Report on the Sector Review of the Labour Force Survey in Azerbaijan

Final Report
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LIST OF ABBREVIATIONS

CZSO	Czech Statistical Office
EFTA	European Free Trade Association
ENP	European Neighbourhood Policy (Countries)
ESCoP	European Statistics Code of Practice (2013)
ESS	European Statistical System
EU	European Union
EUROSTAT	Statistical Office of the European Union (DG of the European Commission)
ICLS	International Conference of Labour Statisticians
ILO	International Labour Organisation
IMF	International Monetary Fund
ISCO	International Standard Classification of Occupations
ISCED	International Standard Classification of Education
LFS	Labour Force Survey
NACE	Statistical Classification of Economic Activities in the European Community
RA	Republic of Azerbaijan
SAQ	Self-Assessment Questionnaire
SNA	System of National Accounts (2008)
SSC	State Statistical Committee of the Republic of Azerbaijan
UN	United Nations
UNECE	United Nations Economic Commission for Europe

PREFACE

1. EUROSTAT supports both enlargement countries (Albania, Bosnia and Herzegovina, the North Macedonia, Montenegro, Kosovo, Serbia, and Turkey) and European Neighbourhood Policy countries (ENP-East: Armenia, Azerbaijan, Belarus, Georgia, Moldova, and Ukraine; ENP-South: Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria, and Tunisia) in aligning their statistical production with European Union (EU) and international standards and assessing their statistical systems.

2. A number of specific tools were put in place in order to assess and support the efforts of the partner countries in this regard: Light Peer Reviews, Adapted Global Assessments and Sector Reviews. [1] Sector Reviews are conceived to support the partner countries in their efforts to align core sectors of statistics (e.g. Labour Force Surveys) with EU principles (e.g. European Statistics Code of Practice [ESCoP]) and international standards (e.g. International Labour Organisation [ILO] recommendations). The objectives of Sector Reviews are (i) to assess the administrative and technical capacity of the statistical systems to produce high-quality statistics in the reviewed sector, (ii) to assess the statistical production in the particular sector vis-à-vis the *acquis communautaire* and (iii) to propose a list of actions to improve and strengthen the statistical system. An important benefit for the statistical institute is that this Sector Review indicates directions for the development of the statistics under review. This report also serves a practical purpose as it may be used as a source document to update the metadata.

3. Sector Review reports (as well as reports of Light Peer Reviews and Adapted Global Assessments) are published on the EUROSTAT website. [2] Sector Reviews so far conducted in various fields - including Labour Force Surveys, e.g. in Egypt, Jordan, Tunisia and Armenia – have shown the importance of such a tool in order to assess and improve the statistical environment, the processes and the production of the national statistical systems concerned. This Sector Review aimed at assessing the Labour Force Survey of the State Statistical Committee (SSC) of Azerbaijan, under the EUROSTAT project *"Provision of global assessments, sector assessments and Light Peer Reviews for enlargement and ENP countries"*. The current lead contractor is ICON.

4. This Sector Review strictly refers to the EUROSTAT provisions (ESTAT/A/2014/016) and makes use of all relevant guidelines and standard tools, notably the European Statistics Code of Practice.

5. This review was organised implementing a recommendation of the Adapted Global Assessment on a Sector Review of labour statistics in Azerbaijan including the Labour Force

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[1] http://ec.europa.eu/eurostat/web/european-neighbourhood-policy/publications/reports.
[2] See above.

Survey. It was conducted by two international reviewers – Ms. Zaiga Priede and Dr. Aloïs Van Bastelaer – with a wide experience in the management of the Labour Force Survey on the one hand, and on the other hand in statistical assessment, communication, and report writing at the international level.

6. End of February 2018, a letter from EUROSTAT was sent to the SSC of the Republic of Azerbaijan announcing the Sector Review. The review then started with the preparation of the self-assessment questionnaire (SAQ) and the agenda for the meeting with the statisticians of the SSC of Azerbaijan.

7. The availability of background documents in Azerbaijani but not in English, e.g. the questionnaire of the Labour Force Survey [3] and the interviewer instructions, the description of the survey design and infra-annual publications, was an obstacle for the accessibility of these documents; the completed SAQ and the meeting with the colleagues of the department of labour statistics were therefore the main source and opportunity for the description of the Labour Force Survey process. The website of the SSC only provides links to documents in English on horizontal institutional topics, annual publications, a database with tables and metadata.

8. The purpose of the SAQ was to collect extensive preliminary information on the Labour Force Survey in Azerbaijan – including its institutional and organisational frame, the administrative and methodological issues, the fieldwork and some relevant budget data. This questionnaire was designed by the two reviewers in line with the contents determined by EUROSTAT tender provisions for Sector Reviews and the related ESCoP. In line with the above references and especially the ESCoP principles, the questionnaire covered all topics of the Labour Force Survey, namely: the institutional environment, statistical processes, and statistical outputs. The questionnaire also included a cover page explaining the scopes of the review, the way to fill in the questionnaire and the availability of the reviewers to provide any additional support in case of need. The questionnaire consisted of 162 mainly closed-ended questions in order to streamline the answering of the questionnaire. It was divided into seven sections (chapters from A to G) covering all Sector Review topics, namely: A. survey plan; B. fieldwork; C. questionnaire; D. data validation and codification; E. estimation; F. outputs; G. work organisation (including budget). All questions were formulated in compliance with the EU regulations and guidelines, in order to specifically assess the status of the Labour Force Survey in Azerbaijan vis-à-vis the *acquis communautaire.*

9. On 10th of April 2018, the SSC represented by Ms. Elnura Tagiyeva returned the answers on the SAQ well before the mission in Baku. The field mission took place from 16th till 19th April 2018 at the central office of the SSC (Baku).

