recruitments, training)

General assessment

Compared to the situation in 2012, the time of the previous GA, the situation in terms of human resources has remained very stable, with approximately the same number of staff in the Head-quarter (HQ) of the NBS and in the TSOs. The change in the organisation of the NBS back in 2012 with the integration of the Main Computing Centre (MCC) and IT staff into the structures of the NBS has led to some efficiency gains but the overall structure and division of staff and responsibilities between the HQ and the TSOs has not changed. Despite a growing demand for high-quality statistics, particularly in the framework of implementing the EU-Moldova Association Agreement and Association Agenda, and despite a growing share of electronic data collection and an increased use of administrative data sources, the structure and number of staff in the NBS are still the same. The changes listed above call for more qualified and methodologically skilled staff in the HQ and less pure data collectors and data encoders in the Territorial Statistical Offices (TSOs). This change of structure, composition, and distribution of staff should be reflected upon and the NBS should be allowed to move staff between TSOs and between TSOs and the HQ to achieve an optimal distribution of staff. Furthermore, the NBS is organised along separate statistical domains with a rather large number of small units/departments. Process orientation is not yet rooted in the office but could be considered to gain some efficiency.

The NBS needs to convince the Government that it can work more efficiently but needs resources first for investing in development, especially in IT and for the optimisation of its territorial office structure. Salaries are relatively low in the NBS, not only when compared

with the private sector but also with other areas of the public sector, notably the ministries. This inequity needs to be addressed to ensure the recruitment and retention of the high-quality staff required by a modern statistical office. Another motivation factor to retain staff in the NBS could be the introduction of a more flexible working regime. Staff motivation factors could also be identified through staff satisfaction surveys.

The NBS combines internal and external training for its staff. While training needs are defined, a more strategic view towards training would be useful and ensure that the staff members receive the training needed for career development. The very small budget available internally should be used for the purpose of training.

As for financial resources, some additional budget was provided for the censuses but overall, the budget remained stable and just sufficient to cover current needs. Increased training opportunities and new developments, also in terms of IT infrastructure, the implementation of new surveys and other development activities are dependent on external funding.

The IT infrastructure consists of various generations of Personal Computers (PCs) and is not up-to-date. Replacement of IT largely depends on external donors, which makes strategic planning and regular updates very difficult.

With the assistance of donor support, the Information Technologies Division (ITD) has made commendable progress in recent years in providing a modern IT service to the NBS. However, many aspects of the hardware and software environment are in urgent need of updating and renewal. An EU sponsored assistance project, with a budget of up to 2 million EUR, addresses this situation in the short to medium term. In the longer term, it is essential that a strategic approach is taken to the development of IT. The Government is urged to provide the necessary resources so that the full benefits of a modern IT environment can be realised. The IT skills of statistical staff in general are relatively poor and variable and it is therefore recommended that priority be given to up-skilling staff so that they can derive maximum benefit from a modern IT environment.

ESCoP indicator 3.1: Staff, financial and computing resources, adequate both in magnitude and in quality, are available to meet current statistical needs.

Human resources

In 2017, the NBS of Moldova including its 35 TSOs had a total of 894 positions, out of which 196 are located in the HQ and 698 in the TSOs. The 698 positions in the TSOs include 392 positions of statisticians, 39 of technical staff, and 267 of interviewers and their supervisors. Interviewers and supervisors are part of the permanent staff and carry out household surveys (150 interviewers for the Household Budget Survey [HBS] and the Labour Force Survey [LFS]) and agriculture surveys (117 interviewers). Each TSO has between 3 and 40 staff members depending on the size of and the economic activities in the region. The number of TSOs seems very high and based on the number of development regions (six) as defined in the regional policy of Moldova. There are plans to adjust the number of the TSOs as well as to transform the 35 TSOs into regional statistical offices located in four to five of the development regions. Based on the calculation of the work load for staff in the TSOs, some 20-30 staff members could be moved to the HQ in order to place staff in the quality unit, in the innovation unit, and for dealing with administrative data sources. Such reorganization would also provide the possibility to transfer staff to the less resourced HQ, if legislation allowed for such a move of staff.

There are plans to reorganise the NBS with a view to hire interviewers on a contract basis instead of them being part of the permanent staff. This may help in addressing forthcoming staff cuts imposed on the NBS in the Public Administration Reform (PAR) implemented in Moldova.

Of the total staff of the NBS 83% are female and 17% are male. The average age is 41 years and almost 96% are civil servants. Around 70% of the staff has higher education. The turnover of staff in 2016 was 7.9%.

Performance of staff is assessed regularly, based on general rules applicable for the entire civil service. Such an assessment is based on annual objectives and tasks and on evaluation standards, defined by a normative act approved by a Government Decision. The evaluation itself is performed by the direct supervisor and the marks given to each employee (very good, good, satisfactory, not satisfactory) have an impact on the allocation of bonuses for employees, on possible promotions, on retaining the person in the same position or on non-financial incentives. The DG and the deputies are evaluated by the State Chancellery.

Working hours are strictly regulated with very few possibilities to apply a flexible working regime or part-time.

The budget for salaries is given on the basis of the budget law for a given year. No flexibility in the heading on salaries is allowed, except by changes to the budget law.

Recruitment procedures

All recruitments are based on the Law on Civil Service and strict rules for recruitments based on Government Decisions. There are three forms of recruitment to a new position - through promotion, transfer or an open competition, in this order of priority. When a position becomes vacant, the NBS first checks whether there is a staff member that can be promoted, then whether a staff member can be transferred and only if these two means do not result in finding any suitable person, an open competition is launched.

Promotion means the transfer to a higher position (specialist, consultant, head, and director) which is a regulated and straight forward process. In 2016, 13 staff members were promoted to a higher position through such a process.

Transfer means either an internal NBS move from one division to another or a move from/to another public authority. In 2016, eleven transfers took place, of which three were internal and eight were external moves, with eight staff members leaving the NBS for a position in a ministry.

Competitions are based on open and transparent procedures as well as merit and competence based and implemented in accordance with the provisions of the relevant Government Decisions/laws. A competition commission is set up inside the NBS with five members, appointed for two years. A Deputy DG is the chairperson of the commission, the human resource department provides for the secretariat of the competition and a head of department/division with two alternate members is another member of the commission. The competition includes two stages, a written test and an oral test/interview with the members of the competition commission. The written test consists of eight to ten questions on legislation (two to three questions), statistical methodology of the competition area (two questions), calculation methods (two to three questions) and IT (two questions) and is passed by a pass mark of six points (maximum ten points). In the oral test with the competition commission, skills, abilities, personality, motivation, and behaviour are tested and points are given. The candidate with the highest number of points is recruited.

A contract is concluded with the successful candidate for a probation period of six months, an individual development plan is agreed upon and a supervisor/mentor is assigned. The development plan contains the job description, objectives for the professional development of the candidate, a training plan (at least ten days of training are required) and job related objectives. After the six months' probation period, the candidate prepares an activity report, the supervisor prepares a report and on the basis of these two documents, the head of department evaluates the candidate and decides on the performance level (very good, good, satisfactory, not satisfactory) and decides on whether to retain the person or not. In 2016, a total of seven people were recruited in this way.

As for the Top Management positions of the NBS, the DG is recruited through an open competition and appointed by the Government while the Deputies of the DG are nominated by the Government, on the basis of a proposal from the DG.

The heads of the TSOs are recruited the same way as described above - through promotion, transfer or competition - and are appointed by the DG of the NBS. Staff for the TSOs is appointed by the head of the TSO, without prior formal consultation of the local Government.

All recruitment procedures are documented.

Training

Training in the NBS is recognised as important in the development of staff and is implemented internally, externally and through training-on-the-job. Within a recently implemented EU funded project, the NBS surveyed staff in order to identify training needs.

Internal training (inside the NBS) is implemented on a regular basis and on request. In 2016, regular training was organised for a total of twelve newly hired interviewers and supervisors as well as for a total of 200 interviewers on new surveys. Ad-hoc training in 2016 took place in form of training the staff of the TSOs on new methodology/changed questionnaires. In total, 22 TSO staff members benefited from such training.

An EU funded project provided training on project management (20 staff members), of trainers (20 staff members), on IT tools (Excel, Oracle) and in some statistical domains such as external trade statistics, National Accounts and living conditions statistics. These training courses were also open to staff from other public organisations and ministries. For the purposes of internal training, the NBS has created a platform for e-learning; however, due to a lack of funding, the platform is not yet functioning.

External training is mainly provided through the attendance of international seminars, training courses, workshops, and conferences. In 2016, a total of 130 staff members benefitted from such training opportunities. Participants in such trainings have to prepare reports on the knowledge acquired which are shared through the intranet of the NBS and have to debrief the Board of the NBS in its weekly meetings.

Future challenges for training are related to a very small budget available for training (roughly 2% of the general budget, which is very often used also for other purposes), the lack of a training centre for the NBS and an operational e-learning platform (also due to a lack of funds) as well as the partly unrecognised need to train staff continuously

Financial resources

The budget of the NBS is provided by the State budget and has developed between 2012 and 2017 as illustrated below:

Break-down	2012		2017	
	Ths. Lei	Ths Euro (based on the average exchange rate for 2012: 1€=15.515 MDL)	Ths. Lei	Ths Euro (based on the average exchange rate for 2017: 1€=20.735 MDL)
Salaries	44353.3	2858.7	68186.2	3288.5
IT expenditure	271.1	17.5	411.2	19.8
Interviewer costs	9484.7	611.3	12953.1	624.7
Research	13733.9	885.2	14223.3	686.0
Procurement	666.3	42.9	773.4	37.3
Other operational costs	14681.4	946.3	10351.5	499.2
Census	692.5	44.6	0	0
Total	83883.2	5406.6	106898.7	5155.5
Of which				
1. Total	60844.6	3921.7	79722.3	3844.8
HQ	22998.6	1482.3	27176.4	1310.7
2. Policies and management in the field of statistics				

Table 1. Budget of the NBS.

Information technology resources

The current Information Technologies Division (ITD) was established in 2012 following the dissolution of the larger MCC that had been in operation up to then. The MCC had covered many activities, such as data capture and validation that were considered to be more appropriate for the subject matter divisions. Accordingly, 50 of the 80 posts in the MCC were redeployed elsewhere within the NBS and the remaining 30 posts were assigned to the ITD. The division is led by a Head and Deputy Head and the remaining staff members are involved in the following activities: computer system and system engineering administration (eight persons); design and implementation of complex computer applications (six persons); printing service (six persons); data input and validation (seven persons); principal programming engineer (one person).

The ITD is responsible for supporting the activities of the HQ and the TSOs, which are networked, and for integrating the NBS system as required with the wider information systems of the public service. All staff members in the NBS have access to a PC /laptop and internet access is widely available in all offices. The Assessment Team was informed

that approximately 50% of the PCs/laptops are well out of date and that this is a particular problem in the TSOs where the level of obsolescence can be much higher. In addition, there is a wide diversity in the age of the software in use throughout the NBS. For example, Windows XP, which is no longer supported, is still widely used. Dedicated statistical packages, such as STATA, SPSS and R, are used to a limited extent in some areas such as the statistical methods section and the Household Budget Survey (HBS) section. Overall, the Assessment Team formed the impression that the IT competence of staff in general is relatively low and variable and thus the delivery of IT services is very much dependant on the competence and capacity of the Information Technologies Division. In this context, the NBS is fortunate in having been able to retain a core complement of skilled and experienced IT professionals. The decision to significantly increase the salaries of IT staff in 2017 has undoubtedly been a very important factor in this regard.

Despite the limited resources, a number of significant developments have been completed in recent years. These include: the migration from MS Dos to Oracle; the construction of a modern and secure server room; the further development of the CIS and CIS2 processing systems (based on the .Net open source developer platform) to cover approximately 50 surveys; and the introduction of e-reporting for business surveys (26 questionnaires can now be completed by enterprises and submitted electronically to the NBS). The NBS is also collaborating with other Government agencies in the development of the M-Connect interoperability platform, which facilitates the exchange of data between the information systems of ministries and other public bodies. M-Connect will be particularly important in the context of the efficient transfer of administrative data to the NBS for statistical purposes.

The NBS is very much dependant on the assistance of external donors in the development and maintenance of its IT systems. It is currently benefitting from an EU funded public administration reform IT project, which involves a commitment of up to 2 million EUR. The project is multi-faceted with the underlying objective of meeting the identified technical requirements of the NBS. It is envisaged that it will include: The acquisition of hardware and software; the development of key systems; and training in IT for both IT staff and general staff.

The maintenance and development of a modern, well-resourced and fit-for-purpose IT infrastructure and environment must be a top strategic priority for all NSIs. Accordingly, the NBS is encouraged to continue to develop and update an integrated and wide-ranging IT strategy/policy to meet its emerging needs. This should include: An integrated statistical information system; the management of data centres; the development of the server room; the standardisation of production processes and applications; the identification of the optimal split of work between IT experts and statisticians; and the selection and support of a limited number of statistical application packages. Substantial savings and efficiencies can be realised from the deployment of modern IT systems. The Government is therefore urged to provide sufficient resources to the NBS to develop its IT infrastructure so that it can realise substantial efficiencies in the production of official statistics. In the short to medium term, it is vital that the NBS makes optimal use of the funds available through the PAR project to address the many current deficiencies and shortcomings in the IT environment. Finally, it is essential that all NBS staff members are up-skilled so that they can make efficient and effective use of a modern IT environment. The Assessment Team strongly supports the creation of a training centre for training on IT and statistical methodology. A particular emphasis should be placed on improving the IT skills of statisticians in the HQ and the TSOs.

Recommendations

The Government is encouraged to:

5. Recognise the importance of good quality statistics and increase the salaries of the NBS staff, aligning it with those applying in the Ministries, so that the NBS can attract and retain the highly skilled and competent staff it requires to implement its mandate.
6. Allow the NBS to transfer staff and/or staff positions from the TSOs to the HQ as well as between TSOs in order to facilitate the optimal reorganisation of the NBS.
7. Provide sufficient resources to the NBS so that the entire IT system can be modernised with a view to achieving substantial efficiencies in the production process.

The NBS is encouraged to:

8. Make optimal use of the forthcoming European Union (EU) funded public administration reform (PAR) project on IT in terms of upgrading the IT infrastructure in the HQ and the TSOs, where necessary.
9. Develop an IT strategy/policy that covers: The planned integrated statistical information system; the management of data centres; the future development of the server room; the standardisation of production processes and applications; an optimal split of work between IT experts and statisticians; and the choice of and focus on a limited number of statistical applications packages.
10. Further pursue its plans to create a training centre for training on IT and statistical methodology and to include appropriate training in user oriented statistical applications in order to develop the IT skills of statisticians in both the HQ and the TSOs.
11. Consider introducing more flexible working arrangements as a motivation factor for staff, especially younger staff.
12. Survey and identify the training needs of its staff on a more regular basis.
13. Secure and ring-fence the recommended 2% of its budget for training activities.
14. Introduce a staff satisfaction survey, which should be repeated at regular intervals.

Chapter 4: P4 - Commitment to quality

General assessment

The NBS Top Management is committed to quality and is developing a quality management system in line with European quality standards for statistics. The Assessment Team was told that in the forthcoming restructuring more resources will be given to quality management. Currently, the NBS has many systems and checks in place to ensure the quality of its statistical processes and products. Major quality indicators are publicly available on the NBS website, a metadata system covers key statistics, and all publications provide information on methodologies and classifications applied.

The statistical system has recently undergone several assessments, for instance assessments of: vital statistics, SBS, HBS, LFS, and the application of the ESCoP.

However, at the moment, there are no documented and standardized overall procedures on quality management in place in the NBS. The adoption of the new LOS, with clear provisions for the development and implementation of a quality management system, will facilitate further efforts (e.g. allocating more resources) towards setting up the quality management system. Specific attention should be given to: Developing quality guidelines to enable systematic quality assessment and reporting throughout the NBS; the collection of appropriate information to monitor the quality of administrative data sources; and the adoption of appropriate quality management and assurance procedures by other producers of official statistics.

Assessment per indicator

ESCoP indicator 4.1: Quality policy is defined and made available to the public. An organisational structure and tools are in place to deal with quality management.

A quality policy was developed and approved by the Board of the NBS on 29 June 2017. It is publicly available on the NBS website. In the LOS, Chapter VIII, Articles 21-22 state that the NBS is committed to continuous assessment and improvement of the quality of official statistics. Furthermore, the mission of the NBS is to set goals related to quality. These high-level quality commitment statements will need to be followed by a more detailed overall approach to quality management, which is not yet in place.

The NBS has a unit for internal audit and quality management, but it focuses on the internal audit of administrative processes rather than on quality management. Furthermore, this unit has only one post which has been vacant since more than one year. The new organisational structure, which is under discussion at the moment, foresees to allocate more resources to this unit.

To improve the current situation, in August 2017, the DG of the NBS created a Task Force on the implementation of a quality management system (TFQM). The TFQM shall develop an action plan for the implementation of the quality management system in the NBS and in the NSS; however, work cannot start without proper resourcing through restructuring, which is expected to take place during the first half of 2018.

Currently, quality guidelines and instructions to ensure updated documentation on quality are not available and no training of staff exists to support the quality policy in the NSS. However, several NBS specialists have participated in Eurostat or United Nations Economic Commission for Europe (UNECE) workshops and events on quality issues. In the future, these specialists may act as trainers when staff training is organised. The NBS also uses the United Nations Development Programme (UNDP) e-Learning Platform on statistical issues which comprises a module on quality management.

ESCoP indicator 4.2: Procedures are in place to plan and monitor the quality of the statistical production process.

At present, no procedures for systematic quality management are in place. Different quality management activities take place but as part of planning and statistical production processes. It is hoped that better planning and monitoring of quality of the statistical production processes will start when the planned reorganisation has taken place.

Even though the unit for internal audit and quality management does not implement any activities on statistical quality management, some procedures and quality checks are in place across statistical domains, e.g. data coherence and comparability over time are analysed in all statistics. The statistical methodology unit produces quality indicators such

as non-response rates and confidence intervals for LFS, HBS and SBS. The production systems include modules for data validation at different stages of the production process (data entry, processing, and tabulation). Furthermore, punctuality of statistical dissemination is monitored against the release calendar.

The NBS plans and monitors quality of statistical production process through a number of other activities, methods or tools, such as identifying the relevance of statistics in the consultation process on the annual statistical work programme. In statistical production, the NBS follows international standards and methodologies; based on them develops methodological notes for statistics and makes them publicly available on the website.

For household surveys, an assigned supervisor controls interviewers' work to ensure quality. The NBS also evaluated the results of the 2014 Population and Housing Census by carrying out a post-enumeration survey. The results have been carefully analysed when finalising the census and will feed into the planning of the next census.

ESCoP indicator 4.3: Product quality is regularly monitored, assessed with regard to possible trade-offs, and reported according to the quality criteria for European Statistics.

Quality reports for users are not produced for all statistics. However, the NBS publishes some quality indicators, such as the non-response rate and confidence intervals that help users to assess accuracy and reliability.

The NBS monitors timeliness and punctuality based on release dates and a comparison with the release calendar. During the preparation of the annual statistical work programme, timelines of statistical releases are being discussed.

The NBS collects feedback on the relevance and other quality criteria by carrying out a user satisfaction survey every four to five years. However, its organisation depends on the availability of external financing. The NBS conducted the last general user satisfaction survey in 2012 and another one targeted to users of regional statistics in 2015. Survey results are publicly available on the website.

While comprehensive quality reports are not prepared, the NBS produces metadata files based of the Euro-SDMX Metadata Structure (ESMS) and makes these available for users on the NBS website. Other quality reporting includes quality assessment reports published by the NBS, for instance the assessment reports of LFS and HBS and the results of the post-enumeration survey for the 2014 Population and Housing Census.

ESCoP indicator 4.4: There is a regular and thorough review of the key statistical outputs using also external experts where appropriate.

There are no systematic quality reviews in place or planned at the moment. However, the NBS analyses and takes action to improve key statistical outputs when needed without a specific action plan. The reason for such action may result from internal needs or from user feedback.

As mentioned, a unit for internal audit and quality management exists but is not operational in statistical quality management at the moment. The auditors are trained to carry out audits of internal administrative processes only.

For certain domains, improvement actions are taken in consultation with focus groups (e.g. gender statistics, regional statistics and Sustainable Development Goal [SDGs] indicators). User consultation results are used for improving key statistical outputs.

External experts have carried out in-depth assessments of certain statistical domains, for example in the areas of National Accounts, price statistics, HBS, SBS, LFS, demographic statistics, vital statistics, and regional statistics.

Usually, when improving the quality of certain statistical domains, the NBS takes into account the experience of other countries. Priority is given to countries with similar experience (centralized statistical system, small country and/or transition period) like Estonia, Lithuania, Poland, and Romania.

Recommendations

The NBS is encouraged to:

15. Put procedures in place to obtain more information and metadata on the quality of administrative data sources.
16. Develop an overall quality policy and move towards implementing an overall quality management system with realistic objectives, including the allocation of the necessary human resources which aims at assuring in a systematic way the quality of its statistical processes and outputs. The system should be based on best practice and should be driven and overseen by the Top Management.
17. Develop, at an early stage, quality guidelines for systematic quality assessment and reporting in line with the European quality standards.
18. Extend quality management and assurance to the other producers of official statistics, once they are properly defined, and tailor the quality approach to their systems and realities.

Chapter 5: P5 - Statistical confidentiality

General assessment

The legal basis for the protection of statistical confidentiality is formulated in the LOS of 26 May 2017, including several articles dealing with statistical confidentiality, protection and access of data as well as dissemination of statistical information. The law strictly prohibits the disclosure of confidential statistical information.

The NBS has many procedures and systems in place to ensure that the principle of statistical confidentiality is respected in practice. However, the Assessment Team identified a number of situations where procedures may need to be reviewed, and adapted where necessary, in order to avoid any potential breach of the principle or a perception of the same. Firstly, appropriate data protection procedures will need to be developed to ensure that the principle is fully respected, when NBS starts facilitating access by researchers to statistical microdata. Secondly, data collected for statistical purposes must be clearly distinguished from the publicly accessible book-keeping reports that are collected by NBS staff for its subsidiary, the Information Service for Financial Reporting (ISFR). While the book-keeping reports may be used for statistical purposes, data collected solely for statistical purposes must not be used to validate or correct the individual book-keeping data. Thirdly, the potential implications for statistical confidentiality of the proposal to include statistical reporting within a new centralised Government reporting platform will need to be carefully assessed. Finally, the NBS should develop and implement a clear policy to govern the storage and protection of hardcopy statistical returns held in the TSOs.

Assessment per indicator

ESCoP indicator 5.1: Statistical confidentiality is guaranteed in law.

Statistical confidentiality is addressed in the LOS. Article 18 states that “*data collected, processed and stored for the production of statistical information are confidential if they allow the direct or indirect identification of the respondents*”.

The law states that:

- Confidential data shall be used exclusively for the purpose of producing official statistical information in accordance with this law, unless the statistical unit has expressly consented to its use for any other purpose.
- Confidential data held by the central statistical authority may not be delivered to natural or legal persons.
- The central statistical authority may deliver to other producers of official statistics individual data on statistical units under the following conditions:
 - a) Data are used exclusively for the purpose of producing official statistics;
 - b) Data do not allow the identification of natural or legal persons.
- Confidential data cannot serve as evidence in court.

The law also specifies which data that shall not be considered confidential:

- Data that can be obtained from publicly accessible sources according to the legislation;
- Individual data on address, telephone, name, type of activity, number of employees of legal entities, and individual entrepreneurs;
- Data referring to public enterprises, institutions and organizations funded from the budget, submitted at the request of the public administration authorities.