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[3] The missing questionnaire in English has an insignificant effect on the survey (results) because a small 3% of the foreigners does not speak Azerbaijani fluently

10. Both international experts met the head of the department of labour statistics and the statistical officers belonging to the sector in this department involved in the data processing and dissemination of the Labour Force Survey in order to assess institutional, organisational, methodological, communication, and planning issues relating to the Labour Force Survey in Azerbaijan (List of participants, Annex 2). The meetings in Baku provided the two reviewers with more specific information concerning the topics covered in the SAQ.

11. The last day of the meeting, 19th of April, a summary debriefing from the review team was conducted with the first deputy chairman of the SSC. Next, preliminary findings and recommendations were presented by the two reviewers and discussed with the head of the department of labour statistics and the staff members of this department. On 3rd of May, the summary report «Labour Force Survey: summary of main characteristics, recommendations and actions» was sent by ICON to the SSC. On 24th of May, comments were received from the head of the department of labour statistics which are taken into account in this report.

12. The cooperation with the SSC was constructive since its start; it allowed a sound, proper and useful assessment of the Labour Force Survey in Azerbaijan.

EXECUTIVE SUMMARY

13. On the basis of the information provided by the head and the staff of the department of labour statistics, we can conclude that the Labour Force Survey ["Survey of Economic Activity of the Population"] is a coherent source on labour participation, employment and unemployment producing robust (on the basis of a large 1% sample) and timely annual and quarterly results according to a sound methodology of sample design and estimation – although the estimation can still be improved. Much progress has been made since the 2010 United Nations Economic Commission for Europe (UNECE) global assessment of the system of official statistics (H. Šlégrová (Czech Statistical Office [CZSO]), P. Hackl, C. Hansen (UNECE) and J. Byfuglien (European Free Trade Association [EFTA]), 2010), particularly in the domains of the use of sample frame, sample design, sample rotation and estimation or reweighting to population totals. [4]

14. The Labour Force Survey is a rotating panel design where households are interviewed four consecutive quarters. Since 2007, the survey has a quarterly survey but, it is not a continuous survey: the reference week is a single week in each quarter. The reference weeks should be uniformly distributed over the quarter, the monthly samples should be balanced over the geographical areas (the sample strata) and the reference week should be determined when the sample is selected. A true period estimate, for example, the quarterly average level of employment assumes that the reference weeks are distributed uniformly over that period. Several recommendations concern the sample design.

15. The Labour Force Survey has several objectives and addresses several topics. The first objective according to the SSC is to provide an overall, coherent and up-to-date description of the labour supply. Besides the demographic background variables, thirty-four questions concern the characteristics of employed persons and eighteen questions concern the characteristics of unemployed persons or persons outside the labour force. Compared with the EU Labour Force Survey, five specific questions are added to distinguish informal employment; these questions are now permanent questions for the whole sample, when a survey on informal employment and the informal sector will be organised in the future, these five questions could then be directed to a subsample in the years between the survey on informal sector employment.

16. The labour market domain, including wage and job vacancy statistics besides the Labour Force Survey results is the fourth most frequently visited statistical domain on the web site of the SSC. A limited set of annual estimates from 2006 onwards on the labour force, employment, unemployment and persons outside the labour force are disseminated by sex, age, educational level and section of economic activity for employed persons, by sex, age,

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[4] Recommendations on the labour force survey concerned the sample rotation, improvement of the sample frame, the business register, metadata and the breakdowns of the disseminated tables.

educational level, marital status, and region for unemployed persons and by reasons why persons are outside the labour force. These tables are available online and disseminated in digital publications, e.g. the "Statistical Yearbook of Azerbaijan" ("*Azərbaycanin Statistik Göstəriciləri*„) and "Women and men in Azerbaijan" ("*Azərbaycanda qadınlar və kişilər*"). Eight weeks after the reference week, a hardcopy <u>quarterly statistical bulletin</u> is released with the main aggregates by sex, age, and section of economic activity; these short-term, quarterly indicators as well as other quarterly estimates (with breakdowns by job characteristics) and supplementary indicators on underemployment and the potential labour force in a format of time series are missing on the website of the SSC. Several recommendations concern the dissemination.

17. The second objective of the Labour Force Survey is to yield demographic data on <u>household composition</u> between censuses. A third objective is to provide data that are relevant <u>for the formulation of employment policy</u>, e.g. in relationship with working conditions and working hours. The ministry of labour and social protection and the ministry of economic development are regular users of the Labour Force Survey results besides scientific researchers, trade unions, and the entrepreneurs' federations, and the press. A fourth objective is that the Labour Force Survey results can be used for <u>international comparison;</u> the production and dissemination of cross-national comparable indicators is a preoccupation of the SSC with the application and compliance with international standards. A fifth use of the survey is to yield <u>regional</u> and local labour market statistics.

18. Total employment estimates from the Labour Force Survey are used as data about labour input in National Accounts. The concepts and coverage of National Accounts diverge from the Labour Force Survey, e.g. the domestic concept of employment is used in National Accounts but a national concept in the Labour Force Survey, National Accounts measure jobs instead of persons and National Accounts may retrieve more reliable data on the number of employees from business surveys while the Labour Force Survey covers own account workers, unpaid family workers and informal employment. Research into the Labour Force Survey estimates on the one hand and data from business surveys and National Accounts on the other hand serves two purposes: it illustrates the quality dimension of the <u>data coherence</u> and it will underpin the validity of the employment estimates from the Labour Force Survey. In recent years, registered unemployment was about 12% of ILO unemployment according to the Labour Force Survey; according to a user survey last year, 83% of the users had (some) confidence in the unemployment rate compared with 91% - 94% in data of the population size or industrial production. Several recommendations concern research into the coherence.

19. In general, the survey <u>complies with international standards, concepts and classifications</u> ensuring the international comparability of the results although some <u>adaptations of operational definitions</u> are needed as well as <u>additional variables</u> for a more complete description of the labour market. In particular, some operationalisations to measure unemployment have to be corrected taking into account International Conference of Labour

Statisticians (ICLS) resolutions and European definitions. The three classifications of the industrial activity, viz. NACE rev.2, the classification of occupations, viz. ISCO-08 and the classification by educational level, International Standard Classification of Education (ISCED) 2011 are the most recent classifications; they were implemented in 2009, 2011, and 2014 respectively. Because the coding of occupations on a detailed level of unit groups on the basis of only the job title may be insufficient, an additional question on the description of the job tasks and duties is needed. Variables are missing to describe employment from the perspective of a commodity on the labour market, an economic production factor and a social function. Several recommendations concern the revision of the questionnaire and the coding of the industrial activity and the occupation.

20. The fieldwork is carried out by 187 professionally trained interviewers who are working in the seventy-four regional offices; they are trained by the regional offices. The relatively high average workload of the interviewers is sixty face-to-face interviews per week, the average duration of an interview is between fifteen and twenty-five minutes. Participation in the survey is obligatory according to the "Law on official statistics" but this obligation is implicit, it is not mentioned in the communication with the sample households. A high response rate of 98% is achieved after replacement of part of the initial sample when the sample list of dwellings is updated by the regional offices, introducing an undesirable non-sampling error. Besides the interview, interviewers also enter the data into computers and are coding the occupation. The labour statistics department accepts the interview data at face value. Computer-assisted interviewing should be used to collect the data instead of the current paper- and pencil questionnaires; this will substantially increase efficiency, relocate quality monitoring of the fieldwork to the central office and a clean dataset will be available earlier. Several recommendations concern the change to computer-assisted interviewing and the calculation of the response rate.

21. The re-weighting of the Labour Force Survey consists of three steps. First, effective unequal sampling probabilities are adjusted by the stratification by region and type of area. Next, a post-stratification or calibration on the population benchmarks by region (*iqtisadi rayonlarının*), sex, and age by 5-year age bands is applied. In a last step, a further calibration by region, type of area, and sex is applied. This post-stratification yields individual weights; they ought to be replaced by household weights in an additional step. Another recommendation concerns the reweighting of the estimates.

22. Metadata are available online on the website of the SSC for two variables, the economically active population and employees; they were last updated in October 2016. General metadata on labour market statistics and partly describing the survey on "economic activity of the population" are disseminated on the website of dissemination standards bulletin board of the International Monetary Fund (IMF); they were last updated in September 2011. A recommendation concerns the metadata.

23. Implementation of the recommendations on short or medium term will improve and strengthen the quality of the survey, viz. the quality dimensions of accuracy, accessibility, and coherence and they will further enhance the use of the survey results.

ASSESSMENT OF RESULTS

Institutional environment

Principle 2: Mandate for data collection

24. The statistical institution in the Republic of Azerbaijan has a long history: End of 1920, the Central Statistical Agency with fifteen departments was established while earlier statistical bodies were decentralised in different ministries. In 1987, the Central Statistical Agency became the SSC of the Soviet Socialist Republic of Azerbaijan. In February 1994, the Law on Statistics of the Republic of Azerbaijan was signed [5]; 2006 it was revised and renamed as the "Law on Official Statistics of the Republic of Azerbaijan", the main changes were to widen the legal basis of the production of statistics and to align the national law with the law of the statistical offices in the EU and the Fundamental Principles of Official Statistics of the United Nations (UN).

25. The "Law on Official Statistics" determines the mandate of the SSC. It is the task of the SSC to organise the centralised and country-wide system of official statistics (art. 3). Official statistics provide accurate and representative information about the economic, demographic, social, and environmental situation in the country to the government, social and economic agents, academic and scientific institutions, the public at large, and International Organisations. The main aim is to provide confidentiality of the primary data; other aims concern the real representation of the situations, the guarantee of objectivity and reliability of the data, comparability with international statistics, transparency of the aggregate statistics and the justified dissemination of data with respect of the citizens' rights taking into account the balance between expenditures, response burden, and priorities (art. 2). That organisation of official statistics takes shape in the annual programme of statistical work adopted by the council of ministers; it covers the information as a result of statistical observations, further specifying the coverage, type or source and frequency of the observations (art. 3). The SSC prepares a draft of the work programme according to art. 3, develops and applies the methodology, classifications and standards for the statistical production, and carries out the observations (art. 6). Legal entities and natural persons within the territory of Azerbaijan owe to submit the data in paper or e-document format for the statistical production (art. 3 and 11). Other specific tasks of the SSC involve the compilation, dissemination and explanation of the results, analysis and research on the economic and social situation, and the establishment and maintenance of the registers of statistical units (art. 6).