In Article 20, it is stated that access to individual data which do not allow the direct identification of respondents may be given for scientific survey projects.

ESCoP indicator 5.2: Staff signs legal confidentiality commitments on appointment.

It is stated in Article 19 that employees of producers of official statistics, including temporary employees, shall not have the right to use individual data for purposes other than statistical ones, and shall sign, upon employment, a confidentiality statement under their own responsibility.

ESCoP indicator 5.3: Penalties are prescribed for any wilful breaches of statistical confidentiality.

Penalties for any wilful breaches of statistical confidentiality are not specified directly in the statistical law. In the statement signed by staff, the employees commit to the confidentiality of data and their use for statistical purposes only. Otherwise, they will be sanctioned according to the legislation in force.

ESCoP indicator 5.4: Guidelines and instructions are provided to staff on the protection of statistical confidentiality in the production and dissemination processes. The confidentiality policy is made known to the public.

Dissemination is regulated in Articles 23 and 24 of the LOS which state that statistical information cannot be disseminated to users if it refers to one to three statistical units, except in cases where it is necessary to inform the society about issues of major importance and the annual statistical work programme makes provisions for its dissemination.

On each statistical questionnaire it is mentioned that the NBS ensures confidentiality of individual data and non-admission of its disclosure (Article 19 of the LOS).

The principle of statistical confidentiality must be strictly adhered to on all occasions. Data collected for statistical purposes must be clearly distinguished from the publicly accessible book-keeping reports that are collected by NBS staff for its subsidiary, the ISFR. While the book-keeping reports may be used for statistical purposes, data collected solely for statistical purposes must not be used to validate or correct the individual book-keeping data.

While the NBS has a policy in place for ensuring the protection of personal data, including some elements of guaranteeing confidentiality in the IT systems, there is no overall policy on confidentiality and guidelines and instructions for its implementation do not yet exist.

ESCoP indicator 5.5: Physical, technological and organisational provisions are in place to protect the security and integrity of statistical databases.

An information security system is in place. Data are stored in a safe, physical area. Only security approved personnel has access to this protected area.

Additionally, the access to the databases is restricted. Other staff than IT personnel has access and may read or extract the data from the databases but is not entitled to change the data.

Hardcopy questionnaires are stored in the TSOs, normally for many years. This might represent a confidentiality risk if not stored or destroyed in a proper way.

The Government has proposed to centralize data centres in the whole public administration in a state owned company with only remote access to data. It is crucially important that the NBS continues to have the full administrator rights of the statistical databases.

ESCoP indicator 5.6: Strict protocols apply to external users accessing statistical microdata for research purposes.

The LOS allows the access to microdata for research purposes. The conditions are specified in Article 20. However, no specific procedures have been put in place by the NBS. The Assessment Team had the impression that the access to microdata for external researchers was not implemented in a coherent manner.

Recommendations

The NBS is encouraged to:

19. Put in place appropriate data protection procedures, in accordance with the LOS, to facilitate access by researchers to statistical micro-data for research purposes.
20. Develop a confidentiality policy and the related guidelines and instructions for staff to implement it.

21. Explicitly address any confidentiality issues potentially arising from individual staff in the TSOs handling both statistical reporting forms, which are subject to statistical confidentiality, and book-keeping reports that are made available for non-statistical purposes thus ensuring that data collected for statistical purposes are not used by staff to correct or otherwise influence the administrative information contained in the book-keeping reports.
22. Carefully assess the proposed inclusion of statistical reporting in a centralised Government reporting platform. In particular, the advantages and disadvantages of such a development need to be carefully assessed from the statistical perspective. The following should be included in any assessment:
 - The need to absolutely guarantee statistical confidentiality;
 - The need to maintain a separate profile from other Government agencies such as the tax authority;
 - The ability to maintain the functionality and flexibility of the current e-reporting tool developed by the NBS, particularly in respect of adjusting questionnaires and validating returns; and
 - The need to retain the NBS administrator rights over the NBS databases and to ensure the assignment of adequate resources to meet statistical requirements.
23. Review the storage of original hardcopy questionnaires containing personal identification information in the TSOs and develop and implement an appropriate policy with a view to guaranteeing statistical confidentiality in practice.

Chapter 6: P6 - Impartiality and objectivity

General assessment

Many practices are in place to ensure the impartiality and objectivity of the statistical outputs produced by the NBS. The legal framework is defined in the LOS and the dissemination regulation (24 April 2009). Statistical sources and methods are discussed by the methodological board prior to their application and approved by the DG. Statistical information is disseminated under equal conditions, at the same time and free of charge. The dates of release of statistical products are set in the release calendar.

When the NSS is developed to formally include other producers of official statistics, the release calendar should be expanded to include the statistical outputs of these producers. Changes to the calendar should also be announced publicly by the NBS in advance and there is a need to prepare and publish an explicit revision policy.

Assessment per indicator

ESCoP indicator 6.1: Statistics are compiled on an objective basis determined by statistical considerations.

Provisions on impartiality are determined in Article 5 of the LOS. The NBS and other producers of official statistics develop and produce official statistics respecting scientific independence in an objective, professional, and transparent manner, in which all users are treated equally. Objectivity of statistical processes is described in Article 7 (Central statistical authority), paragraphs 8, 9, 11, and 12.

ESCoP indicator 6.2: Choices of sources and statistical methods as well as decisions about the dissemination of statistics are informed by statistical considerations.

The NBS defines data sources depending on professional aspects and the quantity of data necessary for the production of official statistics. The data sources may be sample statistical surveys, exhaustive statistical surveys and administrative data (Article 14, “Data collection sources”).

All statistical surveys are conducted in accordance with the methodological documentation approved by the DG of the NBS. The Head of the Department or the survey manager prepares the methodology. The procedure for selecting data sources for the production of statistical information is not public; however, the resulting data sources are public through listing them in the annual statistical work programme. Information on statistical methodology and data sources is available in the metadata; methodological notes and statistical publications at:

Quality reports are not prepared yet.

The annual revision of statistical questionnaires/surveys also includes a review of the data sources and the data collection methods (quarterly methodological board, led by the Deputy DG).

ESCoP indicator 6.3: Errors discovered in published statistics are corrected at the earliest possible date and publicised.

Some provisions about errors discovered are laid down in the dissemination and communication regulation of the NBS, point 4.7 “Error correction”:

- 4.7.4. All correction made must be easy to see. The corrected data must be accompanied by a footnote where the date of correction is indicated. If the correction lasts up to 24 hours, the note also indicates the time of correction.
- 4.7.5. The NBS Top Management and the synthesis and dissemination division are informed about the discovered errors.

The general dissemination policy stipulates the procedure to follow in case errors are detected: Whom to inform, how to correct errors, how to correct errors in the mass media. A separate policy or document on error treatment is not available.

ESCoP indicator 6.4: Information on the methods and procedures used is publicly available.

For each published statistic there are methodological notes and metadata (user-oriented, ESMS format) available on the NBS website:

Not all products and stages of the process are documented. However, in the strategy for the development of the NSS 2016-2020 and in the NBS monthly/weekly plans, such work is foreseen.

ESCoP indicator 6.5: Statistical release dates and times are pre-announced.

A calendar of release of statistics is available on the NBS website:

<http://www.statistica.md/pageview.php?l=ro&id=5861&idc=213>;

<http://www.statistica.md/pageview.php?l=ro&id=5861&idc=213>.

Statistical information produced according to the annual statistical work programme is disseminated free of charge with equal access for all users at the same time. Procedures to announce changes to the release date are not envisaged.

ESCoP indicator 6.6: Advance notice is given on major revisions or changes in methodologies.

A revision policy or calendar is not available yet. All revisions of methodologies are pre-announced publicly. For revisions of some very important statistical data, enhanced communication measures are undertaken, such as releasing information notes and presenting improvements at conferences and workshops.

All planned revisions of methodologies are included in the annual statistical work programme and approved after consultation with all stakeholders, following the procedure set out in the legislation. After revision takes place and data are produced according to the new methodology, users are informed about the changes in the methodologies/concepts/definitions and breaks in the times series, if any, or plans for retrospective recalculations according to the new methodologies/classifications.

ESCoP indicator 6.7: All users have equal access to statistical releases at the same time. Any privileged pre-release access to any outside user is limited, controlled and publicised. In the event that leaks occur, pre-release arrangements are revised so as to ensure impartiality.

According to the LOS (Article 23, “Dissemination of official statistical information”), access to statistical publications is provided for all groups of users at the same time.

Producers of official statistics are obliged to disseminate statistical information within the deadlines specified in the annual statistical work programme and in the release calendar. Dissemination of statistical information to all categories of users is free of charge and with equal access in terms of quantity, quality, and time to all users.

The release calendar specifies the dates of publication of statistical products. According to the dissemination regulation, all statistical publications are available at the same time free of charge to all users. The subject matter communication notes are published on the NBS website usually at 10.00 or 14.00, depending on the workload of the dissemination unit.

ESCoP indicator 6.8: Statistical releases and statements made in press conferences are objective and non-partisan.

Special templates and guidelines for the dissemination of statistical information are available on the intranet (for TSOs).

No guidelines or calendar for organizing press conferences are available. All statistical events are organized for solely statistical or scientific purposes, avoiding mixing them with any events of political character.

Recommendations

The NBS is encouraged to:

24. Develop a release calendar for the entire statistical system once the other producers of official statistics are included into the annual statistical work programme.
25. Announce changes in the release calendar in advance.
26. Prepare and publish an explicit revision policy.

Chapter 7: P7 - Sound methodology

General assessment

Sound methodology underpins quality statistics. This requires adequate tools, procedures, and expertise. The NBS has a clear policy to adopt European and international standards and methodologies in the production of official statistics and significant progress has been achieved over the past five years. National statistical classifications are aligned with European and international standards which is known to be the main condition for cross-country and international comparisons; the methodology used broadly complies with international and partly also with European standards. The adoption of new or improved methodologies has to go through all stages of the standard procedure, which is a guarantee of their quality.

Over the past five years the following achievements were noted:

- International and European methodologies and classifications were introduced;
- New statistical classifications and methodologies were implemented;
- Good cooperation with external partners was established;
- New statistical products were implemented.

The Assessment Team agrees with the NBS management that more resources are required for training and it recommends that priority should be given to the specific needs of new employees and also to facilitate the move towards a more process-based organisational structure.

The NBS is also encouraged to systematically improve the quality of its questionnaires and to continue to give priority to the adoption of EU methodologies in all statistical domains.

Assessment per indicator

ESCoP indicator 7.1: The overall methodological framework used for European Statistics follows European and other international standards, guidelines, and good practices.

The NBS applies international and European methodologies and classifications. Standard methodological documents containing guidelines for statistical operations and describing the methodological framework are prepared. All documents are placed on the NBS website:

- Methodology on: <http://www.statistica.md/pageview.php?l=ro&idc=441&>;
- Metadata on: <http://www.statistica.md/pageview.php?l=ro&idc=430&>;
- Statistical publications on:
<http://www.statistica.md/pageview.php?l=ro&idc=350&nod=1&>.

However, not in all statistical domains standardised methodology exists.

Once changes in the methodology occur, they are updated and discussed by the NBS methodological commission (headed by a Deputy DG, seven members) and approved by the DG. The NBS Board (headed by the DG, eleven members) analyses all new methodologies. The head of subject-matter division is responsible for preparation of survey methodology.

ESCoP indicator 7.2: Procedures are in place to ensure that standard concepts, definitions and classifications are consistently applied throughout the statistical authority.

Mainly international concepts and definitions are applied, in some cases they are adjusted to the national needs. A list of concepts and definitions is prepared and available to all users.

Statistical operations are based on methodological documentation, containing all relevant information on metadata, concepts, methods, and classifications. The NBS has a clear, Government supported, policy to adopt European and international standards and methodologies for the production and dissemination of official statistics of Moldova. The national classification system is fully in line with the European and international standards. Methodological documentation is made public (see indicator 7.1). One of the tasks of the NBS methodological commission is to approve statistical questionnaires and revise methodologies. The statistical methods unit is responsible for sampling. A specific NBS unit for the coordination of data collection in households is established for the coordination of data collection from households.

Assessments results of international experts are placed on:

<http://www.statistica.md/pageview.php?l=ro&idc=399&id=2739>.

NBS staff attends national and international seminars and workshops on standards, methods, and classifications as well as on their application.

ESCoP indicator 7.3: The business register and the frame for population surveys are regularly evaluated and adjusted if necessary in order to ensure high quality.

Business Register is updated regularly: Daily (identification of data) as well as annually (economic indicators and types of activity). See also chapter 16.1.

Administrative data sources (tax records and bookkeeping reports) are of sufficient quality. The sample frame for household surveys is updated every two years for new statistical units that are included into the master sample after rotation (approximately 20% of the population).

Based on available information from electricity providers, in 2018, the NBS plans to update the sample frame for the Chisinau municipality for the SBS. The coverage of the sampling frame for STS is not yet assessed but the NBS plans to assess it in the future.

ESCoP indicator 7.4: Detailed concordance exists between national classifications systems and the corresponding European systems.

Creation and management of classifications are carried out in accordance with the LOS (Article 26 “System of statistical classifications”).

The National classification system is fully in line with European and international standards, e.g. NACE=CAEM (Classification of Activities in Moldovan Economy), please see:

<http://www.statistica.md/pageview.php?l=ro&idc=385&>.

ESCoP indicator 7.5: Graduates in the relevant academic disciplines are recruited.

Recruitment of the qualified and appropriate staff depends on the NBS qualification requirements for each position.

General recruitment procedure for civil servants is provided by the Law on Civil Service and by the Statute of Civil Servants no. 158-XVI from 4 July 2008. Specific requirements are provided by the NBS, taking into account the responsibilities and obligations for corresponding positions on:

<http://www.statistica.md/newsview.php?l=ro&idc=30&id=5721&parent=0>.

Based on the description of functions, responsibilities, and obligations for each position, specific qualification requirements are set for all positions. The recruitment process involves open competition, including interviews and tests.

ESCoP indicator 7.6: Statistical authorities implement a policy of continuous vocational training for their staff.

No vocational training policy has been developed by the NBS yet. However, the NBS specialists benefit from the general trainings provided for civil servants by the State Chancellery and vocational trainings provided by International Organisations such as Eurostat, United Nations Statistics Division (UNSD), UNECE, EFTA, etc.

Compulsory annual evaluation of every civil servant contains questions and requirements for a specific number of attended hours for training. Specialists receive bonuses if they attended 40 hours and more of training.

Every newly recruited civil servant is obliged to attend introductory courses on the civil service. In the framework of some technical assistance projects, master studies undertaken by some specialists were paid for by the NBS.

All information about training and study possibilities is available via the human resources department and on the corresponding website and intranet.

ESCoP indicator 7.7: Cooperation with the scientific community is organised to improve methodology, the effectiveness of the methods implemented and to promote better tools, when feasible.

In 2017, an inter-institutional agreement was signed between the NBS and the Academy of Economic Studies, indicating cooperation areas and opportunities for mutual development. The NBS Board includes a member of the Academy of Economic Science. Information on developments is shared with the academic world.

Depending on the available expertise and administrative capacities, some of the NBS specialists are members of international working groups/steering committees/task forces on various topics (business registers, labour market statistics, gender statistics, SDGs, etc.).

Technical assistance projects and participation in the various events ensure interaction and communication of the NBS specialists with the representatives from other countries, thus allowing the sharing of best practice and discussing challenges.

An impediment to strengthening and activating international communication and cooperation is the rather modest knowledge of foreign languages by some specialists.

Participation of the NBS staff in international events is encouraged, in particular active participation through presentations. Afterwards, debriefings of study visits, conferences, seminars, etc., are organised at weekly meetings of the NBS Top Management and heads of divisions and units. All presentations are available on the intranet.

The NBS organises both national and international events. The list of such events is available on the following page: <http://www.statistica.md/lib.php?l=en&idc=223&>. However, the number of such events is limited due to a lack of financing.

The organisation of international and national events is envisaged in the Strategy for the Development of the National Statistical System (SDNSS) 2016-2020, promoting the coordinating role of the NBS. There is recent practice at the NBS to organise common events with other producers and users. In the framework of the STATREG project, many events of this type were organised:

<http://www.statistica.md/pageview.php?l=ro&idc=399&id=2739>.

Recommendations

The NBS is encouraged to:

27. Introduce targeted vocational training on methodology issues.
28. Expand application of the EU methodology to all statistical domains.

Chapter 8: P8 - Appropriate statistical procedures

General assessment

The NBS places a priority on ensuring that appropriate statistical procedures are implemented from data collection to data validation in order to guarantee the quality of its statistical outputs. Progress has been made in recent years but it is clear that more needs to be done. A small methodology unit makes a significant contribution in many areas but difficulties have been experienced in recruiting and retaining suitably qualified staff.

The use of the central M-Connect platform to transfer administrative data from a number of public authorities to the NBS is a welcome development. It will be important, however, for the NBS to maintain direct contact with the main data holders in order to agree on technical issues and to ensure that full access rights are accorded. It will also be important to ensure that it is informed in a timely manner of any planned changes to the content or format of the source data.

In its review of various statistical procedures, the Assessment Team identified the following issues for attention: The need to take steps in the organisation and processing of relevant surveys to ensure that key statistics for the six development regions can be provided; the introduction of a standardised approach to the classification of non-response; the need to avoid overlaps in the collection of data in business surveys; and the desirability of evaluating the quality of coding by interviewers in household surveys. More frequent questionnaire testing should also be applied for a larger number of surveys

Assessment per indicator

ESCoP Indicator 8.1: When European statistics are based on administrative data, definitions and concepts used for the administrative purposes are a good approximation to those required for statistical purposes.

The NBS produces official statistics based on the administrative data provided by other central public authorities (demography statistics, based on the civil registration office data as well as external trade statistics, based on the custom declarations).

Within the statistical domains, each data source has its own data validation procedure. In case of missing information, there are clear procedures for updates. Identification and validation of new data sources is a part of the workflow process. However, not all data sources are documented.

ESCoP Indicator 8.2: In the case of statistical surveys, questionnaires are systematically tested prior to the data collection.

Testing is usually done for new surveys (for example agriculture, energy statistics). Cognitive testing was carried out for the LFS questionnaire. The NBS does not have a specialised unit for questionnaire testing; usually this work is carried out by the survey manager.

Initial training on questionnaire testing took place, in the framework of the Swedish International Development Cooperation Agency (SIDA) financed project (Cooperation project between National Bureau of Statistics of the Republic of Moldova and Statistics Sweden). The NBS plans to establish a unit responsible for testing and standardising the procedure of testing. All testing results are taken into account and implemented. Reports on testing exist, but their content and format is not standardised.

Estimation of response time is not performed in the NBS.

ESCoP Indicator 8.3: Survey designs, sample selections and estimation methods are well based and regularly reviewed and revised as required.

In the NBS, there is a specialised unit (statistical methods unit) responsible for survey design, sampling, and estimation, employing four specialists, which is however faced with a high staff turnover.

Survey design and sample selection are developed according to standard methods. Sample design is periodically renewed for regular surveys. Methods for calculating the accuracy of statistical estimates are applied that permit the accuracy of the data to be assessed.

The sampling accuracy is not assessed for STS and agricultural surveys, for all other sample surveys it is assessed using CLAN software, developed by Statistics Sweden. For some surveys, sampling accuracy is reported to users (e.g. SBS, LFS, and HBS).

Estimation methods, including correction of non-response and data calibration, are applied systematically, but the methodological guidelines are not prepared yet. Currently, seasonal adjustment is applied only in macroeconomic and industry statistics.

The Assessment Team were informed that estimates for the six economic development regions, defined in 2006, could not be produced because of survey design and other limitations. This is a matter that should be addressed, particularly in respect of the most important and relevant economic and social variables.

ESCoP Indicator 8.4: Data collection, data entry and coding are routinely monitored and revised as required.

A separate unit for data entry and coding does not exist yet. The rules and procedures are standardised and usually prepared by the survey manager using guidelines or metadata.

Data collection is optimised to reduce costs and response burden in order to improve accuracy as well as to reduce non-sampling errors. Respondents of the surveys are provided with all necessary documents. These documents are regularly reviewed, revised, and updated. The Assessment Team is of the view that there would be some benefit from rationalising the set of business surveys in order to reduce the number of surveys conducted and to avoid overlaps in the collection of data.

Systems for systematically evaluating the quality and consistency of coding by interviewers in household surveys are not in place. The Assessment Team believes that some priority should be given to developing such systems.

ESCoP Indicator 8.5: Appropriate editing and imputation methods are used and regularly reviewed, revised or updated as required.

Editing is mainly applied for outliers and partly for non-responses (examples: household surveys, SBS, and HBS). In case of the 2014 Population and Housing Census, more advanced imputation techniques for missing and erroneous data were used; editing and imputation procedures are documented, according to international editing rules.

For other surveys, standardised editing rules are not prepared and imputation techniques are not introduced, but their harmonization is promoted and encouraged, e.g. the primary databases are edited for the household surveys. A standardised approach towards the classification of non-response should be introduced for all household surveys.

ESCoP Indicator 8.6: Revisions follow standard, well-established and transparent procedures.

In all statistical domains revisions take place applying various methods. In case of changes in the methodology and classifications, users are informed about the changes and new data are published. Any kind of revision is supported by explanatory notes. A separate policy and a calendar to announce revisions do not exist but revisions are included into the annual statistical work programme.

ESCoP Indicator 8.7: Statistical authorities are involved in the design of administrative data in order to make administrative data more suitable for statistical purposes.

Access rights of the NBS to administrative data are determined in Article 16 of the LOS (“Access to administrative data”). In order to increase the number of data necessary for the production of official statistics and at the same time to reduce burden on respondents, the NBS has the right to access and use administrative data sources free of charge, including sources containing individual data.

The owners of the administrative data coordinate with the NBS the content and quantity of data collected by them, including possible changes in the data, and, at the request of the NBS, includes additional indicators.

In some statistical areas, for example social statistics, the NBS is consulted on the content and structure of administrative data. Inter-institutional committees meetings, task forces, etc., are organised to discuss cooperation on the data sources.

For each statistical field, administrative data sources are investigated for the purposes of the specific statistical field. Meetings are organised on ad-hoc basis, depending highly on the willingness of the administrative data owners to cooperate.

ESCoP Indicator 8.8: Agreements are made with owners of administrative data which set out their shared commitment to use of these data for statistical purposes.

Agreements with the administrative data owners are signed but not with all of them. The new M-Connect system (<http://www.egov.md/en/communication/news/mconnect-digital-solution-streamlining-interaction-between-state-institutions>) optimises intra-institutional data exchange and reduces operational costs based on the reuse of available information and IT systems but the NBS needs to ensure that it will still be consulted on all changes in the administrative data sources available on the platform and that it has formalised access to all information on the data sources.

All administrative data sources are indicated in the annual statistical work programme (part B).

ESCoP Indicator 8.9: Statistical authorities cooperate with owners of administrative data to ensure data quality.

The purpose of the use of administrative data is indicated in the annual statistical work programme:

<http://lex.justice.md/viewdoc.php?action=view&view=doc&id=369020&lang=2>.

Specific inter-institutional agreements (Egov, Ministry of Justice, registration chamber, tax authority) are signed.

Recommendations

The NBS is encouraged to:

29. Make sure in using the M-Connect platform that it is fully consulted in a timely manner by the holders of administrative data on planned changes to the content and format of the data.
30. Notwithstanding the use of the M-Connect platform, conclude parallel agreements with the holders of the main administrative data sources to agree on technical issues and to guarantee full access.
31. Produce statistics for the six economic development regions, defined in 2006, in statistical domains where this is relevant (e.g. Labour Force Survey [LFS]).
32. Standardise the classification of non-response in all household surveys.
33. Rationalise its set of business surveys in order to reduce the number of surveys conducted and avoid overlaps in the collection of data.
34. Evaluate the quality of coding by interviewers in household surveys.
35. Apply questionnaire testing on a more frequent basis and for a larger number of surveys.