26. The annual work programme [6] is drawn up after consultation of the statistical council; this statistical council acts under the SSC; it delivers its opinion, makes recommendations and

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5 https://www.stat.gov.az/menu/3/Legislation/law_az_en.pdf.
6 For example: Programme for 2016: https://www.stat.gov.az/menu/2/work_program/St_req_2016.pdf.

gives advice. [7] It is composed of representatives of government, statistical, and financial bodies, banks, unions or federations, academic institutions, and representatives of the press agencies. There are fifteen members; their membership is approved by the government (art. 8).

27. Official statistics are autonomous: The state and non-governmental organisations are not interfering with the activity of the SSC (art. 10). Furthermore, there is an explicit reference to the goal of the quality and the trustworthiness of official statistics as a function of the reliability, objectivity, relevance, confidentiality, and transparency of the statistical product (art. 9). Finally, it is mentioned that data collected, processed, and stored are confidential (art. 16).

28. The SSC is organised into fifteen subject-matter statistical departments, the centre for scientific research and statistical innovations, the general department of information technology, the department of quality management, four support departments directly dependent on the chairman, the SSC of the Nakhchivan Autonomous Region and 74 regional statistical departments. [8] The subject-matter oriented departments are grouped into three major domains: macro-economic statistics (e.g. National Accounts, agricultural and service statistics), social (e.g. labour statistics) and business statistics; each domain is managed by a member of the board, the deputy chairman.

29. Since August 2015, the chairman of the SSC is Mr T. Budagov. Besides the chairman, the governing board of the SSC is composed of the three deputy chairmen, the chairman of the SSC of the Nakhchivan AR, the head of administration, four heads of department, and the director of the Centre of Scientific Research and Statistical Innovations. The department of labour statistics depends hierarchically on the first deputy chairman.

30. The "Law on Official Statistics" is elaborated in the multi-annual strategic plan of the SSC [9] including statistical information for the observation of the economic, demographic, social, and environmental situation taking into account available resources, response burden, and cost-effectiveness.

31. The specific formal basis of the Labour Force Survey (in Azerbaijan: "survey on economic activity of the population") is determined in the annual work program [10], this annual work program is agreed with the cabinet of ministers. Under the activity of indicators of economic activity of the population, quarterly frequency, breakdowns (e.g. geographic, age, and gender, economic activity, and education) and the delay of the availability of the results – 55 days after the reference period - are mentioned. The Labour Force Survey is also referred to in the strategic plan of the SSC. In the 2014-2017 strategic plan the implementation of a

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[7] https://www.stat.gov.az/menu/2/statistic_council/.
[8] The Baku city office is now a single regional office.
[9] For example: Strategic plan 2014 - 2017: https://www.stat.gov.az/menu/2/strategy/strategy_plan_en.pdf.
[10] For example: Work programme 2016: https://www.stat.gov.az/menu/2/work_program/St_req_2016.pdf.

quarterly Labour Force Survey with a 1% sample is included as an objective. Explicit reference is made in this strategic plan to the value of statistics, the role of the SSC, the scope of the different statistical domains – in the case of the Labour Force Survey: labour statistics reflecting the population, labour resources, and labour conditions – as well as global trends.

Principle 3: Adequacy of resources

32. The Labour Force Survey is designed and implemented by the SSC given its institutional organisation and human resources.

33. The central SSC employs 279 civil servants, nearly as many women as men, while the 74 regional offices on average employ twelve employees; about 75% of the staff has higher education. [11]

34. The Department of Labour statistics is responsible for the design, statistical processing, dissemination, and analysis of the Labour Force Survey. The work of this department is not limited to the Labour Force Survey; besides the Labour Force Survey department also processes business surveys, the labour cost survey, the structure of earnings survey, and job vacancy statistics on the basis of administrative reports and an annual questionnaire. The staff in the sector of the Labour Force Survey consists of the head of the department and seven statisticians with a university background. The actual selection of the sample is carried out by a statistician of the centre of scientific research and statistical innovations who also provides advice and support on statistical estimation. The head of the department is highly competent and skilled, particularly with regard to the conceptual framework of the Labour Force Survey. [12]

35. The fieldwork and data entry are decentralized. The interviews are carried out by the regional offices; the number of interviewers for the Labour Force Survey is 187. The data entry of completed paper-and-pencil questionnaires with Microsoft Access software is done by the regional offices as well. The source data files are then transmitted to the central office.

36. The SSC total current operational budget amounts to 18 million Azerbaijan Manat (about 9 million EUR); about 60% for salaries and 2% for interviewer costs. The past years, the total cost of the Labour Force Survey represented 0.4% to 0.6% of the total budget of the SSC. In 2014, the total cost of the Labour Force Survey was diminished by one fifth but in 2015 it was increased by 50% mainly due to an increase of the sample size. The budget for the Labour Force Survey is not considered as commensurate with the needs of its processing.

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[11] AGA of the National Statistical System of AR, p. 36.
[12] Member of the UNESCAP technical advisory group of population and social statistics and member of the UNECE expert group on Measuring Quality of Employment. Furthermore, he presented a training course on labour statistics for statisticians of the statistical office of Uzbekistan (Tashkent, 2016).

Principle 4: Statistical quality

37. The Law on State Statistics of AZ specifies the fundamental quality requirements of state statistics: objectivity and validity of statistics, accuracy, comparability over time and across countries, actuality, dissemination, accessibility, and the public ownership of statistical information.

38. The policy of the SSC is focused on satisfying the user demands with special attention to the development of the statistical capacity and in coordination with advanced international practice. [13] In 2018 a user satisfaction survey was conducted; 78% mentioned that the information provided by the SSC was impartial and described important events (§ 79 on relevance). The goals of the SSC in relationship with quality management are specified yearly [14], currently they concern, e.g. the reduction of error in source data, the increase of the user audience, the alignment of national classifications with international standards and the updating of the software of the State Register of Statistical Units.

Principle 5: Statistical confidentiality

39. The general obligation of statistical confidentiality is included in the "Law on Official Statistics": The SSC must preserve the anonymity of the collected data and it must not disseminate the initial statistical data (art. 2). In the law on the "Rules of Ethics Conduct of Civil Servants" (art. 8), the obligation of civil servants to guarantee the confidentiality of information obtained as a result of her/his duties is reaffirmed. [15]

40. The SSC guarantees the protection of information containing statistically confidential data. Individual statistically confidential data are only kept as digital databases without time limit; the hard copies on the basis of these data could be destroyed after data entry, data control, and editing. Access to statistically confidential data is restricted to those persons who are implementing state statistical work and it is not allowed to disclose statistically confidential information. [16]

41. The SSC may grant access to statistically confidential micro-data that do not allow direct identification (by formal identifiers) if the expected results of scientific work and research do not refer to individual units that are subject to discovery (art. 18) [4]. It has to be ensured that disclosure of the data will not harm the individual provider as this represents an important guarantee for trustworthy and reliable statistics.

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[13] https://www.stat.gov.az/menu/2/quality/en/policy_en.pdf.
[14] https://www.stat.gov.az/menu/2/quality/en/goals_en.pdf.
[15] https://www.stat.gov.az/menu/3/Legislation/ethic_rules_en.pdf.
[16] Resolution of the State Council of Statistics of RA, June 25, 2001, §13-15.

Principle 6: Impartiality and objectivity

42. The SSC is a public body and is independent from the government, it has a function of public interest (art. 6).

43. The state statistical work program is developed explicitly addressing the demand of the users of statistics (art. 11).

44. Transparency consists in presenting the statistical sources and related methods and aims to inform respondents about the utilisation and the interpretation of the disseminated statistics. Transparency also consists in informing respondents and the public about the legal and institutional frame characterizing the statistical activities as well as their statistical purposes.

Statistical processes

Principle 7: Sound methodology

45. In 2007, the scientific and methodological council of the SSC was established, it proposes to apply and improve statistical methodology and standards on the basis of its study of advanced international practice. Therefore it harmonises the national statistical methods with the international methodology, it advices on methodological issues, it improves statistical forms, and it recommends advanced information technologies. The scientific and methodological council consists of the two deputy chairmen of the subject-matter oriented departments, the heads of these departments, the head of the IT department, the director of the Centre of Scientific Research and Statistical Innovations and three statisticians from the National Academy of Sciences, the State Economic University and the ministry of economy.

46. Statisticians of the labour statistics department participate in international meetings, seminars or workshops on the Labour Force Survey organised by, e.g. the ILO, UN, or the Interstate Statistical Committee of the Commonwealth of Independent States (CIS STAT), therefore they have a good knowledge of international standards, guidelines, statistical processes, and good practices. Staff members of the labour statistics department attended the CIS STAT meeting on the development of labour statistics: Problems and prospects (Minsk, 2014), the second technical workshop on European statistics for the Eastern Europe, Caucasus and Central Asia (EECCA) countries (Vilnius, July 2017) and the CIS STAT meeting in Geneva (October 2017) on the development of labour statistics.

Principle 8: Appropriate statistical procedures

Population coverage

47. The target population of the Labour Force Survey comprises all persons aged 15 and over excluding collective or institutional households (see table 1). These collective or institutional households (e.g. student hostels or dormitories, boarding houses, residential care homes, and hospitals) can be identified on the basis of the census and are then excluded from the sample

list of households. The size of the population in collective dwellings is likely to be substantial. [17] The survey estimates are grossed up to the total population including collective households. A comparison of the labour force characteristics of the total population including persons living in the institutional households on the basis of the census with the total estimates excluding the institutional households is useful to explain the effect of the non-coverage of the institutional household from the survey (*recommendation c*).

48. The target population of the Labour Force Survey is the usually resident population. The usual residence is defined as including all persons normally living at least one year in Azerbaijan or living shorter there than one year but intending to live there for at least a year. [18] Household members who are temporarily absent for six months or more and conscripts regardless of the duration of their absence from the household are excluded from the survey.

Survey frequency and survey period

49. In spring 2003, the first Labour Force Survey was carried out within the framework of the joint ILO/UN Development Programme of technical assistance in the field of labour statistics and regional development; it was repeated three years later. From 2007 onwards, the Labour Force Survey was conducted quarterly. Until 2012, the sample fraction varied between 0.2 and 0.4%. By the end of 2012, the sample fraction was increased to 1%. The Labour Force Survey is a stand-alone survey.