Chapter 9: P9 - Non-excessive burden on respondents

General assessment

The new LOS provides a strong legal framework for using administrative data sources and reusing data among producers of official statistics. Inter-institutional agreements on data exchange support the reuse of already collected data. There are several administrative data

sources available in society for the development of statistical products and services. These should be made more easily available for statistical production.

The NBS has taken several actions to reduce response burden, such as implementing sample surveys and electronic data collection and developing standardised questionnaires for STS. It also organises annual meetings with the Employers' Confederation, the Chamber of Commerce and the Economic Council to further improve data collection and maintain and improve relationships with respondents.

The Assessment Team would, however, recommend that a more integrated and pro-active approach be adopted towards reducing the response burden through greater use of sample surveys and administrative sources. A methodology should also be developed for measuring the burden on a regular basis and for setting targets for its reduction.

Assessment per indicator

ESCoP indicator 9.1: The range and detail of European Statistics demands is limited to what is absolutely necessary.

The annual statistical work programme is the most important instrument in analysing possible redundancy and duplication of statistical information collected directly from respondents. The scope and detail of statistical production is reviewed across the NSS when drafting the annual statistical work programme in collaboration with other producers of official statistics and users.

ESCoP indicator 9.2: The reporting burden is spread as widely as possible over survey populations.

The NBS manages the response burden in each statistical area separately. In business statistics, particularly in STS, the NBS applies a rule that the smallest units with one to three employees are not surveyed. The NBS has analysed the response burden of household surveys and reduced the panel accordingly. For the 2014 Population and Housing Census, the tentative time limit for one visit was set to 40 minutes to manage the response burden.

The NBS has no generic action plan to decrease the burden on respondents and has not assessed the burden to respondents caused by all its surveys. Currently, the applied sampling methods depend on the statistical area. For instance, household surveys apply a coordinated sampling methodology but business statistics do not.

ESCoP indicator 9.3: The information sought from businesses is, as far as possible, readily available from their accounts and electronic means are used where possible to facilitate its return.

The NBS makes available correspondence manuals between statistical reporting and national accounting standards to facilitate answering statistical surveys. A user manual for e-reporting is on the NBS website. Some respondents have used these manuals to develop automatic extraction of data from their accounting systems. The NBS has not developed any software tools nor collaborated with software providers to enable direct extraction of information from business accounting systems.

The NBS has developed an e-reporting portal for businesses. Data collection through the system started on 1 March 2015. At the moment, the e-reporting system includes 27 statistical forms with monthly, quarterly, and annual frequency. Furthermore, businesses have the opportunity to present their financial statements through the e-reporting system.

Statistical forms include methodological notes that present additional information for respondents. Some questions make direct reference to national bookkeeping standards to facilitate correct reporting.

Currently, the NBS is adjusting the system, removing errors, improving the reporting process, and enhancing the automated e-reporting system by including new statistical data collections in the system.

ESCoP indicator 9.4: Administrative sources are used whenever possible to avoid duplicating requests for information.

The SDNSS 2016-2020 includes an action plan that aims at better use of administrative data. The SDNSS recognises the need to increase the integration and use of administrative data and registers in statistical production. Today, access to administrative data is still somewhat limited due to technical and confidentiality reasons. The content and format of administrative data sources do not correspond to statistical needs. Another shortage is the limited availability of data in electronic format.

One important step forward in the use of administrative data sources is to make them accessible through a Governmental interoperability platform such as M-Connect (see Chapter 8).

The planned measures of the SDNSS 2016-2020 include: New agreements to be signed with partners for the use of administrative data for statistical purposes and the development of procedural methods for data exchange as well as creating an efficient system of information exchange allowing modification of concepts, structure, methods, and techniques used in the construction of administrative data.

The reform action plan of the public administration also includes an intention to use value added tax data for the calculation of turnover, use of data from the National House of Social Insurance for the production of labour statistics, etc.

Article 16 of the LOS provides the backbone for better access to administrative data. It states that with a view to supplementing the quantity of data necessary for the production of official statistics and to reducing the information burden on respondents, the NBS shall have the right to access and use, free of charge, administrative data sources, including sources containing individual data. The holders of administrative data sources are also obliged to provide metadata.

Article 16 further states that the holders of administrative data shall also coordinate with the NBS the content and number of data collected by them, including possible changes to their data.

According to Article 14 of the new LOS, the producers of official statistics are entitled to use also data held by other legal entities than public administration as a source for statistical production. This remains to be implemented.

ESCoP indicator 9.5: Data sharing within statistical authorities is generalised in order to avoid multiplication of surveys.

There exist many inter-institutional agreements among producers of official statistics on data exchange that support the reuse of already collected data. However, data sharing could be further strengthened to avoid unnecessary overlapping data collections.

Article 18 of the new LOS allows the NBS to deliver to other producers of official statistics individual data on statistical units under the condition that these are used exclusively for statistical purposes and that these data do not allow the identification of natural or legal persons. Article 10 obliges the other producers of official statistics to deliver, free of charge, statistical information to the NBS at its request.

ESCoP indicator 9.6: Statistical authorities promote measures that enable the linking of data sources in order to reduce reporting burden.

The NBS promotes the use of internationally agreed statistical classifications and common identifiers for natural and legal persons in different administrative data sources. Fiscal codes exist for companies and individual identifiers for persons that are presented in contact with different authorities. This code is compulsory to use throughout public authorities.

However, since the NBS has no access to the population register, the individual identifier cannot be used for persons. The same situation holds for the real estate register. These issues need to be solved by negotiating access to these data, based on the new LOS, with register holders. Wider use of M-Connect should facilitate the linking of different data sets for statistical purposes.

Recommendations

NBS is encouraged to:

36. Take a more pro-active and considered approach towards minimising the burden on respondents. The actions might include the greater use of sample surveys in collecting data and an increased use of administrative data for statistical purposes. The NBS could furthermore encourage other public administration bodies to develop administrative data sources usable and accessible for the production of statistics.
37. Develop a methodology for measuring the response burden on a regular basis and set targets for reducing the overall burden on respondents.

Chapter 10: P10 - Cost effectiveness

General assessment

The use of resources is monitored on a general level, according to the general requirements and procedures set down for state-financed institutions in Moldova. The rules in place for requesting budgetary allocations from the Government, and for reporting on their use, also impose reporting requirements. However, neither the SDNSS for the period 2016-2020 nor the annual statistical work programmes contain any information on resource allocations or requirements. This reflects the absence of a time recording system to enable the costing of statistical products and hence, there is no basis for linking the products of the annual statistical work programme with the needed resources. The NBS has made some efforts to use the potential of administrative data sources to gain efficiency by concluding agreements with administrative data holders and being actively engaged in the establishment of the Government sponsored M-Connect platform that should become a central storage of all available administrative data in the country. These efforts should be

continued and pursued pro-actively. The NBS has also screened its statistical survey questionnaires to reduce duplication and redundancy of questions as well as to introduce e-reporting. However, further efforts are needed in this regard.

The use of modern ICT tools such as tablets for statistical surveys and a modern IT infrastructure could help the NBS to benefit from the potential of latest technology developments.

Assessment per indicator

ESCoP indicator 10.1: Internal and independent external measures monitor the statistical authority's use of resources.

The use of financial resources is monitored according to national rules and procedures and in accordance with the relevant budgetary classification. For the interviewer network used by the NBS for mainly household surveys, the budget is monitored separately from the general budget.

The allocation of the total number of staff given to the NBS is centrally decided as well, while the allocation of staff to the departments in the NBS and to the TSOs is decided by the Top Management of the NBS. The use of staff resources inside a department is decided and monitored by the head of the department. Assessment of staff performance is done annually. There are no competence profiles developed in order to match jobs and staff competences but the NBS has plans to develop a matrix of staff competences and job requirements.

No central monitoring of the use of staff for data collection, production, and analysis is implemented but the NBS has done some ad-hoc analysis of the workload of staff.

The situation of IT was assessed in preparing specifications for an EU funded project on the provision of IT, within the overall PAR of Moldova.

No time accounting system measuring the time used for statistical activities and production exists yet. Hence, no cost accounting for statistical products is available.

ESCoP indicator 10.2: The productivity potential of information and communications technology is being optimised for data collection, processing and dissemination.

The availability of IT equipment is reasonable in terms of numbers but the NBS is faced with a rather large variety of software applications used in different production processes and the fact that almost 50% of the equipment is outdated. These factors hamper the NBS to benefit from potential productivity gains through the use of modern ICT tools and infrastructure and force it to focus on ensuring normal production rather than effectively organising and rationalising its processes.

E-reporting has been introduced recently but not yet at large scale (roughly 40% of enterprises report their data online through electronic questionnaires). The NBS has a specific department collecting financial reports from enterprises, however, not yet systematically in electronic format. For price surveys tablets are used. However, the use of tablets for CAPI/CAWI-based household surveys would support the NBS to benefit more from technology development and to increase efficiency of data collection and production.

The development of the M-Connect project as a platform for storing different administrative data sources available in Moldova has a significant potential of productivity gains if all administrative data are stored there, are stored there in a proper and easy-to-reuse data format and structure, and can be accessed by the NBS on entity level.

Almost no measurement of the productivity potential takes place and the lack of resources and concepts hinders a more regular and systematic way of identifying and using productivity potentials.

ESCoP indicator 10.3: Proactive efforts are made to improve the statistical potential of administrative data and to limit recourse to direct surveys.

The NBS has signed some agreements with the holders of administrative data sources, such as the tax register, the National House of Social Insurance and one general one with the holder of the M-Connect platform planned to be a central storage of a significant number of administrative data sources available in Moldova. Negotiations with other holders of administrative data sources are ongoing but often hampered by considerations of personal data protection.

The potential of using administrative data sources for reducing the amount of statistical surveys is well recognised by the NBS but the creation of a centralised unit for dealing with administrative data sources and the allocation of resources for a more pro-active approach to explore their potential would be needed.

Samples for statistical surveys are not coordinated throughout the NBS and hence, some respondents can be selected for several surveys. The NBS has taken some steps to screen its statistical questionnaires in order to identify duplicated or redundant questions, to streamline questionnaires, to move from monthly to quarterly surveys, and to use available administrative data rather than implementing surveys for some indicators. All of this aims at reducing response burden. These efforts are commendable and need to be continued. Additionally, they should be coupled with introducing coordinated samples and a regular measurement of response burden in order to assess the efficiency of the efforts to reduce response burden.

ESCoP indicator 10.4: Statistical authorities promote and implement standardised solutions that increase effectiveness and efficiency.

Although there is awareness about the GSBPM among the staff of the NBS and its potential usefulness for organising the work of the statistical office along its steps, it is not yet used for describing statistical processes and automating parts of the production process. GSBPM as a basic standard could be used as a first step to move towards a greater degree of standardisation and automatization of processes, including the description of processes (process maps), organising the production processes according to the GSBPM, rationalising the organisational structure of HQ versus the TSOs and applying standard quality measurement/indicators.

Some standardisation is applied and promoted through the use of international classifications not only by the NBS but also by other producers of official statistics and other administrative data holders.

Recommendations

The NBS is encouraged to:

38. Introduce in the medium term, a time recording system with a view, in the longer term, to systematically costing the production of its individual statistical products.
39. Increase electronic reporting further for enterprise surveys and consider extending it to other surveys.
40. Introduce standardisation of processes through the use of GSBPM in order to describe and automate statistical processes.

41. Consider the introduction of CAPI/CAWI in its household surveys.

Chapter 11: P11 - Relevance (user consultation)

General assessment

The NBS provides a good service to users, particularly through its well-developed website. However, it needs to develop a better relationship in general with users and to raise its public profile as a producer of high-quality statistics.

The creation of the National Council for Statistics is a welcome development and it should be convened as soon as possible. In the medium term, the Assessment Team believes that the structure of the Council should be re-balanced to have greater user representation - at the moment its membership profile is heavily weighted towards producers of statistics. The current Management Board of the NBS, which contains two external members, undertakes some functions that may be more appropriate for the National Council for Statistics. In these circumstances, the continued need for a Board with external members should be reviewed when the Council becomes operational in order to avoid overlaps in responsibilities.

Scarce resources are a significant obstacle to meeting the needs of users, particularly in satisfying demands for new statistics. The NBS should therefore, in conjunction with the Council, put an emphasis on developing a methodology for prioritising user needs, including the identification of lower priority outputs that might be discontinued.

Assessment per indicator

ESCoP indicator 11.1: Processes are in place to consult users, monitor the relevance and utility of existing statistics in meeting their needs, and consider their emerging needs and priorities.

In the LOS, the role of National Council for Statistics is specified (Article 8). One of its tasks is to make recommendations on the development and improvement of the NSS with a view to increasing the degree of meeting user requirements. However, this Council has not been established yet. Contacts with users took mostly place on bilateral basis as well as with main users like the NBM and ministries.

It is the Assessment Team's opinion that the Council should be convened as soon as possible and, to the extent that there may be some overlap in functions and membership between it and the existing Management Board, the continued need for the latter should be reviewed.

ESCoP indicator 11.2: Priority needs are being met and reflected in the work programme.

The proposals from users are taken seriously. However, due to resource constraints and a lack of funding, it is difficult for the NBS to take proposals for new or extended statistics on board in the annual statistical work programme. Therefore, priorities in the annual statistical work programme are rather defined by the resource constraints of the NBS than by considering all user needs.

ESCoP indicator 11.3: User satisfaction is monitored on a regular basis and is systematically followed up.

User satisfaction surveys are not done regularly. The last survey on user satisfaction with NBS data was done in 2012/2013. The SDNSS 2016-2020 includes the implementation of another user survey by 2020. A user survey limited to measuring the satisfaction with regional statistics was conducted in 2015.

The Assessment Team got the impression that although the NBS is aware of general and specific user needs, it does not always respond to these needs in the most appropriate manner either through delivering the requested data or by explaining why these data cannot be provided. Timeliness of data, the non-availability of seasonally adjusted data, the lack of certain breakdowns/disaggregated data, the non-existing possibility to access microdata for researchers, delays for providing tailor-made statistics, non-user friendly presentation of the data, and insufficient response when the plausibility of some highly sensitive statistics (e.g. unemployment and inflation) is challenged were concerns raised by some users. Some of those concerns could likely be addressed by increasing the resources for the NBS and by a more pro-active dissemination and communication policy of the NBS.

On the other hand, metadata available on the website of the NBS were seen as a good tool to understand concepts behind the published data.

Recommendations

The NBS is encouraged to:

42. Convene the newly created National Council for Statistics as soon as possible and seek to re-balance the membership structure towards having greater user representation in the medium term.
43. Reconsider the continued need for the current Management Board, which contains two external members, once the new Statistical Council is operational, in order to avoid overlaps in responsibilities between the two bodies.
44. Introduce a method for prioritising user needs, including the identification of negative or low priorities where the relevant statistical outputs might be discontinued, in the development of the annual statistical work programme.
45. Approach and consult users in a more pro-active and structured way on a regular basis.

Chapter 12: P15 - Accessibility and clarity

General assessment

Overall, official statistics are presented in a clear and understandable way, released in a suitable and convenient manner and available and accessible on an impartial basis with supporting metadata and guidance. In addition to the availability of metadata based on the ESMS standards, the NBS has also developed a list of concepts and definitions for all statistical domains and placed it on the website.

A modern website, with some innovative features, has been developed and is now the main means of dissemination employed by NBS. Users are enabled to access statistical reports, create their own tables using the PC-Axis tool, and download data using various data formats. The website of the NBS also has some features to assist people with disabilities (e.g. possibility to increase font-size, subtitles for some videos, background colour, etc.).

The Assessment Team has identified a number of areas where the NBS could further improve its service to users. These include: greater interaction with users; more active engagement with the mass media; the introduction of measures to improve statistical literacy; and the facilitation of access by researchers to microdata.

Assessment per indicator

ESCoP indicator 15.1: Statistics and the corresponding metadata are presented, and archived, in a form that facilitates proper interpretation and meaningful comparisons.

A dissemination policy is available and published on:

http://www.statistica.md/public/files/despre/legi_hotariri/Principii_de_diseminare_a_informatiei_statistice.pe_site.pdf.

A user satisfaction survey of all users was carried out in 2012 as well as a targeted one on regional statistics in 2015. The annual statistical work programme can also be considered as an instrument to consult users on dissemination aspects like timing and level of disaggregation.

Training of users is carried out on an ad-hoc basis, e.g. in the framework of the STATREG project: Training has been provided on regional statistics and on the use of statistics for

policy making for 57 groups, with 1155 participants for a total of 121 days, as well as on gender statistics for three groups up to 15 persons. Seminars to inform users are organised on a regular basis.

In addition, guidelines are available to users explaining how to interpret statistics:

as well as the manual for the users of regional statistics:

A common nomenclature for archiving files has been developed by the NBS and the state archive. Unfortunately, the archiving policy does not cover digital information. Generally, meaningful comparisons (time series and revised/back-casted data are available for users but this differs per statistical domain.

ESCoP indicator 15.2: Dissemination services use modern information and communication technology and, if appropriate, traditional hard copy.

Dissemination of statistical information ensuring equal access for all users in terms of quantity, quality, and time is set out in the annual statistical work programme and is free of charge. In case users ask for specific/additional statistical information in writing, the preparation of such information is done against payment covering the expenditure necessary for its preparation, in accordance with an internal regulation (Article 23 of the LOS).

The statistical databank ([\) allows self-tabulation and export of data in 16 formats, including XLS and HTML. Most of the data on the NBS website are in XLS and HTML format:](http://statbank.statistica.md)

Users are able to choose appropriate formats according to their needs. Usually, if users need more detailed information, they can contact the Communication and Dissemination unit. If there is a need for a more elaborated answer, users are directed to the branch statistics division.

Statistical data are disseminated using tools and formats that facilitate re-dissemination:

GenderPulse is an interactive, easy-to-understand graphical visualisation tool created for gender-sensitive statistical indicators. This specific application is worth highlighting from a technological point of view and its utility. The intuitive interface of the web application and its content include illustrations and icons specific to the topics viewed, allowing users to understand the data without having advanced knowledge in the field. Data visualisation has traditionally been associated with printed products. However, with the development of web technologies, new dimensions of information presentation, where users have an active role, have been explored, such as scalable vector graphics (SVG) design which provides exceptional quality of the image without loss of data quality.

The website of the NBS has some features for people with disabilities (e.g. the possibility to increase font-size, subtitles for some videos, background colour, etc.). The NBS plans to take into account accessibility guidelines via redesigning the website.

ESCoP indicator 15.3: Custom-designed analyses are provided when feasible and the public is informed.

The possibility to provide custom-designed analyses is mentioned in Article 25 of the LOS (“Dissemination of official statistical information outside the Statistical Work Programme”).

At the request of internal or external beneficiaries, the NBS and TSOs are authorized - on the basis of contracts - to conduct special statistical surveys and work, including publications that are not included in the annual statistical work programme.

The policy for determining the costs arising for such work needs to be revised. A template for custom-designed outputs is available online on:

http://www.statistica.md/solicitare_informatii_statistice.php?l=ro.

ESCoP indicator 15.4: Access to microdata is allowed for research purposes and is subject to specific rules or protocols.

Article 20 of the LOS “Access to individual data” makes reference for access to microdata.

Under a regulation approved by the NBS, access to individual data that does not allow direct identification of respondents, may be given for scientific surveys and research purposes as long as the expected results do not refer to identifiable individual units.

Access to individual data can only be granted if there is no risk of violation of the individual data protection regime and on the basis of a contract that defines the purpose of using the data, conditions of the use, the user's obligations to communicate the results of the survey, and not to publish or deliver individual data to a third party. Such contracts also determine the payment for the services provided to the user.

The dissemination regulation makes general provisions for the access to microdata.

ESCoP indicator 15.5: Metadata are documented according to standardised metadata systems.

Metadata are documented according to the ESMS standard but they are not available for all statistical surveys (<http://www.statistica.md/pageview.php?l=ro&idc=430&>). Metadata are produced in the user-oriented ESMS standard. Metadata are updated annually or when the methodology is revised. There is no history of metadata versions.

ESCoP indicator 15.6: Users are kept informed about the methodology of statistical processes including the use of administrative data.

Methodological documents are available but not in a user-friendly format and to a limited extent for the use of administrative data.

ESCoP indicator 15.7: Users are kept informed about the quality of statistical outputs with respect to the quality criteria for Official Statistics.

Quality indicators (accuracy, comparability, and coherence) are included in the ESMS metadata. Methodological notes and the quality of statistics are described in publications. Quality Reports are not yet produced and hence, not available to users.

Recommendations

The NBS is encouraged to:

46. Update and improve its dissemination and communication policies.
47. Develop and publish metadata for all statistical processes and products.
48. Consider holding more frequent press conferences when releasing headline indicators and statistics such as quarterly National Accounts, annual National Accounts, labour market and household expenditure surveys, inflation, etc., and consider inviting economic analysts to participate, where appropriate.
49. Include more cross-country comparisons when publishing regional data.
50. Promote the effective use of official statistics by policy makers, business interests, and the public at large through the development of appropriate strategies.
51. Introduce measures to increase statistical literacy in Moldova, in cooperation with educational and other interest groups.
52. Consider tailoring its outputs to meet the needs of different user groups.
53. Endeavour to be more responsive in addressing the concerns of users.
54. Provide training to selected staff on effective media and other communications.
55. Adopt practical measures in the medium term to implement the provisions in the new LOS granting access to microdata for researchers.

Chapter 13: Organisational and structural aspects

While the new LOS allows for the formal recognition of other producers of official statistics, only the NBM is recognised explicitly at present. It is expected that a small number of other public institutions, notably the Public Health Agency (PHA), will be recognised in the near future and their outputs included in the annual statistical work programme. Accordingly, it may be concluded that the production of official statistics is very centralised in Moldova, with the NBS the dominant producer.

The organisational structure of the NBS is similar to the time of the previous assessment in 2012. The NBS had undergone a reorganisation just before the previous assessment which integrated the main computing centre and the majority of the IT staff together with statistical production. This was a huge step in modernising the NBS organisational structure. Furthermore, the two census divisions (population and agriculture census) became part of the respective statistical divisions.

The NBS is currently discussing a new re-organisation that should take place during the first half of 2018. The NBS should carefully consider the benefits achieved as a result of the previous re-organisation and further re-allocate staff to priority areas. The current organisational structure consists of rather small formal units. Bigger units would probably give more flexibility to align statistical work with priorities and absorb development projects. Certain functions, like quality management, need more resources. During the re-organisation, the NBS plans also to optimise the regional organisation by reducing the number of TSOs and, if possible, move some posts from the TSOs to the HQ. The structure and regulation of organisation and functioning of the NBS shall be approved by the Government.

13.1. Organisation of the National Statistical Institute

13.1.1. The National Statistical Institute (NSI)

The NBS is an institutionally and professionally independent administrative authority, established by the Government for the coordination of the NSS and the development and production of official statistics. The autonomous role of the NBS is clearly stated in Article 7 of the new LOS. The NBS independently decides on statistical methods, standards and procedures as well as on the content and timing of publishing statistical information. Any interference in the activity of the central statistical authority, the NBS and its TSOs, is prohibited by law.

The NBS is managed by the DG who is appointed by the Government for a term of five years. The position of the DG cannot be held by the same person for more than two terms. Article 8 of the new LOS defines the position of the DG. It could be more clearly stated in the law that the DG decides on statistical methods, standards and procedures as well as on the content and timing of publishing statistical information. Currently, this responsibility is addressed to the organisation.

The HQ of the NBS is presently organised in 25 internal units at the level of divisions, sections and services (see the following organigrams in Figures 1 and 2). The NBS has in its subordination 35 TSOs and two other units:

- The State-owned enterprise "Statistical Publishing House" is autonomous and self-financed from its own revenues but operates for the time being under the NBS. Nowadays, its only printing service for the NBS is the printing of the statistical yearbook.
- The ISFR collects, verifies, and summarizes the financial reports of enterprises (except public entities) and advises them on filling in the mandatory financial statements. This body is also subordinated to the NBS. The NBS uses the information collected by this service for statistical production.

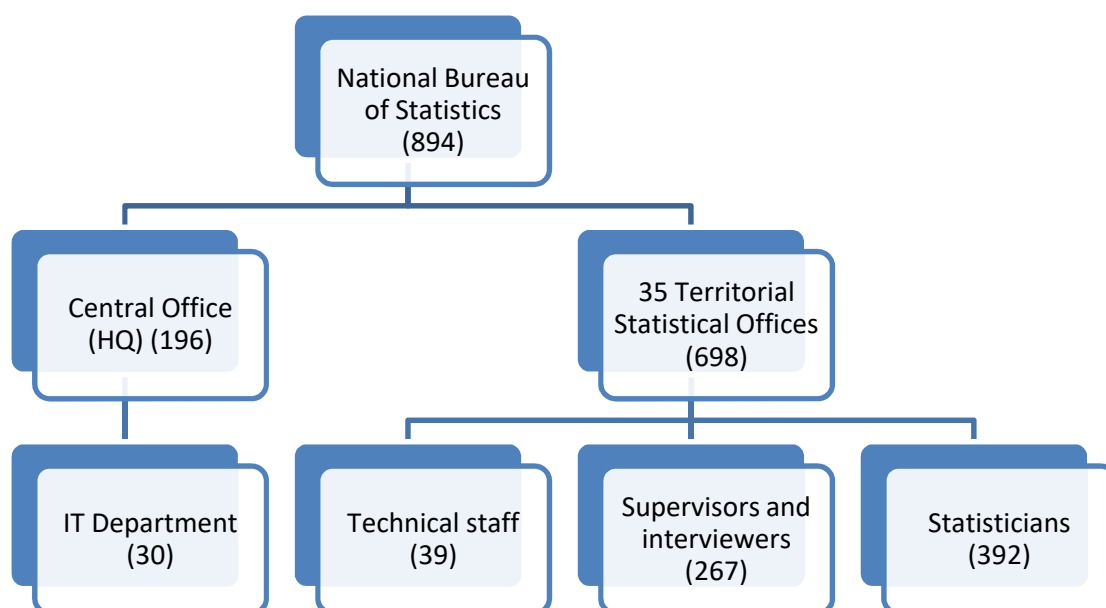


Figure 1. Organigram of the NBS.

The NBS (HQ and TSOs) comprises 894 positions, of which 555 are positions of civil servants, while 69 positions are technical support (of which 30 belong to the IT department of the HQ and 39 are technical staff of TSOs). Further, 267 positions are interviewers and their supervisors. Less than 25% of all positions are located in the HQ and more than 75% in the TSOs (196 in HQ and 392 in TSOs). A large share of staff is in managerial positions since the offices, at both central and territorial level, consist of relatively small units.

The NBS has a Board that advises it in issues related to prioritisation of tasks and the functioning of the NSS. The Board consists of nine persons including the DG (chair), deputy directors and other assigned persons from the NBS as well as representatives of other public authorities, scientific institutions, and educational institutions. The membership of the board is approved by the Government on the basis of a proposal by the DG of the NBS. The decisions of the Board become enforceable after approval by the DG of the NBS.

The new LOS also establishes a National Council for Statistics in Article 9. The Council will make recommendations on the development and improvement of official statistics, approve the draft strategy and statistical work programmes, set strategic priorities for the development of official statistics, monitor the implementation of statistical work programmes and the strategic planning, and will assess compliance with the principles of official statistics. The Council is not active yet. When the Council will be established, the role of the Board could be reconsidered.

The NBS is also requested by the Government to set up a national commission for censuses to prepare the next round of population and housing and agricultural censuses. The commission will be chaired by the Prime Minister and it will also include heads of relevant ministries.

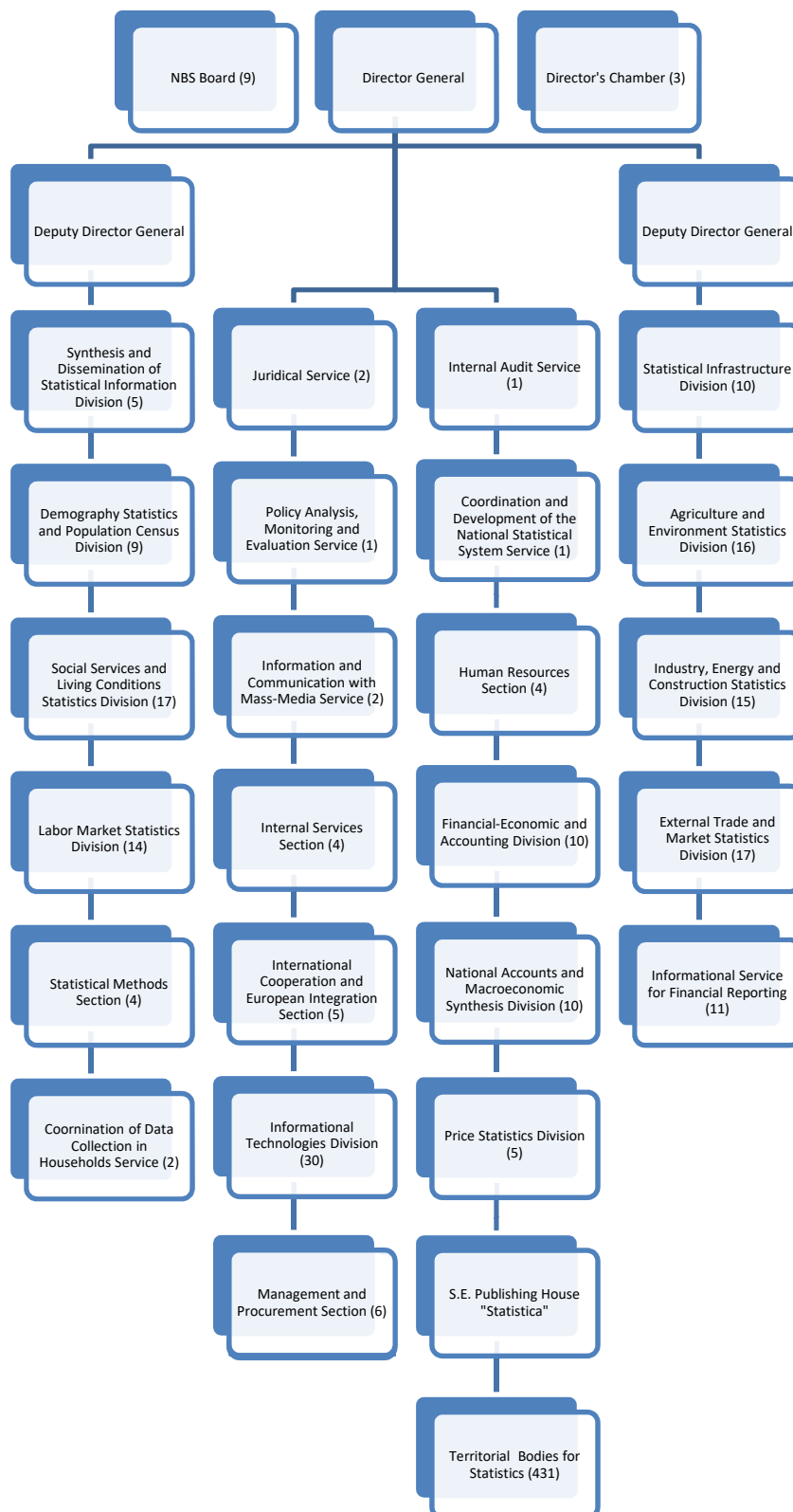


Figure 2. Organigram of the Central Office of the NBS.

The work of the NBS is undergoing fundamental change driven by greater access to administrative data for statistical purposes and the adoption of modern IT solutions (such as e-reporting) for the collection, validation, and dissemination of statistical data. Management is currently reviewing the organisational structure of the HQ and the need for the current extensive regional structure. The Assessment Team welcomes these initiatives as being both necessary and timely. With regard to the re-organisation of the HQ, it believes that there is an urgent need to adopt structures and management practices that are more attuned to the modern environment for the production of official statistics. In particular, the Assessment Team is of the view that there is a need for a more corporate approach towards strategic management and development and consideration should be given to the creation of a third Deputy DG position to take responsibility for all administrative functions and corporate support. Furthermore, it would recommend that a new central unit be created to coordinate and streamline the approach towards the greater use of administrative data for statistical purposes. Finally, it would recommend that the GSBPM be used as the template for the re-organisation of the NBS.

Recommendations

The NBS is encouraged to:

56. Review its production processes and structures, notably its very decentralised territorial structure, with a view to: centralising data collection in the NBS, making better use of administrative data sources and e-reporting; and introducing a greater process orientation in its HQ.
57. Review its internal corporate governance structures with a view to developing a more corporate approach towards strategic management and direction.
58. Consider the creation of a central unit for dealing with all administrative data sources to coordinate the relationship with data holders and to streamline and promote the use of the data for statistical purposes throughout the NSS.
59. Consider the use of the GSBPM as the template for the re-organisation of the NBS and, as a first step, introduce a system to describe all major statistical processes in a structured manner.
60. Reflect on the need for a third deputy director general position in the new organigram of the NBS to take responsibility for all administrative functions and corporate support.

13.1.2. Regional structure

The NBS includes 35 TSOs. They are located in the 32 regions of the country, in the municipalities of Chisinau and Balti, and in the autonomous administrative territorial unit of Gagauzia.

The TSOs work under the supervision of the NBS. The NBS defines the methodology, develops the instructions and instruments for data collection and surveys, compiles statistical products, and implements necessary quality checks. The TSOs collect and process the primary data in the regions. This includes initial checking of the data. The NBS provides the list of surveys to be conducted and the samples to be covered. The TSOs transfer the primary individual data electronically to the NBS' database. Each TSO keeps the paper questionnaires for three years.

The NBS carries out additional data checks and verifies data where necessary with each TSO. The NBS is responsible for the final processing and validation of the data and publication of statistical products. It provides the TSOs with aggregated regional tables to

allow them to serve local Government authorities. Regional data are also published through the NBS website. The TSOs also instruct economic agents in the regions on statistical issues.

The TSOs may execute - on a contractual basis - statistical surveys on behalf of the local public administration, enterprises, organisations and others in the manner established and coordinated with the NBS and in line with the LOS.

Heads of the TSOs and their deputies are nominated by the DG of NBS. This happens either through an open competition or internal mobility. According to the LOS, the Government shall approve the structure and organisation of the NBS. Therefore, the DG cannot move posts from the TSOs to the HQ.

The staff allocation between the HQ and TSOs is based on the number of interview-based surveys, paper questionnaires, number of economic units in their respective region, etc. The DG of the NBS defines the number of staff per TSO based on these criteria.

As the NBS has developed electronic data reporting and has improved and increased the reuse of administrative data, the allocation of staff between the HQ and TSOs should be reconsidered. A new unit at the HQ focusing on electronically reported and administrative data would possibly allow some efficiency gains.

Currently, the number of TSOs is very large compared to the size of the country. The Assessment Team considers the greater use of e-reporting, the adoption of sampling instead of exhaustive surveys, and the replacement of direct surveys by data from administrative sources all combined make such heavy regional structures both relatively inefficient and ineffective in the modern context. The trend internationally has been towards greater centralisation within NSIs. The Assessment Team understands that consideration is being given to consolidating the 35 TSOs into a more manageable five/six regional offices and it would strongly support such a move.

The overall number of staff available to the NBS, at close to 900, compares favourably with NSIs in similarly sized countries. However, the HQ with just 20% of the total is significantly under-resourced and, therefore, in any re-organisation there should be a conscious policy to transfer posts from the regional offices to the central office to achieve a more optimal balance.

Recommendations

The NBS is encouraged to:

61. Further rationalise and optimise its territorial structure by capitalising on electronic reporting, on a more centralised approach and optimal use of human resources.
62. Ask the Government to allow the NBS to transfer staff and/or staff positions from the TSOs to the HQ and between TSOs to facilitate the optimal reorganisation of the NBS.

13.1.3. Publishing house “Statistica”

The state enterprise, publishing house "Statistica" with 18.5 staff, is currently subordinated to the NBS. It performs editing, printing, and other publishing activities. It prints for instance statistical questionnaires and forms for statistical and financial reports. It also performs other editorial activities on request.

The administration board of the state enterprise "Statistica" is chaired by the DG of the NBS. The deputy chair is the head of the human resources section of the NBS. Members of

the board include representatives of the Ministry of Economy, Ministry of Finance (MoF), and Publishing House "Statistica".

Today, the NBS no longer uses the services of the publishing house "Statistica" for its publications. Consequently, there is a plan to move this state-owned enterprise to another administration. The Assessment Team agrees with this intention and therefore, does not issue any other recommendation in this respect.

13.1.4. Information Service of Financial Reports (ISFR)

The ISFR was created in order to fulfil the provisions of the Accounting Law no. 113-XVI of 27 April 2007. It was moved from the MoF into the structures of the NBS in 1997. Having been a division in the past, it is now a legal unit.

The service is a public institution, subordinated to the NBS and authorised to collect, verify, and summarize the financial reports presented by the entities (with the exception of public institutions). The financial reports are designed and approved by the MoF and it is clearly stated that the information is collected for the purposes of the MoF and returned by the NBS to the Ministry. The information service also supervises and provides advice to entities on the preparation and presentation of mandatory financial statements. After processing, the service provides information from financial reports to all categories of users.

Even though the service has administrative tasks, it has been considered useful to keep it subordinated to the NBS because of several advantages of such a structure for the NBS: 1) it provides for a better reporting discipline by the respondents as they report relevant data in both the financial reports and the statistical questionnaires; 2) the NBS can use the information to update the business register and other databases; 3) the NBS can cross-check data from the financial reports for producing SBS; 4) the NBS can use the information in the financial reports for calibration and extrapolation; 5) the NBS can produce business statistics on the basis of the information in the financial reports, especially for small and medium enterprises.

This way of organisation has not created any issues so far and the gains are recognised bigger than possible risks. The ISFR division of the NBS collects and provides access to enterprises' financial statements. Data in financial reports are collected by the TSOs. They are then verified, processed, and validated.

The Assessment Team was assured that data collected exclusively for statistical purposes is not used for the validation or correction of the individual financial reports as this would be in breach of the principle of statistical confidentiality. Nevertheless, the Assessment Team would recommend that the NBS takes appropriate steps, including the adoption of internal procedures and policies, to differentiate itself in the public mind from the ISFR, so that there is no misconception about its treatment of statistical confidentiality.

Recommendation

63. The NBS is encouraged to take appropriate steps to differentiate itself in the public mind from its subordinate body, the ISFR, so that there is no danger of any misconception amongst respondents or the public in general in regard of the treatment of statistical confidentiality by the NBS. This is particularly important in the context of the ISFR implementing its new mandate to provide a publicly accessible repository for the individual financial and book-keeping reports that it collects.

Chapter 14: Coordination

14.1 Coordination (and programming) of the National Statistical System (NSS)

The LOS sets out several legal provisions related to the coordination of the NSS. It defines the scope of official statistics in Article 3, while Article 4 regulates the organisation of the NSS and stipulates that the NSS consists of the central statistical authority and its territorial subdivisions and the institutions subordinated to the latter, the NBS and other producers of official statistics. The same article also provides for the obligation of the NBS to approve and update the list of producers of official statistics based on a regulation approved by the Government.

Article 7 of the same law lists the tasks of the NBS, among them a number of tasks that are linked to the coordination of the NSS, such as:

- Being responsible for coordinating the activities on the development and production of official statistics within the NSS (task (2));
- Issuing, within its competence, regulatory acts related to the production of statistical information (task (4));
- Launching continuous vocational training programmes for NBS employees and other producers of official statistics (task (6));
- Implementing the concepts of quality management in the NSS (task (7)).

In Article 10, the LOS provides the legal basis for the coordination of the NSS by the NBS through a number of tools and instruments, such as the provision of methodological assistance; coordinated transmission of data to International Organisations; the right to engage administrative authorities, other legal entities and natural persons in addressing issues related to statistical methodology; the obligation of other producers of official statistics to coordinate methodology with the NBS; the obligation for other producers of official statistics to deliver free of charge statistical information to the NBS for including it into time series.

Furthermore, in Article 11 of the LOS on programmes of statistics work, it is regulated that the annual statistical work programme shall be the basic instrument by which the NBS and other producers of official statistics produce official statistical information, meaning that the annual statistical work programme contains not only the surveys, studies, analysis, and publications produced by the NBS but also the work of other producers of official statistics.

Moreover, the LOS refers to the central statistical authority and the other producers of official statistics in several places, making it thus very clear that the law refers to the entire NSS, including the NBS and the other producers of official statistics.

The coordination elements of the NSS and the coordinating role for the NBS are therefore very well-regulated and provide very strong legal grounds for coordination.

According to Article 6 of the LOS, the NBS is clearly identified as another producer of official statistics. According to the same article, the list of all other producers of official statistics needs to be approved and maintained by the NBS, based on a regulation to be approved by the Government. In 2017 around 75% of official statistics were produced by the NBS.

The development and approval of a list of other producers of official statistics, and later on its update, is one of the main tasks of the NBS for implementing the new LOS. The NBS

needs to identify all official statistics included in its annual statistical work programme that are not produced by itself and identify the responsible authority. Once the authority is identified, the NBS should discuss and decide upon whether this statistics should be produced by the other authority, in which case the entity within the authority (ministry) producing this statistics shall be included into the list of other producers of official statistics. In case the NBS, together with the authority, decides that the respective statistics could be more efficiently compiled by the NBS, the work should be transferred - together with the respective resources to the NBS and the authority will not be recognised as another producer of official statistics. Once the other producers of official statistics are identified and assigned by the NBS, the NBS should start to raise their awareness about the principles of the ESCoP/the UN Fundamental Principles of Official Statistics, in particular such principles as professional independence, equal access to data for all, and statistical confidentiality. Further work will be needed to make sure the other producers of official statistics comply with these principles in their work of producing official statistics.

The task of identifying properly official statistics as well as the responsible producer is a challenge for the NBS. Although a list of criteria exists for identifying other producers of official statistics, there may be a need for some expert advice and technical assistance to complete this task.

The main instruments for coordinating the NSS used by the NBS are the annual statistical work programmes (although the programmes do not yet contain the official statistics produced by other authorities), Memoranda of Understanding (MoU) with other producers (but they mainly regulate data delivery to the NBS and less elements of coordination), inter-ministerial working groups (they exist but are not used in a regular and systematic manner), the NBS's approval of all statistical forms for surveys (which the NBS intends to abolish in the future), methodology consultations for other producers, and, in the future, the dissemination of official statistics (mentioned in the LOS but not yet implemented).

There is neither a dedicated organisational structure in the NBS for the coordinating function nor is budget foreseen for such an activity. Although other producers are sometimes involved in training activities of the NBS, there is no formal coordination through common training plans and activities, no common dissemination channels, and no quality labelling or similar.

General assessment

The NBS has obtained a very strong legal basis for coordinating the NSS on the basis of the recently adopted new LOS. The law defines the term of official statistics and the NBM as another producer of official statistics. A list of other producers of official statistics needs to be approved and updated by the NBS on the basis of a regulation adopted by the Government. This provides quite some authority to the NBS but as the criteria of defining other producers are not laid down in law, it may become difficult to identify and assign the label of another producer to other state authorities. This will require a lot of conceptual work in the NBS and later good communication and awareness raising in the authorities potentially being assigned as other producers of official statistics. The fact that the NBM as such and not the unit/entity producing official statistics (Balance of Payment [BoP]) is mentioned in the law, is a bit unfortunate and needs to be corrected in any future revision of the LOS.

The law foresees several instruments and tools, which need to be implemented by the NBS in the future. The tools and instruments currently in use are appropriate and quite comprehensive but some of them need to be more actively used (expert working groups,

common training courses, advice and guidance on methodology, common events with other producers), some should be reactivated (approval of statistical forms) and others need to be introduced/reinforced (including the products of the other producers of official statistics into the annual statistical work programme).

In putting forward a number of recommendations, the Assessment Team would point to the importance of: having a conceptual basis for the definition of official statistics; learning from its existing interactions with the NBM; engaging at an early stage with potential other producers of official statistics, such as the PHA and the treasury division of the MoF, with a view to developing a process for formally designating other producers as part of the NSS; and extending the annual statistical work programme to cover all official statistics.

Recommendations

The NBS is encouraged to:

64. Define from a conceptual point of view what should be covered under the banner of official statistics. Based on this concept, the NBS should identify who are the other producers of official statistics and consequently define the NSS.
65. Formalise the assignment of specified official statistics to the other producers, once identified, and include the statistics in an extended annual statistical work programme covering the entire NSS.
66. Develop and set up proper coordination mechanisms for the NSS, including the re-introduction of the prior approval of questionnaires/statistical reporting forms used by other producers of official statistics.
67. Further improve cooperation with the NBM through a combination of an active high-level committee supported by expert level working groups.
68. Together with the NBM, review and update its existing MoU with the NBM at an appropriate time, with a particular focus on clearly identifying the responsibilities and inputs of the two bodies for the production of relevant official statistics.
69. Open discussions with the PHA with a view to formally designating the PHA as a producer of official statistics in line with Article 6 of the LOS. The process agreed for the designation of the PHA, including certification of its compliance with the principles of the ESCoP, should serve as a template for the future designation of other institutions as producers of official statistics.
70. Launch the process of designating the statistics department of the treasury of the MoF as a producer of official statistics in respect of its production of Government Finance Statistics (GFS).
71. Conclude with the statistics department of the treasury of the MoF a MoU on cooperation covering defined responsibilities and areas of cooperation and coordination.
72. Encourage and support other producers of official statistics in producing and delivering proper metadata on their statistical products.

14.2. Coordination of international cooperation and donors

Article 28 of the LOS provides the legal basis for international cooperation activities of the NBS and assigns the responsibility of representing official statistics of Moldova to the DG of the NBS. The NBS and other producers of official statistics shall actively participate in international programmes on promoting and developing norms and standards in order to ensure the comparability of the national statistics on the international level. The LOS

further specifies that the NBS shall initiate and organise bilateral and multilateral cooperation activities with statistical offices from other countries and with International Organisations. Sharing experience, data and publications as well as having the right to launch joint statistical projects and concluding agreements with similar authorities from other countries are other provisions in the law providing hence a very strong legal basis to the NBS for international cooperation activities.

All cooperation activities are channelled through the international cooperation and European integration sector, consisting of five staff members and subordinated to the DG of the NBS.

The NBS benefits from a significant number of technical assistance projects, expert consultations and also from some supply of hard-and software. Bilateral cooperation agreements exist with Sweden, Norway and Romania, who provide substantial assistance since a number of years. More recently, the NBS also benefitted from EU funded projects, such as STATREG aiming to develop the NUTS classification and corresponding regional statistics for Moldova. Other assistance projects/consultations are provided by International Organisations such as the EC/Eurostat, UN, UNECE, Food and Agriculture Organisation of the United Nations (FAO), International Monetary Fund (IMF), International Labour Organisation (ILO), and European Free Trade Association (EFTA).