50. The reference week of the Labour Force Survey is a single week, the fourth week of the last month, each quarter (see table 1). This reference week may be atypical for the entire quarter. Events may be over- or underrepresented when they occur less or more often in the other weeks and areas, e.g. new jobs or job losses in the other weeks are not captured by the survey in a particular week. The total quarterly estimate is therefore not a true, unbiased estimate of the average employment or unemployment for the entire reference quarter. A true period estimate assumes that the reference weeks are distributed uniformly over that period. This brings an additional condition on the determination of the reference week. The precise reference week should be determined in the sampling process when the sample is allocated to a particular reference week (*recommendations a and b*). A successful interview may thus take place some weeks later, e.g. due to new attempts to contact an absent household or other local conditions in the week immediately after the reference week.

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[17] More than 5% of the households are living in collective living quarters in Baku (according to the 2009 census).
[18] UN recommendations on international migration statistics, 1998, § 36; SNA 2008, § 19.11 and EU Parliament and Council regulation no 763/2008, §2(d).

Sample design

51. The sample frame of the Labour Force Survey is a master sample for all household surveys; the source for the master sample is the April 2009 population and housing census. The census is divided in 19 400 enumeration areas stratified by 74 administrative regions (*rayonu*) including the city of Baku, with an average number of 114 households. The census enumeration districts are sorted by type of area (urban/rural) [19] within each stratum (implicit stratification). Slightly more than half of the enumeration areas belong to urban areas.

52. The quarterly sample comprises 20 845 households, a 1% sample of the households in Azerbaijan. A two-stage sample is selected. In a first stage 596 enumeration areas stratified by administrative regions and type of area are sampled with probability proportional to their size; 42% of the urban enumeration areas are located in the city of Baku. In the second stage, households are sampled.

53. The sample list of households (derived from the population census) is updated by the regional agencies before the actual data collection to remove demolished dwellings and to include new constructions; during the same stage a screening takes place of households unlikely to participate (*recommendation m*).

54. Households are interviewed four consecutive quarters. Each quarter 25% of the households are replaced by new households. Households who are interviewed for the first time are called the first wave; households interviewed for the second time are called the second wave, etc. Each quarter therefore consists of four waves or sub-samples. A repeated survey has several advantages: More precise net change estimates, a larger sample size at relatively less survey costs when telephone interviewing or web-interviewing is applied in the later survey waves, a reduction of the interview duration (Non-excessive response burden, *Principle 9 of the Code of Practice)* when dependent interviewing is applied, e.g. to verify the household composition or in some questions on job characteristics as the occupation or economic activity (*recommendation l*). Similarly, savings are attained in the coding of these variables when the answers can be copied forward to the current wave and finally, a repeated survey allows to estimates gross flows between labour statuses. A relatively minor disadvantage is the increase of the non-response – attrition between waves.

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[19] Defined on the basis of number of inhabitants and proportion of non-agricultural employment.

Table 1. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulations no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007, and no 545/2014 of May 15, 2014 oncerning the survey and sample design			
Survey characteristics	Currently implemented	Recommended and considered by the SSC for implementation on the short-term	Recommended and considered by the SSC for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Population coverage: 15 years and over	✓		
Supplementary coverage of collective and institutional households			✓ (comparison on basis of census)
Continuous survey		✓	
Uniform distribution of the reference weeks		✓	
Quarterly results	✓		
Repeated observations / interviews	✓		
Administrative data (except for labour status)		✓ (in particular the economic activity according to business register)	
Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the Labour Force Survey, June 2009			
Balanced samples over geographical areas and reference weeks		✓	
Regular review of the efficiency of the sample design		✓	
Full application of concept of the resident population (EP and Council Regulation no. 763/2008)	✓		
Quarterly rotation pattern, harmonisation of rotation patterns	✓		

Table 1. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulations no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007, and no 545/2014 of May 15, 2014 concerning the survey and sample design.

Fieldwork

55. 187 interviewers are collecting the data for the Labour Force Survey; their relatively high average weekly workload of face-to-face interviews is 60 households [20]; the average duration of an interview is 15 - 25 minutes. These interviewers are collecting data for the Labour Force Survey only and they are regularly working for the statistical office on the basis of a (usually renewed) temporary contract. They are recruited externally and trained by the regional office; their training takes three days. They are trained how to establish the contact with the sample households and to gain their cooperation as well as how to conduct the interview. Furthermore, they have learned how to explain key concepts of the survey, employment, working hours and job characteristics (table 2). A refresher training is organised every year by the regional offices.

56. The interviewer is the intermediate between the statistician and the respondent: The statistician can rely only on the interviewer who conveys the question content to the respondent exactly as it is defined by the statistician. Only in this case, the statistician maintains control over the interview. In statistical terms: Deviations by interviewers from standardised interviewing generally increases interviewer variance, hence increases measurement error. The standardised interviewing technique reduces interviewer variance. Its procedures are the following: (1) to read a question as written in the questionnaire without variation, (2) to probe inadequate answers in a non-directive way, and (3) to record the answers without discretion. Instances of deviations from standardised interviewing are adding or omitting words from the question, incorrectly or incompletely reading the question and response categories and using non-neutral or leading clarifications. These standardised interviewing techniques are part of the training (table 2).

57. The performance of the interviewers is monitored by a re-interview survey of a subsample of respondents. When the data collection is computer assisted, the follow-up of the data collection can be centralised (*recommendation k*).