The content of all projects is based on several strategic documents such as the SDNSS 2016-2020, the EU-Moldova Association Agreement, the association agenda and also the recommendations from the GA in 2012. Actions mentioned in the association agenda have a deadline for implementation and are monitored on a regular basis by the Ministry of Foreign Affairs.

Statistics Norway implemented different projects in the period 2004-2015 focusing on business statistics, demography statistics, provision of IT equipment and cooperation with holders of administrative data sources. Projects with Statistics Sweden lasted from 1997-2017 and supported human resource management, the drafting of the new LOS, the creation of an intranet for the NBS, internal communication, dissemination, and the implementation of the General Census of Agriculture in 2011. The latter was also supported by FAO and Romania, including funding for data collection and data dissemination, the farm register, typology concepts, and the Annual Structural Survey (ASS). The Swiss Agency for Development and Cooperation provided support for the population and housing census 2014. Statistics Poland supported the NBS in the implementation of agriculture surveys, the production of food balances and the population and agriculture censuses. The United Nations Population Fund (UNFPA) also supported the census operations. The IMF supports the NBS since a long time in the areas of price statistics, National Accounts, finance, and fiscal statistics.

A large UNDP project is currently being implemented with the UNDP acting as the coordinator of all UN funding and some other donors as well, aiming to develop the NSS, including the implementation of various household surveys (violence against women, time use survey, entrepreneurship, etc.), user engagement, development of policy indicators, the development of the new strategy and others. UNDP also helped developing an action plan and based on the action plan to develop operational/work plans so as to obtain longer term Government and donor funding.

Due to the fact that the NBS is a large recipient of international funding, a good coordination and strategic planning of donor funded projects is needed. The UNDP project, where UNDP acted as the coordinator of other participating International Organisations, provided a project manager for all projects, and did fundraising for the NBS, is a good

example of such coordination. However, it was still donor-driven, whereas it should be the role of the NBS to coordinate donor projects and also to assess how they fit into their long-term strategy. Currently, the Top Management of the NBS decides on donor projects on the basis of the absorption capacity of the NBS. An aid steering committee exists and International Organisations meet on a quarterly basis but coordination could be improved and should be more strategic.

The NBS has a very small budget for international activities and hence has to rely on international funding for the attendance at international meetings and training courses. Participants in international meetings/training courses are selected by senior management following a consultation procedure involving heads of departments.

General assessment

Due to the severe lack of resources, the NBS is very much dependant on funding and technical assistance from international donors. In order to derive maximum benefit, it is essential to take a strategic and coordinated approach in seeking such assistance.

Recommendation

73. The NBS should take a more strategic and planned approach towards seeking technical assistance and initiating projects funded by development partners. Top Management should take the initiative in this regard and should consider establishing a central unit to assist it in coordinating donor activities and preparing strategic decisions on donor funded projects, using a top-down approach.

14.3. Sustainable Development Goals and indicators

In order to address the challenges in providing statistical indicators to measure and monitor the SDGs, approved at the 47th session of the UN Statistical Commission and to adjust them to the conditions of Moldova, Moldova started raising public awareness about them through a press conference organised together with the Ministry of Foreign Affairs and the UN as well as national workshops organised together with national authorities and Non-Governmental Organisations (NGOs). Between September 2015 and February 2016, four such workshops took place under the auspice of the State Chancellery and in cooperation with the NBS. A National Council for Sustainable Development was established in September 2016, under the Prime Minister. Furthermore, focal points were nominated in key ministries, comprised of a policy expert and a data/monitoring expert. The processes of nationalising the SDG indicators as well as the adjustment of relevant Moldovan strategies to the Agenda 2030 were launched and are ongoing.

The nationalisation process of the SDG indicators stretched over four phases from mid-2016 to spring 2017. It included a technical analysis of the relevance of the SDGs for the country at national level, consultations and policy recommendations, and defining the data needed for the SDGs in order to validate the results of the analysis and to report on them. During these discussions, one of the key messages was that the chosen indicators should be measurable, clearly defined and conform to certain quality criteria. While analysing the SDG indicators, it turned out that some indicators had to be adjusted (because of a different measurement unit applied), had to be split into several indicators (if the global indicator was too general) or a proxy indicator had to be used. At the end of the analysis, out of the 241 global SDG indicators, 171 were found relevant for the context of Moldova, while 70 indicators were not considered as relevant. Out of the 171 indicators relevant for Moldova, 152 are quantitative indicators and 19 are narrative (qualitative) indicators. Among the 152 quantitative indicators, 144 were unique indicators, 8 are repeated. Out of the 19 narrative

indicators, 17 were considered unique and two repeated. The nationalisation process was therefore carried out for those 144 global unique indicators applying the procedure described above (adjustment, split or proxy). All in all, a total of 172 national SDG indicators were defined as corresponding to the relevant global SDG indicators.

Moldova finally came up with a total of 226 SDG indicators consisting of 172 "nationalised" quantitative indicators, 17 unique narrative indicators and 37 additional indicators, which set the framework for measurement and also defined the responsible bodies for measuring and providing the indicators. Among them, the NBS takes a prominent place but a number of ministries, the NBM, agencies, other public institutions, and other data producers are involved as well. For 10 indicators no source of producing the data could be identified.

This nationalisation process resulted in agreeing on a set of SDGs to be followed and indicators to be measured as well as identifying data gaps in terms of methodology, data sources or a combined lack of methodology and data sources. Roadmaps for data for which time series are available as well as national targets have to be established.

However, while the agreement on the SDGs and their indicators is a first step, the real monitoring and measurement still has to start, responsibilities for coordination have to be defined and a national platform for reporting has to be created. While the NBS is not in a position to take over the overall coordination role in this process, it is certainly well placed to support the measurement with methodological advice and data provision.

General assessment

The SDGs carry a huge potential for an NSI with regard to establishing and improving coordination mechanisms. The involvement of the NBS in the SDG indicators could further trigger a strengthened coordination role and improved image for the NBS but would also need to be properly resourced.

Recommendations

The NBS is encouraged to:

74. Explore with other relevant institutions (e.g. the State Chancellery) how they might jointly coordinate in partnership the production and reporting of SDG indicators in Moldova.
75. Use the SDGs as a catalyst and mechanism to increase its coordinating role in the provision of official statistics in the country and to international bodies.

Chapter 15: Macroeconomic statistics

15.1. National Accounts

General assessment

National Accounts in Moldova were introduced in 1995 with retrospective calculations starting from 1993. National Accounts have been developed since then and currently the sequence of accounts is presented up to capital accounts. Financial accounts are not yet compiled.

National Accounts are compiled in accordance with the System of National Accounts (SNA) 1993, which is compatible with the European System of Accounts (ESA 1995).

Calculation of the quarterly accounts follows the instructions of the quarterly National Accounts manual (IMF, 2001).

Both annual and quarterly accounts include estimates for the non-observed economy. The corrections are based on the SNA 1993 and Organisation for Economic Co-operation and Development's (OECD) recommendations on the measurement of non-observed economy (2002). The recently developed regional accounts refer to Eurostat's manual on regional accounts methods (2013).

The latest international classifications are used in the compilation of National Accounts.

In recent years, the changeover from the SNA 1993/ESA 1995 to the SNA 2008/ESA 2010 has been the main priority of work. The first publication following the revised methodology will take place concerning the data of the first quarter of 2018.

Annual Gross Domestic Product (GDP) by area and region

Annual GDP is compiled by all three approaches, i.e. the production, income, and expenditure approaches. Production accounts and generation of income accounts are compiled also by type of economic activities. Annual GDP is calculated in current prices, the prices of the previous year and the prices of a base year.

For residents, accounts are performed and published by five institutional sectors of economy. Linkages between residents and non-residents are reflected in the rest of the world sector, which includes: Goods and services account; primary income and current transfers account and capital account.

GDP (on an annual basis) is being developed also for the sector of small and medium-sized enterprises.

Recently, the NBS has started to compile the Regional Gross Domestic Product (RGDP) on an annual basis using the production approach (by economic activities). This has been possible with the support of STATREG. Currently, RGDP has been compiled for the following development regions: Center, Chisinau municipality, North, South, ATU Gagauzia, for the period 2013-2016. Estimates for Financial Intermediation Services, Indirectly Measured (FISIM) are not included in the GRP. The GRP is compiled after the GDP calculations are final, which means two years after the reference period.

Quarterly GDP

On a quarterly basis, GDP is compiled by production (by economic activities) and expenditure approaches (by seven aggregates: Households; public administration; non-profit institutions serving households; gross fixed capital formation; changes in inventories; export and import of goods and services).

Quarterly calculations are made at current prices and at average prices of the previous year. Quarterly calculations are reconciled with annual estimates and are recalculated using base year prices and seasonally adjusted. Seasonal adjustment is performed using DEMETRA and the TRAMO-SEATS method.

Analytical tables

Annual supply and use tables are compiled at current and comparable prices. The Table of Integrated Economic Accounts is available in current prices only.

The table below summarises the compilation and revision practices:

Type of GDP estimates	Timing
Annual estimates	
1 st estimation (preliminary)	15 March after the reporting period t+1
2 nd estimation	June after the reporting period t+1
3 rd estimation	December after the reporting period t+1
Gross Regional Product (GRP)	December after the reporting period t+2
Quarterly estimates	
1 st estimation (preliminary)	On the 75 th day after the reporting period
2 nd estimation	June t+1

Table 2. GDP estimates.

The previous GA recommended concentrating on the transition from SNA 1993/ESA 1995 to SNA 2008/ESA 2010. Further, the suggested improvements included the separate calculation of GDP for the fourth quarter; the improvement of seasonal adjustment methods; the implementation of chain linking method with annual overlap; the elaboration of financial accounts and of fixed capital formation in accordance with SNA requirements; and the estimation of illegal production. The improvement of price indices, in particular for service sectors and for imports and exports, was also recognised as an important area for future work.

The NBS has managed to achieve significant progress in most of the abovementioned areas.

Description

The national accounts and macroeconomic synthesis department of the NBS is responsible for the compilation and dissemination of national and regional accounts. Ten posts at the HQ are allocated to these tasks. Currently, four of those posts are not filled.

Data collection and initial validation is, to a large extent, carried out by the TSOs. An estimate of the resources used for national accounts at the territorial level is not available. Therefore, it is difficult to estimate the overall resource use in national accounts. The data undergo further checking and validation in subject matter departments and sections before it comes to national accounts.

A wide range of data sources are used in the compilation of national accounts. Firstly, data are used from various sample surveys and censuses primarily conducted for other statistics. Secondly, the ISFR provides National Accounts with financial results of enterprises. In addition, rich administrative data sets are received from different ministries and institutions (MoF, Ministry of Information Technology and Communications, state tax service, customs service, national energy regulatory agency, national social insurance house, national health insurance company, NBM, national commission for financial markets, etc.).

The quality of the data from different sources is verified by compliance with the requirements of international standards, matching data of local units with the enterprise level data and comparing data from different sources. To ensure the completeness, data are

harmonized from all sources of information - administrative sources, financial reports and business statistics. Possible relevant new data from administrative sources are regularly assessed. The new LOS gives a strong mandate to access different data sources.

National Accounts data are revised regularly. The major revisions are due to methodology and classification updates. Historical time series are recalculated as far back as possible. The quarterly GDP is recalculated and reconciled with the annual GDP whenever the annual GDP is revised. GRP is also linked to total GDP and revised accordingly.

The geographical scope of National Accounts is not complete due to the non-availability of data on the territory of Transnistria.

Recommendations

The NBS is encouraged to:

76. Implement carefully but without delay the concepts of SNA2008/ESA2010 and start publishing the data with time series back to 2010 and inform users well in advance of the upcoming revision.
77. Develop estimates for imputed rent of owner-occupied housing (based on results of the population and housing census 2014) and for illegal activities and incorporate them into the National Accounts.

15.2. Government Finance Statistics (GFS)

General assessment

The statistics department of the treasury of the MoF produces and disseminates GFS under the provisions of respective legislation and following IMF's GFS Manual 2001. The time series in accordance with the recommendations of GFSM 2001 are available from 2002 on. However, the operations of the general government budget are recorded on a cash basis, with only some data being compiled on accrual basis. The implementation of GFSM 2014 will take place only after the new public sector accounting standards have been introduced in 2020. Currently, there are no plans for a systematic recording of data on an accrual basis.

The sub-division responsible for GFS compilation is located under the treasury. Currently, six persons are involved in the GFS production. The resources are considered sufficient.

There are procedures in place for data exchanges among the data producing agencies (NBS, MoF, and NBM). The cooperation between MoF and NBS is very good but mostly based on informal contacts. Meetings and workshops are held, but no formal MoU/agreement on cooperation exists between the organisations.

The full General Government sector, including territorial units and social security and health insurance funds, is included. There are, however, some challenges in the delineation of the General Government sector. This is mainly due to the entities that are not fully financed through the national budget.

Description

The MoF is responsible for the production of GFS in Moldova. Data are used mainly by the Ministry itself for the purposes of analysis and state policy needs and for the publication of statistical information on the Ministry's website. Data are also published in the statistical bulletin of the NBS and given to the NBS as sources for National Accounts compilations. GFS data produced by the MoF are the main source for the compilation of

General Government accounts. Further, GFS data are provided to IMF on an annual, quarterly, and monthly basis following the Special Data Dissemination Standard (SDDS).

Starting from 1993, data on the execution of the State budget and starting from 2000, data on Local Government are compiled from the accounting system of the treasury. All data for the Central Government and Local Governments are obtained from the treasury system which provides comprehensive and timely data. Comprehensive monthly, quarterly, and annual reports on the execution of the State social security budget and funds for mandatory health insurance are submitted to the MoF. The NBM provides monthly information of claims on the government to the MoF.

The accounts and budget classification for the treasury system broadly aligns with the classifications of the GFSM 2001. Concepts, definitions, and classifications for producing sub-annual and annual GFS are the same. The sum of quarterly statistics equals the annual statistics. Over long-time periods, the statistical discrepancies have not been large.

Quality monitoring procedures are in place. Studies, analyses, and periodical revisions are executed in order to detect the necessary measures to ensure high quality of statistics.

Recommendations

The statistics department of the treasury of the MoF is encouraged to:

78. Apply the GFSM 2014 guidelines for the production of GFS by 2021, when the new public sector accounting standards have been introduced.
79. Apply the accrual accounting principle for data recording.
80. The NBS and the statistical department of the treasury of the MoF are encouraged to set up a working group to develop guidelines for the delineation of the general Government sector and the correct classification of entities.

15.3. External trade statistics

General assessment

The compilation of figures related to Moldovan external trade in services is done by the NBM which disposes over the necessary information on financial transactions on the basis of the sixth manual for the calculation of the Balance of Payments (BPM6). The NBS contributes to this, delivering information about trade in services in the fields of transport and tourism.

External trade in goods statistics are compiled in Moldova on a monthly, quarterly, and annual basis. Foreign trade figure are produced for type of goods and by trade partners (Commonwealth of Independent States [CIS] and EU partners in absolute values, value indices, and volume indices).

Trade data are published through dedicated publications (downloadable from the NBS website) and in the NBS data base. Merchandise trade data are also transmitted to Eurostat (Comext) and to the UN (Comtrade). In addition, the NBS subscribed to the IMF's SDDS and provides the related metadata.

Description

Being one of the producers of official statistics in the NSS in Moldova, the NBM is in charge of producing the BoP. As a part of the BoP, the NBM also compiles statistics on foreign trade in services. The NBS contributes to the production of trade in services figures by delivering data on transport and tourism services to the Central Bank. The cooperation

between both administrative bodies is described by both sides as being very good and without any further problems.

The NBS has not produced any trade statistics before the independence of the country from the former Soviet Union in 1991. The first complete basis for calculations refers to the year 1995.

Currently, five employees are working on the production of trade statistics in the NBS.

In 2014, Moldova signed an Association Agreement with the European Union which came into full effect in July 2016 and which provided easier market access to Moldova on the basis of a Deep and Comprehensive Free Trade Area (DCFTA).

The fact that the geographical and the economic reference areas in Moldova are distinct, due to the unresolved Transnistrian conflict, underlines the difficulties that still exist up to date in the sector of trade statistics. The territory taken into account in the external trade statistics is referred to the economic territory of the country, to which the national custom legislation applies. However, while exports from Transnistria are declared to a large extent at the customs points of the Republic of Moldova, because economic units need to present the customs declaration at the customs points of the Republic of Moldova. The economic units declare also imports but only partially and mainly raw materials, which will be used to produce goods for exports because for the submission of export declarations the economic units must hold a certificate about the origin of the goods, issued by the Customs Service of the Republic of Moldova. So, while some export/import data are available for Transnistria, they cannot be included into the statistics on external trade for the Republic of Moldova for their incompleteness.

The trade system under which the production of statistics on foreign trade of Moldova is exercised is the General Trade System which creates discrepancies in comparison to the EU Special Trade System. *External* trade statistics of Moldova are produced according to the recommendations of the Statistical Commission of the United Nations (International Merchandise Trade Statistics - Concepts and Definitions, Series M no. 52, Rev. 2), and Eurostat legislation (Council Regulation (CE) no. 1172/95 - EXTRASTAT) on international trade with third countries and Commission Regulation (CE) no.1917/2000 concerning implementation of Council Regulation (CE) no. 1172/95.

The inter-institutional relations between the NBS and the customs authorities are said to be very good. The cooperation between both state bodies is formalised through a MoU and statistical classifications and methodologies are constantly updated. Statistical data on external trade are collected, verified, and processed by the customs service (according to Article 321 of the customs code of Moldova) and delivered to the NBS for completion, finalisation, and publication according to the LOS. External trade statistics are compiled on the basis of customs declarations filled in for all goods crossing the customs border of Moldova. The source of express data for goods transported by cable or pipes is the statistical report presented by the importer or exporter based on the acceptance and delivery act. Statistical valuation of exports is produced in Free On Board (FOB) prices, statistical valuation of imports in CIF (Cost Insurance Freight) prices.

The annual statistical work programme builds the basis on which the cooperation is organised. The year 2005 marked a big change with the introduction of the Automated System for Customs Data (ASYCUDA) World system which helped to comply with the recommendations of the EU on trade data.

In 2016, a project undertaken together with SIDA provided technical assistance on procedures for the validation of customs data. As a result, the data quality from the customs authorities has been significantly improved.

More generally, some mirror studies with Ukraine have been conducted. In the framework of the EU TACIS programme, mirror studies have also been undertaken with EU member States.

The NBS publishes annual, quarterly, and monthly data on external trade on their website in English and Rumanian:

<http://statbank.statistica.md/pxweb/pxweb/en/40%20Statistica%20economica>.

Unit values indices on a monthly basis are not provided due to missing staff.

Statistical values are recorded in national currency and are calculated by transforming the operation currency in Lei, according to legal provisions.

The threshold for obligatory customs declaration is 50 EUR. Information on trade in gas and electricity is collected through statistical reports that are provided by the respective companies in order to prevent possible delays from customs declarations. Once the customs data is available to the NBS, the original data from statistical reports is corrected on this basis.

Recommendations

81. The NSB should consider producing unit values indices on a monthly basis.
82. The NBS and the NBM are encouraged to continue their close cooperation in producing and improving statistics on external trade in services as part of the BoP and to consider introducing appropriate e-reporting forms.

15.4. Balance of Payment statistics

General assessment

The Law on the NBM, Article 5, stipulates that the NBM is responsible for compiling the BoP statistics of Moldova. The new LOS further mandates the necessary data collection. The responsible unit for compiling and disseminating BoP statistics is the International Accounts Statistics Division (IASD) of the Reporting and Statistics Department (RSD).

The Head of the RSD has the sole responsibility for deciding on statistical methods, standards and procedures. The RSD is not subordinated to the DG of the NBS but formal cooperation agreements exist between the NBM, the NBS and other public institutions concerning the collection, compilation, and dissemination of BoP statistics. There is good communication among producers of official statistics in different institutions. Meetings are held when necessary to discuss conceptual and methodological issues. On an annual basis, the RSD participates in the revision of questionnaires used by the NBS for surveys to ensure appropriate coverage and consistency with the statistics produced. There is also a MoU between the RSD and the NBS on data provision. It will be revised once the NBS starts publishing National Accounts data according to SNA 2008, in June 2018.

The NBM is allowed by law to use administrative data for statistical purposes. However, not all administrative data can be used because of technical issues with the systems of some data holders or NBM's lack of capacity to process and maintain some administrative data.

BoP statistics are disseminated by means of an interactive database on the NBM's website. Statistics are also reported to the IMF, the World Bank, United Nations Conference on Trade and Development (UNCTAD) and other organisations and can be found on their websites respectively. Related metadata are available e.g. on the NBM's website and on the country's SDDS webpage (IMF). Statistical releases of the NBM are issued regularly according to the release calendar and separately from any political statements. No deviations from the dissemination schedule have been recorded so far.

Description

The RSD staff involved in the compilation of BoP statistics is highly qualified and experienced. The number of staff members is sufficient for carrying out the core statistical activities required by law but suboptimal for increasing frequency, details, and quality of the statistics produced. Financial and computing resources are also suboptimal and require external funding and technical assistance. The shortage of human resources is related to the way of organising the data collection, validation, and analysis among national statistical bodies and inside the NBM. The work involves a very high amount of manual data processing.

The compilation of BoP statistics is largely in accordance with the IMF's BoP and international investment position manual, sixth edition, 2009 (BPM6). The NBM additionally compiles BoP according to the IMF's BoP manual, 1993 (BPM5). Classifications by institutional sectors and financial instruments are fully consistent with international standards. Data are also consistent or reconcilable with merchandise trade, national accounts and monetary statistics.

However, there is no separate division within the RSD responsible for methodological issues in BoP statistics, and each compiler makes their own judgement in selecting appropriate methods or applying concepts in their area of responsibility.

BoP statistics produced according to BPM5 are available from 1995 to 2017 and according to BPM6 from 2009 to 2017. BPM5 and BPM6 data are not comparable. Quarterly and yearly data within each type of statistics are reconciled.

To facilitate internal consistency with other National Accounts, the BoP is still compiled according to BPM5 (along with the BPM6 version), until the transition to the SNA 2008 methodology is completed.

The RDS is willing to evaluate the possibility to produce financial accounts at national level in the future. Joint meetings with all interested institutions will be organised to define responsibilities.

The data for BoP statistics are derived from several sources. Procedures are in place to monitor the quality of data and statistics produced. Data obtained for compiling BoP statistics are checked for internal and logical consistency based on agreed validation rules. They are also assessed for plausibility following time series analysis and comparison across datasets.

One very important data source is the International Transactions Reporting System (ITRS) database. If inconsistent data are entered to ITRS, the software identifies the wrong entries and the reporting forms are sent back to the reporters for correction and clarification.

Following a specific protocol, the customs service provides the NBS with access to the customs declarations database on exports and imports of goods by legal entities and individuals. The NBS validates the data, imputes and edits, and compiles merchandise

trade statistics. The NBS provides the validated customs data to the NBM on a quarterly basis according to an agreed schedule.

Partner countries' data (mirror statistics) are occasionally used for Foreign Direct Investment (FDI) and personal remittances statistics compilation.

Errors and omissions in BoP statistics are monitored quarterly at the end of each compilation period as an indicator of unrecorded or misreported transactions. In addition, RSD staff has regular meetings with other data producing agencies, such as NBS and the MoF.

In terms of external oversight, the NBM participates in the SDDS and in the IMF Data Quality Assessment Framework (DQAF), used for a comprehensive assessment of data quality. There is also a continuous user survey available on the NBM's website to collect users' opinions and suggestions. Regular formal and informal meetings are also held with the users to discuss their needs.

All statistical reporting forms used by the RSD indicate the confidential nature of individual data and their use only for statistical purposes. The RSD disseminates only aggregated data, the lowest level of aggregation does not allow the identification of any economic agent or individual. Further, every employee has to pass a test on the knowledge of confidentiality regulations and sign an internal confidentiality commitment.

Statistical data are simultaneously released to users via the NBM's interactive database (including three language versions). The NBS has access on agreed data items of external trade in goods and services and secondary income before the release of those statistics for statistical purposes, namely for GDP compilation.

There are clear revision policies for BoP statistics. Quarterly data are regularly revised each quarter for up to three preceding quarters. Revisions of annual data are made once a year and can affect quarterly and annual data for four preceding years. In publications, it is specified whether the data have been revised. It is also mentioned whether the statistical statements are preliminary or final.

Recommendation

83. The NBS is encouraged to develop financial accounts in close cooperation with the NBM.

15.5. Consumer Price Index (CPI), including PPP and housing prices

General assessment

The methodology for calculating the CPI corresponds to recommendations of International Organisations, particularly those exposed in the manual "Consumer price indices" prepared by the ILO, IMF, OECD, Eurostat, and the World Bank in 2004.

An important issue of CPI development is product classification. The CPI has been aligned with the COICOP (Classification of Individual Consumption by Purpose) classification since January 2008.

More than 300 product groups are currently in use in Moldova.

Description

Survey description

As for the coverage, the eight largest cities of the country in which live more than 60% of the total population (Chisinau, Balti, Cahul, Comrat, Orhei, Ungheni, Edinet and Soroca) are selected for data collection.

As for the observation unit (commercial or service unit), about 900 retail stores and units providing services to the population are selected.

For the reference period, the following periods are used - the previous month, December of the previous year, the same month of the previous year, the same period of the previous year.

As to the nomenclature of representative products, it includes about 1,200 products that have a significant weight in household consumption. The nomenclature is divided into three levels of aggregation:

"Food" - 91 groups covering 385 products;

"Non-food" - 156 groups covering 644 products; and

"Services" - 64 groups covering 207 services.

Data collection

Data are collected using tablets. Prices are recorded daily throughout the month.

1. Food prices shall be recorded twice per month for each product;
2. Prices for non-food goods and services - once per month for each commodity/service.

The price recording process is carried out by 20 interview specialists, personally visiting trade units or service providers. The interviewer's role is to identify product-service parameters indicated by the nomenclature (quality, weight, quantity, size, etc.), ensuring the follow-up from one period to the next.

The software developed for the specialists enables interviewers to recalculate the actual price of a product that contains several types (producer) and different packaging units as indicated in the nomenclature.

In average per month, there are about seven average geometric prices for each product and city (in Chisinau and Balti there are up to 10-15 prices). Each given price is a unit of trade: The seven prices collected for a given product means that seven commercial units have been visited to take the price of one and the same product.

For their part, these seven prices (or 10-15 in Chisinau and Balti) are calculated from several assortments. In total, about 80,000 separate prices from about 900 retail units are being transmitted each month.

Cost weights for CPI

Statistical data on spending by households for product groups included in the CPI are obtained from the HBS. Probability sample surveys are representative at the national level, by residence, and statistical regions: North, Centre, South, and municipality Chisinau.

The HBS is using a sample of 814 households monthly, of which 52.1% are urban and 47.9% rural areas. Taking into account the presence of non-response, during a year the survey collects information of about 5,000 households.

Calculation of CPI

The CPI is calculated as a Laspeyres Fixed Base index.

When calculating average prices and elemental indices, the geometric mean is applied.

Currently, the seasonal pricing of seasonal products is based on hierarchically superior pricing. The price is charged until the product is again on the market. This refers not only to fruits and vegetables but also to clothing and footwear.

The cost weights used to calculate the CPI are updated annually.

Starting with 2016, weights of expenditures are estimated using the geometric mean of household money expenditure according to HBS and final household consumption data at four COICOP levels in National Accounts for the year "T-2".

The migration to new weighting coefficients is carried out at the beginning of each year in compiling the CPI for January.

Dissemination of CPI

The CPI is disseminated monthly and published on the NBS website at the level of three major groups: 1) food; 2) non-food goods; 3) Services as well as 36 groups by category of goods and services.

Starting from January 2015, data are also published for twelve COICOP groups.

The time series have been available since 1991.

According to IMF recommendations and taking into account that expenditure savings of households are calculated according to the HBS four statistical regions (North, Center, South, and Chisinau), since January 2016 the CPI has been calculated at regional level but has not yet been published at this level.

For the NBM, starting with 2009, the basic inflation is calculated on a monthly basis, partial indices by the method of excluding some components from the CPI.

On the NBS website, the CPI calculator was uploaded, which is often accessed by individuals and legal entities allowing them to calculate the inflation rate for the required period.

Future plans

The goal and strategy are to comply with SDNSS 2016-2020 "Building a Harmonized Index of Consumer Prices (HICP)" in accordance with the EU regulation; using scanned data directly from large collection centres prices; developing a housing index; and a continuous improvement of the methodology of the CPI.

Recommendations

The NBS is encouraged to:

84. Commence work on introducing the HICP in line with EU standards, including work on explicit quality adjustments.
85. Consider developing a house price index.

Chapter 16: Business statistics

16.1. Statistical Business Register (SBR)

General assessment

Administrative data (e.g. from tax authorities) as well as information from statistical surveys are used in order to continuously update the Business Register at the NBS. Information about the structure of enterprises comes mainly from the SBS, carried out by the NBS since 1997 on an annual basis. However, information about local units of enterprises in the Moldovan business register remains limited. Further development work is therefore required to improve the quality of the register and to produce statistics on business demography.

Description

Enterprises, their branches and representative offices (establishments) are registered by regional branch authorities of the Moldovan State registration chamber of the Ministry of Justice. Registration is obligatory for all enterprises.

State and municipal enterprises are established with fully state- or municipality-owned capital and are treated as legal entities. State enterprises are created and provided with assets by the Moldovan Government or authorized public authorities. Municipal enterprises are created and provided with assets by local authorities.

The most widespread forms are limited liability companies and joint stock companies.

The following forms of business legal entities (for-profit) may currently be incorporated in Moldova:

- Limited liability company (SRL/LLC);
- Joint-stock company (SA/JSC);
- General partnership;
- Limited partnership;
- Co-operatives.

The Moldovan registration chamber delivers data on new enterprises and units as well as on enterprise deaths to the NBS, tax authorities as well as to social and medical insurance authorities. Currently (2017), the business register holds information of about 60,000 enterprises, including approximately 4,000 large farms. A prototype of a separate farm register is still in the phase of being set up.

Activity codes (ISIC/NACE, respectively their national version CAEM) are based on the information provided by the owners of the enterprises in the registration process. Data related national statistical classifications are:

- CAEM (classification of economic activity);
- CUATM (classification of administrative territorial entities);
- CFOJ (classification of legal entities);
- CFP (ownership classification).

Unfortunately, information such as the economic activity, contact details of the enterprises and the respective legal form are almost never updated by the registration chamber. This work is mainly done by the NBS, mostly on the basis of a structural enterprise survey. The respective unit at the NBS has currently four employees.

The business register contains economic information for every enterprise about annual turnover and number of employees as well as demographic information such as date of registration, liquidation, activity termination, and re-organisation.

Additional data to information obtained from statistical surveys is gathered by surveys, such as:

- SBS;
- Annual survey on earnings:
- PRODCOM survey.

The register is constantly updated by also using administrative data such as:

- State register of legal entities (RSUD) - on daily basis;
- State register of non-profit organisations (RSON) - on daily basis.

The NBS also uses information from balance sheets/financial reports provided by the enterprises to the tax authorities. One problem in this regard consists in the fact that such reporting is not mandatory for all categories of enterprises. The NBS judges the existing access to data sources as satisfactory. One of the main challenges for the NBS is the lack of access to individual data from the social insurance (CNAS).

Key variables are used for the identification of the units, and additional variables are used for sampling. The business register contains only limited information about local units.

Information about employment and employment levels are mainly collected through the LFS.

There are no direct publications produced by the NBS on the basis of information of the business register.

Recommendation

86. The NBS should continue developing the Statistical Business Register with a view to fully applying European/OECD recommendations and with a view to producing business demography statistics.

16.2. Structural Business Statistics (SBS)

General assessment

Within the framework of the Eurostat funded project "Assessment of the statistical systems and selected statistical areas of the enlargement and ENP countries" a Sector Review of SBS and STS was conducted in 2015.

Because of this very detailed publicly available recent depiction of the situation on SBS in Moldova, the present chapter confines itself to highlight some points that were briefly raised throughout the current GA, while the recommendations reiterate some of the points already raised by the Sector Review report.

In summary, there is a need to further develop quality reports and metadata on the surveys and to explain differences between the SBS data and statistics based on the financial reports collected by the ISFR. The current classification system does not allow for the production of statistics on the self-employed and this should also be addressed.

Description

There are currently four employees at the HQ engaged for the production of SBS/STS.

There are two sources for Annual Structural Survey (ASS):

- Statistical data: Sampling structural statistical survey covering the enterprises which carry out their economic activity on the territory of the Republic of Moldova;
- Administrative data: Financial reports delivered by enterprises to the tax authorities.

The metadata for structural business statistics in Romanian is available under:

http://www.statistica.md/public/files/Metadate/Ancheta_structurala_anuala.pdf

The methodology applying to SBS/STS corresponds to EU standards as specified in the respective guidelines. Data is collected by means of a paper questionnaire or through e-reporting by the NBS. The e-reporting aims at reducing the response burden on enterprises. The TSOs collect questionnaires of enterprises in their regions and are responsible for control of related documentation from the enterprises, coding of economic activity, data entry, and transmission to the NBS. The NBS statistical methods unit is responsible for finalising the data files including sampling, calculation of weights, and data validation.

Aspects of data quality mainly focus on internal coherence of data and of cross validation with other data sources such as financial reports of enterprises or other annual statistical surveys. The average annual non-response rate is about 5%.

All active enterprises with market activities that have persons employed and an annual turnover are included in SBS/STS. The results are published already eleven months after the reference year, which is faster than in many European countries (usually around 18 months after the reference year).

Overall, there are currently (2017) approximately 12,200 enterprises in the SBS sample. The sample breakdown is as follows:

All strata

- 2,857 enterprises with ≥ 20 employees;
- 765 enterprises with two or more local units;
- 2,903 enterprises considered as outliers due to turnover;
- 778 enterprises of small strata of economic activity with less than 5 units;

plus

Probabilistic sample of enterprises with <20 employees (size groups 2-9 and 10-19 employees):

- 4905 enterprises

Classification systems in use are NACE rev.2 (national version: Classifier of Activities in Moldova Economy [CAEM-2]), legal form, form of ownership, and territorial distribution. Enterprise size classes by employment used are:

- 0 - 4 employees;
- 5 - 9 employees;
- 10 - 19 employees;
- 20 and more employees.

The used breakdown in employment size classes does not allow for distinction of self-employed persons.

However, there is no calculation of employment in terms of full time equivalents (FTE). Information about part-time employment is not available. Although structural business statistics data for different years exist, there is no provision of a time series for longitudinal analysis.

The results of the ASS are published in electronic format and disseminated through the NBS official website within 18 months after data collection:

<http://www.statistica.md/pageview.php?l=en&idc=350&nod=1&>

Besides providing also indicators related to small and medium enterprises, it is planned to produce in the future also figures on business demography.

Recommendations

The NBS is encouraged to:

87. Further develop quality reports and metadata for the SBS.
88. Extend the metadata on the SBS to explain the differences between the SBS data and the financial (book-keeping) reports collected by the ISFR.
89. Consider extending the employment size classes for businesses in order to produce statistics on the self-employed.

16.3 Short Term Statistics

General assessment

Within the framework of the Eurostat funded project "Assessment of the statistical systems and selected statistical areas of the enlargement and ENP countries" a Sector Review of SBS and STS has been conducted in the NBS in 2015. Due to this very detailed publicly available recent depiction of the situation on STS in Moldova, the present chapter confines itself to highlight some points that were raised throughout the current GA, while the recommendations reiterate some of the points already raised by the Sector Review report.

The way for calculating the statistical indicators corresponds to the "International Recommendations on Industry Statistics 2008" and "International Recommendations on Industrial Production Index 2010", edited by the UN Statistical Section and the "Short-Term Statistics Methodology Eurostat 1998" manual.

Overall, the Assessment Team would highlight the need to give priority to producing seasonally adjusted indicators and statistics on hours worked. Quality reports and metadata for the STS should also be developed further.

Description

General description

The statistical data on industrial production are developed based on statistical surveys of enterprises dealing with industry, as their main activity, covering:

- Enterprises with 20 employees and over - exhaustively;
- Enterprises with 4-19 employees - via a random sample.

As an exception, the monthly survey also covers some secondary industrial units of the non-industrial enterprises, which have an important share in the corresponding industrial activity, such as the production of poultry in some poultry farms or the wine-making units from some agricultural enterprises.

The monthly survey includes about 1,200 enterprises with their main activity in industry.

The following industrial activities are represented:

- Section B “Mining and quarrying”;
- Section C “Processing Industry”;
- Section D “Production and supply of electricity, heat, steam, hot water and air conditioning”;

Section E “Water supply; sewerage, waste management and remediation activities”.The CAEM rev.2 is harmonized with the European standard NACE rev. 2.

Concepts and definitions

Value indicators regarding the manufactured production, delivered (sold) production, sale revenues, and other are expressed in thousand Lei.

Production manufactured by types of products in physical units is expressed for every product in its unit of measurement, in line with the nomenclature of Industrial Products and Services (PRODMOLD-2013).

Time coverage

Monthly indicators, starting with 2004, are available according to CAEM rev. 1; starting with 2010, they are available according to CAEM rev.2.

Level of disaggregation

The data are available by activities at the level of CAEM rev.2 class, group, division, and section.

Timeliness

Monthly data are published the 40th day after the reported month.

Monthly data on Industrial Production Index (IPI) are provisional at the first dissemination with possible revision during the next month, when rectifications are made by the economic units.

Period of reference

Reference period is the previous month (compared to the corresponding month of the previous year), and the cumulative period since the beginning of the year (compared to the previous year).

Data collection and processing

Administrative sources are not used.

Value indicators are estimated on a monthly basis through value of manufactured industrial production in current prices, based on surveyed products, and turnover, based on data extension methods in sampling surveys. In some industries, like construction, the number of hours worked could better reflect the current activity and has also been proposed to be used as an indicator by external consultants. This has not been realized.

The statistical unit for the monthly statistical surveys is the enterprise with its main activity in industry, having the status of a legal entity, and (as exception) the secondary industrial

units of the non-industrial enterprises which represent an important share in the corresponding industrial activity.

The method for filling in statistical questionnaires (report forms) is self-registration carried out by the economic unit.

The filled in statistical report is submitted by the enterprises to the TSO not later than the 15th day of the month following the reported month.

Data are verified and analysed from their quality point of view, especially in relation to their internal coherence, temporal coherence, as well as coherence with other data. At the first stage data is verified by the TSOs and afterwards at the HQ by the IT main division of the NBS. The control methods allow verifying:

- Integrity of the data filled in the report;
- Compliance with the identification of data;
- Observance of logical conditions for data correlation.

Controls are based on visual methods as well as automated ones using IT applications.

Usually, the non-response rate is insignificant and does not influence the results of the survey as a whole, but the response rate has declined with regard to the last year.

Seasonal adjusted figures have not been published until very recently, but are reported to Eurostat. Starting with January 2017, the seasonal adjustment of the IPI is now calculated on a monthly basis. The figures are published each month along with an informational note as attachment. Adjustment for working days is not done. One argument given for not publishing adjusted series was the risk that this could confuse users. On the other hand, some researchers/users informed the Assessment Team that they did seasonal adjustment themselves.

Recommendations

The NBS is encouraged to:

90. Produce seasonally adjusted STS for all industries as well as adjustments for working days and to consider producing the indicator “hours worked” in some industries, like e.g. construction.
91. Further develop quality reports and metadata for STS and improve the comparability between the monthly and annual indicators.

16.4 Production of manufactured goods

General assessment

The statistics on manufactured goods are an exhaustive survey and are produced annually. The enterprises have to report the production in physical units and values according to a specified list of products. New units are declared in the survey report on an open product list and then coded by the NBS staff. Only production in physical units of main products is published. Confidentiality checks on number of producers have to be done to decide which products can be published.

Description

The statistical population is divided into sections B, C, D, E according to CAEM rev.2 - exhaustive, and other economic sectors such as units which indicate a secondary activity of

industrial production in the ASS. The observation unit is the legal units and the reference period is calendar years.

Data collection is conducted on paper via the TSOs as well as online. Online data collection has started in 2017 with a share of 15.5% of e-reporting. The number of respondents is 4,400 and data are published at T+208 days. The survey tools are PRODMOLD-A questionnaire “Statistical survey of industrial products”. The main indicator is the turnover, for units with the main industry activity, falling within the CAEM division 05-38 (on internal/external market). The value of industrial production is calculated in current prices and volume figures are available according to PRODMOLD. Data are produced on production, stock changes of industrial products, and sale of industrial products on internal/external market.

In the first stage, data editing is done by the TSOs applying the software validation rules and the final analyses of internal microdata are conducted in the HQ.

Data validation and check of consistency with other data sources is done (ASS, annual energy survey).

Time series are available up to 2004.

The main users are the Ministry of Economy and Infrastructure, Ministry of Agriculture, Regional Development and Environment, International Organisations (Eurostat, United Nations Industrial Development Organisation [UNIDO]) in addition to internal use in agricultural and energy statistics and in the business register for NACE-classification.

In the future, the NBS intends to produce a more recent version of the industrial production list.

Recommendation

92. The NBS is encouraged to publish all available data on PRODCOM on its website including volume and value data.

Chapter 17: Social statistics

17.1. Population register

General assessment

A State population register is maintained by the PSA. However, updates of the register depend largely on the initiative of individuals to report changes (e.g. change of residence) but for many of those actions there is little or no incentive to report. This holds true particularly for movements within and outside of the country as well as for reporting child births. The NBS is provided with aggregated data from the register but does not have access to individually identifiable records. The new LOS provides for such access and the NBS is encouraged to take appropriate steps to obtain access while satisfying any concerns the PSA may have regarding the security of the individual data.

Description

The NBS has access to information from the population register except for individually identifiable information. Before receiving full access, a guarantee of confidentiality of the data has to be ensured. The new LOS provides the NBS with a stronger mandate for data collection than in the past.

The register is limited in many ways, as it relies on the initiative of the people to report movements on external migration as well as movements within the country. As there is no incentive to report such changes, only a small proportion of the moving population registers the event. Access to public services such as education or health care is not affected by area of residence. As Moldova is a country with a high proportion of emigration, the lack of information is a very serious problem for the reliability of the register and for the statistical system in general.

Reporting of deaths shall take place within three days after the event and reporting of child birth shall take place within three months. In the case of child births, the procedure is often not adhered to, although improvements were made in 2009 when registration points were set up at all maternity hospitals. Approximately 50% of children in Moldova are registered in hospitals. There is also the possibility to register children in a village or city council or in the Moldovan embassy in another country. Delays in registering births, particularly when done abroad, mean that up to 2,000 births may not be registered at any given time. Almost all births are ultimately reported as the parents need access to health care or educational services for their children and the service is not provided unless the child is registered.

The Border Police collects information on border movements by scanning people's passports when they exit and enter the country. The Border Police refuses to provide identification information on individuals to the NBS and claim they are prohibited to do so by the personal data protection law. They claim the new LOS does not give the NBS the right to access their data as it has no power over the personal data protection law. This represents a violation of the second principle of the ESCoP which states that the NBS is supposed to have a full mandate for data collection. The Border Police discards passport data after five years and thereby eliminates the possibility of it being used for statistical back casting or production of statistical time series beyond that period. The Border Police claims to cover all movements into and out of the country except those passing through the area of Transnistria which might count for about 15% of the movements. However, the Border Police is working in cooperation with Ukrainian authorities on improvements in that matter.

The next population and housing census in Moldova is planned for 2023 (but not confirmed yet). It will be very important for the census work to have access to reliable register data, particularly on migration and movements within the country.

Currently, the Moldovan Government is developing a M-Connect platform which is meant to serve as a venue for Governmental institutions to provide and control access to their administrative records. At this point in time (November 2017), data on individuals is not available to the NBS through the M-Connect platform, as it is still at a developmental stage.

Recommendation

93. The NBS is encouraged to develop a plan/roadmap to obtain access to the state population register held by the PSA, and to the Border police databases, at individual record level, while guaranteeing data security, with a view to developing a statistical population register.

17.2. Demographic statistics

General assessment

The population and housing census 2014 revealed a huge discrepancy of approximately 600,000 inhabitants, or close to 20%, between the adjusted census figure (2.9 million) and the annual intercensal population estimate for 2014 (3.5 million). Part of the overestimation is explained by the use of the “legal residence” concept for the annual estimates which differs from the internationally recommended “usual residence” concept used in the census through the continued inclusion of around 200,000 Moldovan citizens who have moved permanently abroad. The remaining discrepancy reflects the poor quality of the statistical estimates of migration, both internal and external, which are based on an incomplete analysis of relevant administrative data.

The Assessment Team would urge the NBS, as a matter of the highest priority, to address the shortcomings in its population and migration statistics and to produce revised annual series that are fully in line with international recommendations. The Assessment Team also notes that it will be necessary to review, and revise where appropriate, other statistical series that are linked to the population estimates (e.g. employment, income, National Accounts, etc.).

Annual statistics on births and deaths are considered to be of acceptable quality and in line with international recommendations. No national population projections are currently produced in Moldova and the NBS is encouraged to develop an appropriate methodology in conjunction with other national and international experts.

Description

Demographic statistics in Moldova are based solely on administrative data received from the Ministry of Health, Labour and Social Protection and the PSA (State Register of the Population (SRP)).

Information on vital statistics such as births, deaths, marriages and divorces are currently received from the SRP as part of the Integrated Information Flow (IIF), which is administrated jointly under an agreement between the Ministry of Justice, Ministry of Health, Labour and Social Protection, Ministry of Information Technology and Communications, and the NBS. International definitions are applied for vital statistics such as the definition of live births from the World Health Organisation (WHO) and are according to European standards. The PSA also provides data on internal migration flows (quarterly) and external migration flows (half-yearly) and statistics on population and citizenship (at the beginning of the year). The Ministry of Internal Affairs (Bureau of Migration and Asylum) provides information on immigrants (quarterly) and asylum (half-yearly). Data are received by the NBS on paper and in Excel files.

It is well known that the NBS data on external as well as internal migration are of low quality (see Chapter 17.1). Demographic statistics in Moldova are based on the concept of "legal residence" and not the internationally recognized concept of "usual residence". This goes against European standards in demographic statistics and leads to a serious overestimation of the country's population. The overestimation of the total population in Moldova is of about 600,000 people or 3.5 million instead of 2.9 million. The resident population has neither been adjusted according to the results of the census in 2004 nor to the census in 2014. Only the census shows and reflects the correct population figure. All other statistics in Moldova are based on the overestimated figure of 3.5 million. However, the NBS plans to start using "usual residence" to separate flows and contingents of short term and long term migrants. A task force has been established which analyses the mechanisms for recording migration flows and identifies possibilities for improving migration statistics by extending the use of administrative data sources. It should also

develop an action plan to improve the data collection mechanism on migration. The NBS plans to produce gradually new population estimates for Moldova in cooperation with UNFPA in 2018-2019.