58. Participation in the survey is obligatory according to the "Law on official statistics" (art. 3). [4] However, this obligation is quite implicit; it is not mentioned in the communication with survey households. This non-response rate is relatively small compared with the average non-response rate of 15% of the Labour Force Survey in the Member States where participation is also mandatory. Households are re-contacted three times before they are considered as not at home; when the third attempt was not successful, a paper-and-pencil questionnaire is left to be completed by the household and returned to the local office. Furthermore, the small final non-response rate is the result of the screening of the households unlikely to participate in the survey – when the initial sample list is updated in the field – and their replacement with households from a reserve list. This substitution by the regional

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[20] EU LFSs: On average 17 household interviews per week (2004 data).

offices may introduce a bias (*recommendation m*). [21] Another method to increase response is the delivery of an advance letter (*recommendation d*).

59. The proxy response rate is not available because the variable is missing in the questionnaire (*recommendation e15*).

Table 2. Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the Labour Force Survey, June 2009 concerning the fieldwork			
Recommendations of the task force	Currently implemented	Recommended and considered by the SSC for implementation on the short-term	Recommended and considered by the SSC for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Compulsory participation, wherever legally feasible	✓		
Inform and reassure sample households/persons before interview		✓	
Dependent interviewing of select (stable) variables		✓ (dependent on the introduction of computer-assisted interviewing)	
Scheduling the contact attempts at different times of the day	✓		
Permanent professional interviewers with minimum turnover	✓		
Training on communication skills and survey content	✓		
Regular debriefing of interviewer experiences	✓		
Standardised interviewing	✓		
Monitoring interviewer performance		✓	
Maximum delay between interview and reference week	✓		
Emphasize the confidentiality of the data collection		✓	
Mixed survey modes (CAPI/CATI/Web-based)			Ø (face-to-face interviews for maximum response rate)

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[21] Deviation of the expected sample estimate (on the basis of many repeated samples) from the true population value.

Table 2. Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the Labour Force Survey, June 2009 concerning the fieldwork			
CAPI instead of paper-and-pencil questionnaires		✓	
Tailored approach of non-nationals (translation)			Ø (ignorable language barrier: < 3% of foreigners do not speak AZ fluently)
Wave specific modules/ questionnaire organisation		✓	
Test of changes of the survey design before applying these in the field	✓		

Table 2. Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the Labour Force Survey, June 2009 concerning the fieldwork.

Questionnaire and variables

60. The questionnaire includes slightly more than half of the variables in the EU Labour Force Survey (table 3). Besides the demographic background variables, employed persons are asked 34 questions; persons who are not employed are asked 18 questions. Several important variables are missing; these variables are interesting to describe labour as a commodity on the labour market and to distinguish labour market segments, to describe labour as an economic production factor or from a social perspective. The reasons for a temporary job, its total duration, the contract with a temporary work agency, the (country and the) region of the place of work, the number of persons working at the local unit (an expansion of the scope of the current question 18) and some job characteristics of the last job (for persons who are currently not employed) or the second job (category of economic activity) are interesting variables to describe heterogeneous labour market segments. The availability to start working more hours is not verified as a second condition of time-related underemployment [22] besides the willingness to work more hours (question 37). The search for another job as an additional question for persons who like to work more hours and the reasons for this job search are interesting because they identify actual pressure on the labour market and the related effort of persons in time-related underemployment. The number of hours a person would like to work in total is useful to describe the volume of unmet labour supply. Working at home, atypical working hours, and supervisory responsibilities are meaningful to describe labour from a social perspective. The number of months a person was looking for a job is needed – it can be inserted after question 43 – to determine the unemployment duration [23] besides the question on the number of months a person does not have a job.

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[22] Resolution of the 16th ICLS, 1998, §8.
[23] It is the minimum of the two data.

61. The year when the highest level of education was completed and the field of this education [24] specify the educational path. The variable on current participation in education or training is an essential condition to identify young people neither in employment nor in education or training; the level of this education and the number of hours spent on these learning activities are useful to describe the type of current education in relationship with the educational path. The citizenship, the country of birth, and the number of years of residence in Azerbaijan are relevant to describe mobility across borders. When these variables are added, they will contribute significantly to the relevance of the survey (*recommendation e*).

62. The take home pay is a basic and relevant job characteristics, average hourly earnings is an additional decent work indicator in relationship with adequate earnings; this variable could replace the current question 53 on the source of income. The daily, weekly or monthly take home pay could be measured by a question on the net amount, an alternative, funnel question with a range of income brackets and the reference period for those wages.

Table 3. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulations no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007 and no 377/2008 of April 25, 2008 concerning the variable list			
Survey characteristics	Currently implemented	Recommended and considered by the SSC for implementation on the short-term	Recommended and considered by the SSC for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Questionnaire: Demographic background variables	✓ except citizenship, country of birth and number of years of residence in Azerbaijan		
Measurement of labour status	✓		
Measurement of employment characteristics of main job	✓ except region of place of work, number of persons working in local unit, working at home, reasons and total duration of temporary job, involvement of public employment office in finding a job, contract with temporary work agency, supervisory responsibilities, shift work, atypical working hours		
Economic activity and occupation	✓ (NACE rev.2, A*21 and		

[24] According to the eleven broad groups or twenty-nine narrow fields of ISCED-F 2013.