Recommendations

The NBS is encouraged to:

94. Improve its internal migration statistics as a critical input to the preparation of credible sub-national population estimates. Failure to do so puts the publication of such estimates into doubt in non-census years.
95. Set up an expert working group with the Border Police department and the migration and asylum office to develop methodologies for producing fit for purpose migration statistical estimates for Moldova that take account of all relevant information sources.
96. Revise, without delay, its current population estimates to align them with the results of the 2014 population and housing census. Ideally, the current population estimates should be based on the European and internationally accepted concept of usual residence and back-casted annual estimates, for the intercensal period from 2004 to 2014, should also be prepared and published.
97. Develop a work plan and related time schedule for the revision of all statistical series that will be affected by the availability of revised population figures (e.g. employment, income, National Accounts, etc.).
98. Develop a methodology for the production of population projections.

17.3. Population and Housing Census (previous/next one)

General assessment

There were several issues in planning and implementing the population and housing census in Moldova in 2014 as well as with the processing and publication of its results. A very comprehensive report² has been prepared by an external expert on the conduct of the census 2014.

For the next census, which will be part of the 2020 international round of censuses, it will be important to learn from the experience in 2014 and implement appropriate improvements. Financial resources need to be ensured well in advance as well as the addressing of legal matters and other practical and technical issues such as the use of tablets and other technical devices. The concept of "usual residence" must be applied in the next census as it was the case in the previous one. It remains a highly relevant issue in Moldova as the concept is not consistently applied within the statistical system of the country.

The Assessment Team would strongly recommend that a costed strategic plan for the population and housing census 2022 is prepared without delay. Adoption and funding of such a plan would enable the necessary preparations to be undertaken in a timely manner so that the problems that arose with the population and housing census 2014 might be avoided. Such a plan should consider issues such as the use of Geographic Information System (GIS), the link to the population register, the conduct of a larger pilot survey, the need for better training of interviewers, and the use of tablets to collect the data. The

² Evaluation Report of the 2014 Population and Housing Census in the Republic of Moldova, Mr Eliahu Ben Moshe, UNFPA, Chisinau, 2017.

Assessment Team is of the view that failure to undertake adequate preparations should put the date of the census in doubt.

Description

The last population and housing census was conducted in Moldova 12-25 May 2014. It was done through face-to-face interviews, using traditional paper questionnaires. Information on persons who were living abroad for more than twelve months, were collected if one of the household members provided the information. Urban and rural classification was according to Moldovan national legislation and not according to international classification, with urban population classified as living in communities with 2,000 or more people, while rural population communities have less than 2,000 people.

There were several difficulties and delays related to the planning, conduction, and publication of the census 2014. The capital city, Chisinau, was under-covered as data collection proved more difficult there than in the rest of the country. The census law was too rigid, posing limitations on the NBS's actions. The paper map behind the enumeration areas was of poor quality. The area of the pilot census was too small and when the pilot was carried out, IT infrastructure had not been developed, so scanning and data entry systems could not be tested. Collaboration with other institutions was poor. The planning of the project and the communication campaign started too late. The fieldwork of the Enumerators was not monitored properly (an IT software was not developed for this purpose). In some urban areas the recruitment process was poor, limiting the number of available enumerators. There was political instability in the country and upcoming elections.

A plan for improvements for the next census is in place addressing the aforementioned issues. An evaluation report on the census 2014 "Evaluation Report of the 2014 Population and Housing Census in the Republic of Moldova" was published in 2017, written by Mr Eliahu Ben Moshe for UNFPA. It is a useful document to understand the work and the environment of the census 2014 and the challenges the NBS was facing during this large undertaking. In general, Mr Moshe concludes that considering all the challenges, the staff of the NBS did remarkably well and delivered reasonable quality census data given the circumstances.

For the validation of census data, different administrative sources were used, such as data from energy suppliers. The census 2004 was used as well as the population register and NBS surveys. The census 2014 used the concept of "usual residence" which was an important step in the right direction to move away from the definition of "legal residence" which is applied elsewhere in the NSS of Moldova. However, due to the modified concept use, there are inconsistencies in Moldovan statistics.

The publication of the census 2014 results has taken a long time. The first results from the census were published in March 2017. The work is still not finished (in October 2017), as work on the economy status of the population is still going on.

The next census is planned for the year 2022. Preparations have already started (in February 2018) and the first preparation meeting is scheduled for March 2018. UNFPA will assist the NBS with the planning. The NBS aims at using mobile devices for data collection including GIS for delineation, collection, and dissemination of data. The NBS aims at taking advantage of administrative sources in the census work.

Recommendations

The NBS is encouraged to:

99. Develop without delay a costed strategic plan for the population and housing census scheduled for 2022.
100. Apply the internationally recognised concept of usual residence as the primary statistical unit in the census 2022. Additional information can be collected to facilitate analyses according to different population concepts but such concepts should be given a lower status in the presentation of the results.
101. Seek and secure, on the basis of the strategic plan, a guarantee of funding in advance from the government and development partners/donors to cover the entire cost of the census operation - from preparatory work to the dissemination of results.
102. Start developing the law on the population and housing census but limiting it to the level of detail required for legal purposes - unnecessarily restrictive provisions that might impact on the conduct of the census fieldwork should be avoided.

17.4. Labour market statistics

General assessment

Labour market statistics are generally of good quality in Moldova. The NBS actively adheres to international standards and produces the main international labour market indicators accordingly. However, there are a few discrepancies between definitions in different categories of the labour market statistics and it is recommended that the NBS addresses these discrepancies. Two more general issues affect the quality and efficiency of production of labour market statistics in Moldova, namely: the urgent need to take account of the revised population count in estimating the size of the labour force and the need to make greater use of administrative data.

The LFS is the main source of information on employment and unemployment. The methodological framework for the LFS is based on ILO standards (13th International Conference of Labour Statisticians). Over 7,000 households are surveyed quarterly, in face-to-face interviews using paper questionnaires, by a field force of 150 interviewers. The methodology for grossing the survey results needs to be improved to handle non-response and other survey biases. The NBS is also encouraged to extend the survey to cover all variables specified in EU regulations on the LFS.

Greater use of administrative data should also be considered in the production of data on earnings to facilitate better analysis of the gender pay gap and other important differences between demographic and socio-economic groups.

Description

The NBS produces statistics for the following statistical domains:

- LFS;
- Job vacancy;
- Earnings;
- Labour cost.

Labour Force Survey

The methodological framework of the LFS follows ILO standards (13th International Conference of Labour Statisticians) and good practices. The LFS in Moldova is a household survey.

The LFS provides estimates for unemployment, inactivity, working hours, occupations, economic activity, and other labour related variables as well as socio-demographic characteristics, such as sex, age, and area of residence. The NBS publishes quarterly LFS estimates as soon as the validation procedure has been successfully performed and the press release is officially approved by the management.

The sample size for the LFS is 7,200 dwellings per quarter or 28,800 dwellings per year. Data is collected through face-to-face interviews using paper questionnaires. The non-response rate in 2016 was 12.3%. After the 2012 GA, the rotation scheme of the sample was changed and quarterly sample size reduced from 12,000 dwellings to 7,200. The sample is stratified using geographical areas and population density. The survey weights are based on official population totals which overestimates the Moldovan population by 600,000 people. This is one example of the effects of erroneous population estimates on the official statistics produced in the country.

There are a few conceptual differences between the LFS in Moldova and the EU LFS. In Moldova, employed people include conscripts and persons working as auxiliaries in households (kitchen garden) producing agricultural products exclusively for the household's consumption. In addition, some variables are missing in the Moldovan LFS as compared to the EU requirements (such as receiving continuously the salary during the absence period, number of usually worked hours, atypical work, the block of questions related to education, and training partially covered in LFS, etc.). The NBS plans to add the missing variables as of 2020. The NBS conducts the EU LFS ad-hoc modules but often there is one or two years delay compared to the timing of the Eurostat modules. The NBS plans to implement the new ILO resolution concerning statistics of work, employment, and labour underutilisation as well as to redesign their questionnaires and sampling plan as well as moving to the data collection mode of CAPI / CATI.

Job vacancy statistics

Job vacancy statistics are produced from the Mobility of Employees and Jobs Survey (MEJS). Until 2010, the MEJS included only units with 20 or more employees, and all budgetary institutions, irrespective of their number of employees. From 2011, the survey has been conducted on a sample basis. Between 2011 and 2013, the survey included units with one and more employees. Starting from 2014, the survey was limited to units with four or more employees in order to reduce the response burden. The current sample size is 10,000 units. Metadata for the survey does not exist.

The mode of data collection is mixed; using paper questionnaires and CAWI (e-reporting). E-reporting started in 2017. Data is checked both at regional and central level. If errors are detected, they are revised according to the NBS standards on revision. Data was collected quarterly for 2014, twice a year in 2015, and annually since 2016. Frequency of data collection was reduced in order to reduce response burden. The non-response rate for 2016 was only 1.42% which can be explained by the fact that businesses are required by law to provide data.

Moldova requests technical assistance in harmonising job vacancy statistics with European standards.

Statistics on earnings

Statistics on earnings come from two different sources: The Quarterly Survey of Earnings (QSE) and the Annual Survey on Earnings and Labour Costs. The definition of earnings follows the 11th International Conference of Labour Statisticians.

The QSE provides quarterly data on earnings, number of employees and working hours. The sample in the QSE is about 10,000 units. The survey includes all institutions from the budgetary sector and all economic units from the real sector with 20 or more employees. In addition, enterprises with 4-19 employees are sampled. Data is collected with paper and pencil questionnaires and through CAWI (e-reporting). From 2011 to 2016, information on earnings was collected monthly, quarterly collection started in 2017. The main challenges of the QSE include: late responses, erroneous responses, lack of qualified staff in data checking.

Yearly statistics on earnings are produced from the Annual Survey on Earnings and Labour Costs. The statistical unit is all enterprises with one or more employees. The sample is about 15,000 units. The survey includes all institutions from the budgetary sector and all economic units from the real sector with 20 or more employees. In addition, enterprises with 1-19 employees are sampled.

The non-response rate for the first quarter of 2017 was 0.86% for the quarterly survey and 2.3% for the annual survey in 2016. The low non-response rates can be explained by the legal requirement to respond to the survey. The NBS plans to increase the use of administrative data sources in production on earnings statistics including the data base from the tax authorities.

Statistics on labour costs

The main data source for labour cost statistics is the Annual Survey on Earnings and Labour Costs. This is the same survey used to collect data on earnings and the same methodology applies for both topics.

The NBS only calculates the gender pay gap on a monthly basis, not by hours worked.

The NBS is lacking access to administrative data in order to be able to produce statistics with more flexibility for different groups. It is their aim to be able to produce data by sex, age group and occupation but access to administrative data is lacking, which would also allow the NBS to reduce the response burden.

Recommendations

The NBS is encouraged to:

103. Consider using relevant external sources (e.g. data on the final energy consumption of households) for non-response adjustment and the calibration of its household surveys.
104. Revise as a matter of some urgency the series of estimates from the LFS to take account of the recently published 2014 population and housing census.
105. Develop and implement a plan to collect all variables requested in the EU regulation on the LFS.
106. Align the job vacancy survey to a greater extent with European standards and recommendations.
107. Take further advantage of administrative sources in the production of statistics of earnings and use them to produce more detailed analyses

17.5. Living condition statistics

General assessment

Living condition statistics in Moldova are produced from the HBS. In general, the survey is a well-established project based on a sound methodology. The NBS has recently improved the sampling and questionnaire designs and added material deprivation questions in accordance with European guidelines. The NBS aims to further align its living condition statistics to European standards in the coming years by introducing the EU-SILC survey in Moldova.

Results from the HBS are produced quarterly. Generally, European countries produce them on a yearly basis. The sample size is 9,768 dwellings and the response rate is 60% which leaves a rather small sample for producing detailed quarterly estimates. This is reflected in some rather large differences and variations over time in the published quarterly indicators.

Description

The HBS is the source for living condition statistics in Moldova. The sample size is 9,768 dwellings per year or 814 dwellings per month. The sample is two-staged, stratified, with communes as the Primary Sampling Unit (PSU) and households as a secondary unit, sampled randomly within each PSU. Information on electricity consumption is used for additional stratification of households in Chisinau. Data on electricity consumption is received from the electricity providers RED Gas Natural Fenosa (private), RED Nord and RED Nord-Vest (state enterprises). All members within the selected households are surveyed. Half of the households are surveyed in the same month over four consecutive years and the other half participates only once in the survey. The sample has recently been re-designed, including giving up the use of household replacement.

Data is collected at the same time as for the LFS and both surveys use the same interviewers. This arrangement has been in place since 2006. Data is collected via face to face interviews at the home of the respondents. The response rate for 2016 was 60.9%. Two types of forms are applied, the basic questionnaire and the household diary. The data collection mode is paper and pencil. The NBS plans to introduce tablets in the data collection by the end of 2020. Future plans include taking advantage of administrative records for increased quality, efficiency and reduced response burden.

Information obtained from the survey is used to calculate the weights for the CPI. HBS is also used to calculate poverty lines and poverty measures, to generate poverty profiles and to provide information on living standards through household income and consumption data as well as non-monetary indicators covering education, health, employment, housing, asset ownership, and self-assessed living conditions. The NBS publishes quarterly and yearly results from the survey. The HBS methodology corresponds to the Eurostat manual on the HBS with some exceptions related to national needs, such as a different method for estimated cost of housing, treatment of income in kind, and treatment of income which is common for the household members.

From 2014 onwards, the “Assessment of the Standard of Living” section was amended to include questions concerning the socio-economic situation of a household. This allows for measuring the level of material deprivation of a household. These questions were used in 2016 for the pilot calculation of multidimensional poverty. The NBS plans to introduce the EU-SILC in the future.

Recommendations

The NBS is encouraged to:

108. Reconsider the publication of detailed quarterly household budget survey results, considering the high sampling variability attached to such estimates.
109. Progress with the introduction of the EU-SILC, including looking at synergies with other household surveys, in particular the HBS.

17.6. Education statistics

General assessment

The NBS generally produces educational statistics according to international standards although there are some gaps at present. The NBS is aligning its national educational classification system to ISCED 2011 - the work is progressing but not yet finalised. Data on life-long learning is collected through the LFS but there is a reason to believe that the LFS module underestimates life-long learning in Moldova and the NBS needs to address the matter.

Description

The NBS produces statistics for the following statistical domains:

- Educational system;
- Educational expenditure;
- Life-long learning;
- Vocational training.

The educational system

Collection of statistical reports regarding early education, primary and general secondary, and secondary vocational education is done by territorial education, youth and sports departments, and the TSO. Those subsequently send the statistical reports to the NBS for processing and generalisation. Statistical reports on the activities of post-secondary vocational and higher education institutions are collected directly by the NBS.

Concepts, definitions, and classifications are developed by the NBS and mainly applied in accordance with UNESCO recommendations and national legislation. However, some data on education is lacking. There is no information about formal adult education, annual statutory teacher compensation in public institutions, teaching by level of education and education on computers.

Data on the number of students in primary and secondary education is available, disaggregated by gender, class and age as well as on secondary vocational education graduates by gender and speciality. The data is checked for quality by the NBS and corrected if errors or inconsistencies are detected. The NBS is planning to adapt ISCED 2011 in cooperation with the Ministry of Education.

Educational expenditure

The data comes from administrative sources of the MoF, which is responsible for the quality of data. For administrative data on educational expenditure, there are no transparent procedures and in some cases there are no procedures for data revision.

The accuracy and reliability of data are constantly evaluated and monitored by the NBS specialists in the process of completing international questionnaires. Current data are compared with those of the previous year and discrepancies discussed with representatives

from the MoF. Statistical data on education expenditure are available from 2006 and in more detail from 2008.

Life-long learning

Data on life-long learning is collected from the LFS. Sampling, data collection, and other LFS methodology therefore also applies to life-long learning statistics.

LFS estimates of life-long learning were found to be biased, significantly underestimating the incidence of the phenomenon among the adult population because respondents, having employee jobs, do not report the job-related trainings because they do not perceive them as trainings. Attempts have been made to address this matter in the questionnaire design but the problem has not been solved.

Vocational training

Data on vocational training are received from the "Vocational Training of Employees Survey" (VTES) which is an annual sample survey among enterprises. It applies to all training which is fully or partly organised by the enterprises. The definition of "vocational training" is according to the European CVTS (Continuing Vocational Training Survey).

The mode of data collection is mixed; there are paper questionnaires and CAWI (e-reporting). Logical data checks are done and data is compared with previous reporting periods as well as with other sources such as the survey of earnings and labour costs. The non-response rate for 2016 was 0.7%.

Until 2013, the survey covered enterprises with 20 or more employees but since then it has covered enterprises with ten or more employees which is in accordance with EU regulations. VTES covers sections A to S of the Statistical Classification of Economic Activities: CAEM rev.2 (harmonised with NACE rev.2). Metadata for the survey is not provided.

Recommendations

The NBS is encouraged to:

110. Fully implement ISCED 2011.
111. Study best practice/experience for measuring life-long learning in the framework of the LFS (ad-hoc modules) in order to avoid the inconsistency between the LFS and the enterprise surveys and the resulting bias in the estimated number of people benefitting from life-long learning.
112. Take further steps to align variables collected in education statistics in general, including education expenditure, lifelong learning and the VTES, with EU/international standards.

17.7. Health statistics

General assessment

The National Health Management Centre, now part of the PHA, is responsible for the collection, processing, validation, and dissemination of health statistics in Moldova. Similarly, statistics on disability have been traditionally produced on the basis of data compiled from administrative sources. The NBS publishes health and disability statistics

on the basis of data provided to it by the Centre and by the administrations concerned with disability. It also periodically collaborates through the inclusion of questions on disability and health status in the Population and Household Census and in surveys such as the LFS and HBS. In general, European and international standards are followed but further work is required to fill some data gaps. The collection of data on accidents at work has been discontinued because of changes in administrative procedures and new approaches need to be developed.

Description

Health statistics covers the following domains:

- Health care;
- Disability statistics;
- Life expectancy;
- Health and safety at work.

Health care statistics

Data on health care statistics in Moldova are received from the National Health Management Centre, now part of the PHA, which is responsible for data quality although the NBS further validates the data based on comparative analysis. The cooperation between the NSI and the National Health Management Centre is generally good. In some cases, there are no procedures for data revision and a lack of publicly available metadata. The reference unit is institutions which carry out activities related to health and social assistance. Statistics are provided on the number of patients and medical personnel. Classifications and nomenclatures are common for the whole health domain. Definitions are mainly unified and standardised according to the legal framework.

Health care statistics have been available in Moldova since 1995. Some modifications have been made which limit comparability over time. In 2008, Moldova started to implement European standards and criteria for registering births and new-borns in the official statistics. The NBS plans to implement a quality policy for other official statistics producers and to draw a roadmap of unique classifiers and nomenclatures for use by all official statistics producers.

Disability statistics

Data on primary disability is produced by the National Council for Determining Disability and Work Capacity. Data on persons with disabilities receiving pensions or social allowances is produced by the Social Insurance House. Both institutions are under the Ministry of Health, Labour and Social Protection.

The data source holder is responsible for quality and statistical procedures such as imputation but the NBS may be involved in the formation of definitions. Data on disability is available from the year 2000. Statistical units are individuals. Prevalence of disability is estimated based on administrative data on beneficiaries of pensions and disability allowances. The definition is in accordance with the Law No. 60 on social inclusion of people with disabilities and follows the definition of the Convention on the Rights of People with Disabilities but, in practice, medical criteria and the Classifier of Diseases, and not the ICF, are still used in the determination of disability. Consequently, international definitions are not applied.

From 2017, information on disability was also collected through the LFS in accordance with European standards. In the 2014 Population and Housing Census, a minimum set of disability questions were included for the first time according to the Washington Group recommendations. These data have been processed but have not yet been disseminated. The future plans of the NBS include the implementation of the European System of Integrated Social Protection Statistics (ESSPROS) methodology, the analysis of census data on disabilities, and the improvement of the national set of indicators on disability.

Life expectancy

Information on life expectancy at birth is processed from the NBS statistical data on population number and mortality. The NBS has long time series of life expectancy at birth by sex, age, and areas of the country. Comparative analysis with WHO indicates minor differences in the data which is due to the fact that the NBS does not make adjustments to infant and child mortality on the basis of special social surveys. The NBS does not have other data on deaths, except for those officially registered by the civil status service.

Health and safety at work

The NBS receives data on accidents at work from the economic and social units where the accidents took place. The list of units used to be provided by the State Labour Inspectorate. Unfortunately, this institution is no longer responsible for this work and the collection of data is spread over different ministries, which makes it difficult or impossible to capture the data necessary to produce reliable statistics on work accidents.

Recommendations

The NBS is encouraged to:

113. Discuss with the PHA ways to produce data on access to health, health status and disability, in line with European/international standards. Where household surveys are required, they should be under the responsibility of the NBS.
114. Consider ways to reinstate the collection of data on accidents at work, which has been discontinued for administrative reasons.
115. Continue implementing its plans for the introduction of ESSPROS.

Chapter 18: Agricultural statistics

General assessment

Agriculture is an important part of the Moldovan economy and the NBS devotes considerable resources to providing a wide range of agricultural statistics that are compiled broadly in accordance with EU and other international recommendations. The successful completion of the first General Census of Agriculture in 2011 was a major achievement. The census results provide a comprehensive picture of agricultural activity at national, regional and local levels. Furthermore, the information on the 900,000 agricultural producers collected in the census formed the basis for the development of a Statistical Register of Agricultural Producers (SRAP). As part of the SDNSS 2016-2020, the NBS has also identified a number of priorities for agricultural statistics that will further improve Moldova's compliance with EU and international requirements.

The Assessment Team welcomes the commitment to undertake the next General Census of Agriculture as part of the FAO 2020 world round (but the year of conducting the census has not been determined yet). Good planning and the availability of the necessary resources are essential in ensuring the success of the census, as was demonstrated in 2011. Accordingly, the Assessment Team would encourage the NBS to secure the necessary support from the government and international donors in good time. The availability of the SRAP provides a good basis for streamlining the system of sample surveys of small agricultural producers. The Assessment Team would recommend that the methodology unit should be involved in the future design of these surveys in order to ensure that they can be optimised from a statistical methodology perspective.

Description

Agriculture is a very important activity in Moldova. For example, in 2016, approximately one third of those in employment were engaged in agriculture, forestry and fishing, while around three quarters of all households were involved to some extent directly in agricultural activity - in most cases growing crops or keeping livestock for own consumption.

This importance is reflected in the resources devoted to agricultural statistics in the NBS. More than 6,000 persons were deployed for the General Census of Agriculture in 2011. Four staff members are permanently deployed for the census and for the establishment of a farm register. 16 staff members in the HQ are engaged in current agricultural statistics production in addition to one to two in each of the 35 TSOs. Additionally, 106 interviewers and eleven supervisors are engaged in data collection in the regular sample surveys of small agricultural producers.

All current statistics and the results from the General Census of Agriculture of 2011 are readily available on the NBS website.

18.1 Census of Agriculture

The first General Census of Agriculture was conducted in 2011 and involved the enumeration of over 900,000 holdings with some agricultural activity. The vast majority of the holdings in Moldova are small, with over 85% producing for own consumption only and, in terms of size, around 71% having less than 1 hectare of agricultural land. The size threshold for inclusion in the census was 10 ares, which is considerably lower than the international recommendation. The inclusion of such a large number of small holdings in the census was necessary because of their importance in terms of their share of overall agricultural production.

Holdings with 10 hectares and more were required to complete the census questionnaire and return it to the TSOs. There were approximately 6,000 such holdings but they accounted for around 60% of the agricultural area. The remaining, almost 900,000, holdings were exhaustively enumerated by direct interviews, conducted by a specially recruited and trained field force of 4,500 interviewers. In total, the census cost was 4.5 million EUR, of which 1 million came from the State budget with the remainder financed by external donors (Sweden, Romania, and EU).

The census was conducted in line with EU Regulation 1166/2008 on farm structure surveys and the survey of agricultural production methods, and also in accordance with the FAO recommendations for the 2010 round of agricultural censuses worldwide. The results of the census were published in a number of detailed reports that provide a comprehensive picture of agricultural activity in Moldova at national, regional and local levels. The census

returns were also used as the basis for developing a statistical register of agricultural producers, which is described below.

It is planned to hold the next General Census of Agriculture as part of the FAO 2020 world round (but the year of conducting the census has not been determined yet). This will be important in order to update the information on agricultural activity and also to collect necessary information to facilitate the updating of the farm register from administrative and other sources. The success of the census in 2011 was due to it being well planned and well-resourced and it will be essential to replicate these conditions in the conduct of the next census.

Recommendation

116. The NBS should hold the next General Census of Agriculture as part of the FAO 2020 world round and should approach the Government and potential development partners/donors to provide the necessary funding and support.

18.2 Farm register

The SRAP was created by the NBS in collaboration with FAO experts and is based on the 902,000 holdings enumerated in the General Census of Agriculture in 2011. Two types of characteristics are distinguished in the SRAP:

- General characteristics
 - Identification characteristics (name and address of the holding, legal status, fiscal code/identification code, if a legal entity, personal identification code of farmer, district and region);
 - Demographic characteristics (information on the establishment or cessation of agricultural activity);
 - Economic characteristics (economic dimension).
- Agricultural characteristics
 - Total area, field plots, plots of land and gardens, utilised agricultural area, arable land, orchards, nuts, fruit plantations, vineyards, pastures, mushrooms, livestock by main species (cattle, sheep, pigs, goats, horses, poultry, rabbits, bees, and fur animals).

The main objectives of the SRAP are to establish and maintain, through periodic updates from various sources, a database of key indicators of agricultural activity and to provide a population framework for the ongoing surveys of agricultural activity.

The sources for updating the register include the ongoing statistical surveys and various administrative sources. The next General Census of Agriculture in 2021 will be used to collect personal and unique registration information from agricultural producers in order to improve the linkages between the SRAP and administrative registers. The Assessment Team would support this initiative and would encourage the NBS to ensure more generally that the next General Census of Agriculture is organised in such a manner as to ensure that the linkages with the SRAP are optimised with a view to improving the quality and coverage of the register.

Recommendation

117. The NBS is encouraged to organise the Census of Agriculture in such a manner as to ensure that the linkages with the SRAP are optimised with a view to improving the quality and coverage of the register.

18.3 Agricultural statistics

A broad range of current information on agricultural activity is produced by the NBS. This includes quantitative information on crop areas, livestock numbers, prices paid and received, agricultural machinery used, etc. In addition, the NBS compiles economic accounts for the agricultural sector, price indices and food balance sheets. In general, the NBS follows EU and FAO guidelines and recommendations in the production and dissemination of its agricultural statistics.

A wide range of surveys are conducted annually and sub-annually to collect the basic data from agricultural producers. In the case of the larger units (i.e. those with 10 hectares or more), exhaustive surveys are conducted in which the producers complete the questionnaires and submit them to the TSO. For the smaller producers, relatively small-scale sample surveys are undertaken in which the producers are surveyed directly by the 106 interviewers retained for this purpose. As mentioned above, one of the purposes of the SRAP is to provide a survey reference framework and this will allow a more structured approach to be adopted for the design and implementation of the surveys. The Assessment Team would recommend that the methodology unit should be involved in the future design of these surveys in order to ensure that they can be optimised from a statistical methodology perspective.

In addition to re-organising the system of sample surveys of small agricultural producers, the SDNSS 2016-2020 also identified the following priorities for the development of agricultural statistics:

- Collaboration with the Ministry of Agriculture and Food Industry on the use of the ministry's administrative registers for statistical purposes;
- Elaboration of the statistical instrument on the ASS of agricultural holdings;
- Further development of food balance sheets;
- Improvement of agricultural price statistics;
- Development of agri-environmental indicators (land use, use of fertilizers, use of pesticides, water consumption, etc.) in accordance with the requirements of the EU.

Recommendation

118. The NBS is encouraged to involve its methodology unit in reviewing the sampling methodologies used for the regular agricultural surveys.

Chapter 19: Multi-domain statistics

19.1. Transport statistics

General assessment

A broad range of statistics is published on goods and passenger transport by road, inland waterway, air, and rail. In addition, annual data are published on the transport infrastructure and on the structure and operations of transport companies. Data sources include sample surveys, returns from transport companies, and administrative data. In

general, international and EU guidelines are followed but there is a need for some further alignment with EU standards.

Description

Transport statistics cover all indicators related to the volume and evolution of goods and passengers transportation per every transport type: road, railway, air, and river. The annual statistical data on transportation of goods by road obtained through the statistical survey on transport of goods by road refer to the transport on own account and on order by others. The statistical data refer to transport ordered from enterprises, which own / rent ten and more road vehicles for transportation of goods. Public passenger transport covers transportation by vehicles (scheduled and on ad-hoc basis), and transportation by railway, river and other transport means. At the different stages of statistical data collection, production and dissemination, the NBS cooperates with the economic units as well as with the relevant institutions directly or indirectly involved in the transport sector. An exhaustive statistical survey specific for every mode of transport (railway, road, air, river and gas pipelines) allows producing statistics on the length of public roads, railway and trolleybus lines, inland waterways, gas pipelines, and stock of transportation means of the enterprises as of 31 December. Data on the number of registered transport means, existing at the end of the calendar year, are presented by the Ministry of Information, Technologies and Communications.

The legal basis for the collection and dissemination of transport statistics are several national laws and government decisions as well as the Regulation (EU) no. 91/2003, Regulation (EU) no. 70/2012 of the European Parliament and the Council of 18 January 2001.

The NBS is responsible for collecting and processing the data on the carriage of goods and passengers by road, the carriage of goods and passengers by inland waterways and electrical passenger transport.

The civil aviation authority is responsible for the collection and processing of data on air cargo and passenger transport.

The Moldovan Railways are responsible for collecting and processing data on freight and passenger transport.

Six specialists from the transport, tourism and communications statistics section are responsible for transport statistics at the NBS HQ.

Production of transport statistics is based on exhaustive statistical surveys specific for each transportation type: railway, road, river, air, except for the transport of goods by road by physical persons, for which there is a sample survey. The following statistical reports are used:

- Monthly: Road transport performance; goods and passengers railway transport, indices of railway transport use; goods and passengers river transport; air traffic;
- Quarterly: Transportation with road transport means;
- Annually: Road transport and length of roads; railway transport of general use and length of railways. The following information from administrative sources is used to produce statistical data in the field of road transport:
 - Information from the State transport registry;

- Information on transport operators engaged in the international transportation of goods by road;
- Information on transport operators, regularly carrying out passenger transportation by city, interurban and international coaches.

The number of passengers using taxi and the related turnover are estimated on a quarterly basis. The number of passengers using buses and minibuses, trolleybuses, including the users of free-of-charge transport and the related turnover are calculated and registered in the statistical report by the responsible person from the reporting unit, according to the methodological guidelines annexed to the statistical report:

http://www.statistica.md/public/files/Metadate/en/Transport_en.pdf.

A respondents' list is updated annually using the following sources:

- The survey from which the list of the economic agents with the main and secondary activity of freight and passenger transport is extracted;
- The economic agents that indicated means of transport at the balance of the enterprise in the "Financial statements";
- The economic agents that indicated means of transportation in the ASS;
- Central and local public administrations that possess transport means.

Respondents can submit their reports electronically on the website using respective the e-reporting system.

Transport activity data cover indicators on the transportation of goods (in tons and tons-kilometres) and transportation of passengers (in passengers and passengers-kilometres), per every type of transport: road, railway, air, and river. Public passenger transport covers the transportation by road (buses, minibuses, taxi, and trolleybuses) on scheduled and ad-hoc basis, as well as transportation by railway, river, and air.

Concepts, definitions and classifications broadly comply with European/international standards.

The following classifications are used for transport statistics:

- CAEM rev., fully harmonized with the NACE ver.2.
- Classifier of Ownership Forms in Moldova (CFP), approved by the standards, metrology, and technical supervision department Decision no. 276-st dated 4 February 1997;
- Classifier of Administrative-Territorial Units of Moldova (CUATM), approved by the Standard Decision no. 1398-ST dated 3 September 2003; in force since 3 September 2003.

At the same time, a number of nomenclatures and classifications corresponding to the EU requirements are used for the statistical surveys on transport:

- Standard nomenclature of transports/ revised - NST/R;
- Classification of hazardous goods;
- Nomenclature of goods' packing modalities;
- Classification of types of road transport routes.

The quality of statistical data is ensured by verifying data and analysing them for internal coherence and coherence with other data. This is done by the TSOs and afterwards at the HQ by the IT Division of the NBS.

Results of statistical surveys are presented as totals, percentages, and average values. Control is based on the visual methods as well as automated methods using IT applications. Control methods allow verifying:

- Integrity of the data filled in the report;
- Compliance with the identification of data;
- Observance of logical conditions for data correlation.

Data cover:

- Monthly/quarterly data - enterprises (legal entities) with ten and more vehicles owned/rented, operating transportation of goods by road against payment;
- Annual data - all legal entities owning or renting road transport means and carrying out transportation of goods by road on their own (without payment) and/or on the order of others (fee-based);
- Long time series of comparable data are available. When changing classifications, methodology or the coverage of indicators, the data are back-casted.

The NBS is responsible for the dissemination of all transport statistics:

http://www.statistica.md/public/files/Metadate/en/Transport_en.pdf.

Recommendation

119. The NBS is encouraged to expand the use of EU standards for the production of transport statistics (variables, coverage).

19.2. Tourism statistics

General assessment

Tourism statistics include annual data on the capacity of tourist accommodation and quarterly data on the use of tourist accommodation as well as on the activity of travel agencies and tourism operators. The NBS intends to start working on the coverage of tourists accommodated in private households in 2018.

Some consideration is being given to the preparation of a satellite tourism account but the Assessment Team would not consider this to be a priority in view of the relatively small scale of the tourism industry and the work that would be required - for example, tourist movements are estimated to account for just 4% of all cross movements at present and accurately identifying these movements would pose practical difficulties.

Description

There are strong national users of tourism statistics:

- Government of the Republic of Moldova;
- Ministry of Economy and Infrastructure;
- Tourism agencies;
- NBM.

The following surveys are undertaken:

- The capacity of the collective tourist accommodation with accommodation functions:
 - Annual periodicity;
 - Number of respondents: 252;

- Period of data dissemination: Annual, 15 February;
- Accommodation of tourists in the collective touristic reception facilities with accommodation functions:
 - Quarterly periodicity,
 - Number of respondents: 252;
 - Period of data dissemination: T+15;
- The activity of travel agencies and tour operators:
 - Quarterly periodicity;
 - Number of respondents: 500;
 - Period of data dissemination: T+15.

Data on tourist accommodation are representative at country level and in territorial profile, the activity of travel agencies and tour operators at regional level.

Future plans:

Household tourists are not covered in the surveys. The plan is to start including household tourists from 2018 on.

A satellite account with estimations of the expenditure of tourists is envisaged. One large problem is the distinction between visitors versus travellers at border crossing. The border authorities will not provide data for this breakdown. There are more than 3 million border crossings each year; of these 120,000 are estimated to be tourists.

Recommendation

120. The NBS is advised not to produce a satellite account for tourism in the short/medium term, as this is not a high priority, given the current size of the tourism industry in Moldova.

19.3. Energy statistics

General assessment

Energy statistics include monthly indicators on energy supply and utilisation, prices of electricity and natural gas together with more detailed annual energy statistics. For the compilation of energy statistics, the NBS follows the methodologies developed by the International Energy Agency (IEA) and Eurostat. Starting from 2010, the energy balance of Moldova has been presented in accordance with the international standards (IEA, UN) in conventional energy units.

Further development work is envisaged for the preparation of statistics on the consumption of energy by enterprises and for the compilation of energy balances.

Description

The implementation of the Regulation (EC) no. 1099/2008 of 22 October 2008 on energy statistics to improve the transparency of gas and electricity prices charged to industrial end-users commitments was adopted by Moldova by signing the Energy Community Treaty on 17 March 2010.

The legal framework for energy statistics is the LOS and the annual government decisions approving the annual statistical work.

The NBS is responsible for the preparation of energy statistics. Two specialists from the industry, energy and construction statistics division are involved at the HQ and 40 at the TSOs (involved in other activities as well).

Exhaustive monthly surveys are used and an annual sample survey for NACE rev2 codes B, C, D, and E: <http://www.statistica.md/pageview.php?l=ro&id=5371&idc=536>.

All legal units (270) producing, importing and exporting energy resources are included in the survey. Production, imports, exports, stock changes and consumption are the main indicators of the survey. Time series are available from 2015 on. Due to a lack of human resources, monthly indicators on energy statistics are published 55 days after the reference period, instead of 25 days according to the regulation.

A survey on electricity and natural gas prices is carried out: data on electricity prices for final consumers in industry and construction, electricity prices for the households, natural gas prices for final consumers in industry and construction, and prices for natural gas for households are collected and disseminated.

An exhaustive survey is used for economic units with a turnover of 100,000 Lei and more. Public sector units with four and more employees are included. The total number of the survey population is 16,000 units.

Energy statistics data are produced in accordance with the relevant international classifications: CAEM rev.2 which is harmonised with NACE rev. 2 and standard international energy product classification (IRES, UN-2011).

The energy balance of Moldova presents information about energy resources used on the territory of Moldova from all energy producing sources. The energy balance is compiled annually and covers indicators related to the production, import, export, distribution and final consumption of the primary resources as well as transformations, coverage of all economic activities and household consumption during the reported year.

The energy balance is structured in two main parts:

- Energy balance expressed in energy units according to international standards;
- Energy products balance expressed in corresponding natural units.

Starting from 2010, the energy balance of Moldova is presented in accordance with the international standards (IEA, UN, Eurostat) in conventional energy units (oil equivalent, coal equivalent, joules). The energy balance data is compiled in natural units (for energy products balance) and in conventional energy units (coal equivalent, oil equivalent, and joules).

The survey covers the units producing electricity and thermal energy as well as other local energy sources, such as renewable energy sources (fire wood, agricultural combustible waste, etc.), photovoltaic energy, wind energy as well as consumers of energy resources which have a legal personality status. The survey is based on the functional principles and covers all units which produce, import, distribute and finally consume energy sources regardless of the main activity of the economic unit or the legal entity.

Information is produced and disseminated without the data of the enterprises and organisations from the left part of the River Nistru and Bender municipality.

Data are available by types of fuel and energy in accordance with the IEA and Eurostat standards.

To fully identify and cover the economic units, importing energy resources have to be added; in the survey the data from bills of entry are used. These documents are supplied by the customs service of the MoF.

The control methods allow verifying: integrity of the data filled in the report; compliance of the identification data; and observance of logical conditions for data correlation. Controls are based on visual methods as well as automated ones, by using IT applications.

Errors, inconsistencies, and suspicious data are verified and corrected. Primary data are verified and analysed for internal coherence (within the questionnaire), temporal coherence (with data from previous periods), with data of other similar units as well as with data available from other statistical surveys and administrative data sources. Missing or inconsistent data are imputed, if needed.

To ensure the quality of primary data, meetings (seminars) with interviewers and respondents are organised for explaining definitions, instructions to fill in the questionnaires, especially when they are modified or newly introduced.

Energy balance data are published on the NBS official website under statistics by themes (energy resources and fuel): <http://www.statistica.md>.

The NBS publishes energy balance data in the following publications:

- Energy Balance of the Republic of Moldova (only in electronic format);
- Statistical Yearbook of the Republic of Moldova.

Recommendations

The NBS is encouraged to:

121. Introduce sample surveys for the production of data on energy consumption by enterprises.
122. Continue work on improving the compilation of energy balances.

19.4. Environment statistics

General assessment

The published environmental statistics are mainly based on monitoring and other data provided by the Ministry of Agriculture, Regional Development and Environment and on statistical data reported by enterprises. International recommendations and guidelines are followed but more work will be required to meet EU standards.

According to the SDNSS 2016-2020, the following priorities have been set for environment statistics:

- Creation and development of the integrated environmental information system;
- Implementation of indicators on sustainable development and the "green economy";
- Elaboration and implementation of a methodology for the calculation of environmental protection expenditures according to the European requirements; and

- Elaboration and implementation of the air emissions account according to the Eurostat standards and in the future to elaborate and implement other accounts.

The Assessment Team welcomes the strategy, which is very ambitious, and would support in particular the development of environmental accounts.

Description

The main tasks of the NBS in the domain cover the development of methodologies for exhaustive statistical surveys; the organisation and conduct of exhaustive statistical surveys; the dissemination of information; contributing to the development and implementation of the nationally used classifications and nomenclatures; participating in the development and implementation of national programmes and strategies; developing draft government decisions and prepare opinions on draft laws, Government Decisions, other normative acts; producing regional environmental statistics and enhancing the cooperation of the NBS with international bodies.

For the data production information from the following administrative reports on the environment is used: atmospheric air protection; waste generation and use (including toxic); use of water; emissions of pollutants into atmospheric air from mobile sources; air quality monitoring in big cities; inventory of greenhouse gas emissions; state control on the rational use of natural resources and environment protection; questionnaires on forestry and sanitary control on water quality from aquatic sources.

Information on performing geological exploration works, current expenditure on environmental protection and sanitation of the territories of urban localities is obtained from environmental reports.

In order to improve data in the domain, the NBS and the Ministry of Agriculture, Regional Development and Environment annually decide on the distribution of tasks in the process of data collection and processing between the Ministry of Environment and the NBS. Furthermore, the NBS started implementing a new survey on environmental expenditure in line with EU standards by developing the questionnaire and methodical guidelines to complete it and carrying out a pilot survey and started work on the air emissions account

Together with the Ministry of Agriculture, Regional Development and Environment the NBS works on developing the Shared Environmental Information System (SEIS), based on SEIS principles; implementing indicators on sustainable development and the green economy; improving questionnaires, the data collection system and developing new data processing software; developing agro-environmental indicators according to the EU requirements; introducing the European waste list; and on implementing environmental accounting calculations in practice.

Recommendation

123. The NBS is encouraged to continue developing environmental economic accounts.

19.5. Research and Development (R&D) statistics

General assessment

In the field of R&D, innovation and patent statistics, the NBS collects data on research and development expenditure and R&D personnel based on the OECD Frascati-manual (version 2002). An updated version, Frascati-manual 2015, is now available and the NBS needs to take this into account. Currently, the data are only published in a press release. The NBS recently conducted an innovation survey for the first time, based on the Oslo manual. The results were published in January 2018. Statistics in this area are very much at a developmental stage and the Assessment Team would put forward a number of suggestions for consideration in this context.

Description

With regard to R&D, the NBS conducts an annual statistical survey. The survey questionnaires are filled in by all types of units which carry out R&D activities, as their main or secondary activity. The main goal of the statistical survey in the area of R&D activity is to collect data for quantitative indicators referring to human resources and expenses. This survey serves as a basis to obtain statistical information necessary for a knowledge-based development of the economy. The statistical indicators are based on the methodology provided in the Frascati-manual (version 2002).

The statistical surveys in the R&D area cover the units, which according to the CAEM rev.2, division 72, carry out R&D activities as their main activities as well as the public institutions with another basic activity than R&D but that have structures/centres which carry out R&D activities (educational, medical institutions, etc.).

In the sample, only enterprises with an R&D activity in the book-keeping reports are included.

Statistical data are collected through an annual statistical form “Research-development activity” which contains the following indicators:

- Number of employees by sex, occupations, level of education, age groups;
- Number of researchers by sex and scientific areas;
- Internal expenses for R&D according to the destination (current and capital costs), scientific areas, destination of results, finance source (means from the budget, own means, economic agents, means of higher education units, from abroad, and means of non-profit institutions serving households).

The survey unit is the institution, organisation, enterprise which carries out activities in the R&D area. A common questionnaire for all sectors is used.

In the data processing, data are compared with information from the Research Academy of Science.

The number of research units in 2014 is 66, including institutions of scientific research (40 units), organisations for design and exploration and design and construction offices (8 units), higher education institutions (15 units), and other (1 unit).

With regard to innovation, the NBS has conducted an innovation survey for the first time, covering the period 2015-2016. The results were published in January 2017. The survey is based on the Oslo manual.

The exhaustive survey covers enterprises with ten employees and more and most industries. The number of respondents were 3,233 enterprises, the response rate was 98,7%. A quality report will be drafted. The NBS plans to conduct a new innovation survey for the period 2017-2018, based on the new Oslo manual.

With regard to patents, the NBS conducts an annual statistical survey on economic effects of patents. Responsible for data collection is AGEM. Only 36 units are included in the survey. The results do not seem to be published.

Recommendations

The NBS is encouraged to:

124. Start to use the latest version of the Frascati-manual (2015) for methodological guidance.
125. Review its approach towards R&D statistics with a focus on: Revising its sampling plan; identifying synergies with the innovation surveys; and covering industries other than NACE 72.
126. Take the necessary measures to produce statistics on Government budget appropriations or outlays on research and development (GBAORD) in compliance with European standards.
127. Consider the continued usefulness of the patent survey.

19.6. Information and Communication Technologies (ICT) statistics

General assessment

The concepts and definitions used in statistics on information technologies as well as the concepts and definitions used in statistics on electronic communications seem to reflect national provisions that lack conformity with international concepts and definitions such as the European “Digital economy and society glossary”.

The same holds for the indicators published on ICT by the NBS which are only partially comparable or totally non-comparable with the European ICT indicators, either due to diverging definitions or because of the different composition of the sample studied (e.g. only entities possessing ICT are considered in the exhaustive statistical ICT survey in Moldova).

The NBS is therefore encouraged to take steps to align its surveys and procedures to a greater extent with EU standards and requirements.

Description

A major data source for ICT statistics is an exhaustive statistical survey focusing on ICT usage of legal persons and individuals, covering approximately 11,000 respondents. Information on ICT usage in enterprises is based on statistical reports while information on households is taken from a dedicated module in the HBS. As of 2017 a new sample is used covering exhaustively also public institutions (including schools, high schools, and higher education institutions) and Moldova IT Park residents as well as legal entities with 10 and more employees. The survey includes enterprises with ICT equipment (identification done through tax survey which contains information about ICT equipment of enterprises), schools and administration/health administration. Metadata is available. Since the exhaustive survey only focuses on entities that already dispose of ICT equipment, the measurement of the spread of ICT, which is an important indicator on the availability of new information and communication technologies in different parts of society (economy, households, public administration, etc.), is not possible.

Other data sources include a survey on activities in the field of electronic communications and a survey on activities in the field of postal communications.

Data collection and processing on electronic and postal communication is done by the respective national regulatory agency on quarterly and annual basis, whereas the dissemination is done by the NBS.

Currently six experts from the transport, tourism and communication statistics sections are involved in ICT statistics in the HQ. Related figures are presented in the statistical data base on the NBS website.

Classifications used in the production of ICT statistics are:

- The national version (CAEM rev. 2) of the European Classification of Economic Activities (NACE rev. 2);
- Classification of legal form (“classifier of forms of ownership”) of 3 September 2003;
- Classification of administrative-territorial units (CUATM).

Recommendations

The NBS is encouraged to:

128. Review its current approach of surveying only enterprises with internet connections for the purposes of undertaking the ICT surveys required under EU regulations. Instead, the NBS should survey all enterprises, with or without an internet connection, on a sample basis.
129. Further align its surveys on ICT usage in all areas (including: households, enterprises, schools, etc.) with EU recommendations.
130. Make use of the European standard questionnaires for the surveys on the usage of ICT by households and enterprises.