Table 3. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulations no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007 and no 377/2008 of April 25, 2008 concerning the variable list			
according to NACE rev.2 and ISCO-08	ISCO-08, minor groups)		
Measurement of take-home pay		✓	
Measurement of characteristics of second job (International Classification by Status in Employment, NACE and hours)	✓ except economic activity		
Measurement of hours usually and actually worked	✓		
Measurement of time-related underemployment	✓ except availability to start working more hours, search for another job and reason why not seeking another job		
Measurement of search for employment	✓ except job search duration, need for care facilities (only in relationship with the EU Joint Assessment Framework) and situation before job search – *but this variable may be deleted in the revised Labour Force Survey (LFS)*		
Measurement of educational attainment	✓ except year when (highest level of) education completed and field of this completed education		
Level of educational attainment according to ISCED 2011	✓		
Measurement of participation in education and training	✓ except current education or training, its level and number of hours spent on these learning activities		
Measurement of previous work experience of person not in employment	✓ except status in employment and occupation in last job		
Measurement of	✓		

Table 3. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulations no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007 and no 377/2008 of April 25, 2008 concerning the variable list			
main activity status			
Technical items, i.e., proxy and private/ collective household		✓	
Completeness (variables in comparison with EU LFS)		53%	
System of ad-hoc modules		✓ (informal employment)	

Table 3. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulations no 577/98 of March 9, 1998, no 1372/2007 of October 23, 2007 and no 377/2008 of April 25, 2008 concerning the variable list.

63. Informal employment is defined by labour relations which are typically temporary, casual or based on kinship or personal relations instead of contractual arrangements that bring associated (social security) benefits (e.g. paid domestic workers employed by households, day labourers, street vendors or contributing, unpaid family workers). Five supplementary questions are included in the questionnaire to distinguish informal employment: Questions on the entitlements to social security benefits, retirement and pregnancy benefits as well as social compensations in relationship with employment and redundancy benefits (question 20 - 24).

64. The Labour Force Survey does not follow a modular approach; the questionnaire remains the same for all survey rounds. However, the SSC is considering the implementation of a special survey on informal employment and the informal sector. When this survey will take place, those five questions on entitlements to social security benefits can be deleted from the Labour Force Survey. The survey on the informal sector will not be an annual survey. In the years between the surveys, an ad hoc module on the entitlements to social security benefits could then be added, for example, in the last wave of the Labour Force Survey (recommendation e14).

65. The questions on the labour status meets the question design principles according to the European Commission Regulation 1897/2000 except for the specification of the reference period in the case of a job that is already found and the restriction of the scope of the questions to determine unemployment (table 4). This indicates the high degree of cross-national comparability (*Principle 14 of the Code of Practice*).

66. The question 44 on the reasons why someone is not looking for a job includes a (first) response category for persons who already found a job to start later, but the period until the expected start of this job is not specified; a three months period should be specified (*recommendation e8*).

67. Unemployment depends on three conditions: Not having a job, availability to start working, and job search (or the case that someone has already found a job to start later). In the questionnaire of the Labour Force Survey, a filter question 39 is inserted asking whether a person would like to work, before the question 40 on availability to start working and question 42 on job search. Both questions on the availability to start working and on job search must be asked all persons without a job irrespective of the answers on the question on willingness to work (*recommendation m*).

Table 4. Assessment of the correspondence between the labour status questions in the Labour Force Survey and the European Commission Regulation no 1897/2000 of September 7, 2000			
Question design principles	Currently implemented	Recommended and considered by the SSC for implementation on the short-term	Recommended and considered by the SSC for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Questions on labour status are in general the first questions in the individual questionnaire	✓		
Questions on employment consist at least of 2 separate questions	✓ (+ question 16 on production of goods and services for sale and for own use)		
Questions on employment and job search contain at least one cue for the identification of minor jobs	✓		
Questions on employment contain at least one cue for the identification of unpaid family workers	✓		
Questions on employment clearly indicate work for pay or profit	✓		
Reference period of employment is last week 'from Monday to Sunday', period of job search is past four weeks including the reference week, period of availability is two weeks following the reference week	✓		
All persons identified as having no job are asked the questions on availability to start working and job search		✓ but ungrounded filter question on willingness to work	
Question on job search refers	✓		

Table 4. Assessment of the correspondence between the labour status questions in the Labour Force Survey and the European Commission Regulation no 1897/2000 of September 7, 2000			
to any effort to find a job			
The question on job search methods contains active and passive search methods	✓ (question 43 only contains active search methods – this satisfies the new EU requirements)		
At least three search methods are enumerated	✓		
Contact with the public employment office is finding out about job vacancies or suggesting job opportunities	✓		
Persons who have already found a job to start within next 3 months and currently not employed and not searching are identified		✓ (question 44.1: period of 3 months is missing)	

Table 4 Assessment of the correspondence between the labour status questions in the Labour Force Survey and the European Commission Regulation no 1897/2000 of September 7, 2000.

Data editing and coding

68. Some three weeks may pass after the interview until the data entry by the interviewers themselves. As data are collected by a paper-and-pencil questionnaire, incomplete questionnaires and routing errors may occur. Imputation of missing values is not applied; missing data ("no answer" or 'does not know") are explicit categories in the tables.

69. The industrial activity of the establishment (*questions 27 and 46)* is a closed-ended question with a list of nineteen categories corresponding with the broad structure of NACE rev.2 by sections. A more detailed breakdown on a 2-digit level by divisions would yield a more adequate description of trends in the structure of the labour market (*recommendation h*).

70. The NACE rev.2 classification was introduced in 2009. The custodian of the state classification of economic activities [25] is the metadata and classification sector in the department of quality management and metadata. Because the business register, the state register of statistical units [26], is a key tool for the coordinated coding of the industrial activity, it should be used as much as possible. When the name or the address of the establishment is available, this name or address could be matched with the business register to unambiguously determine the code for the industrial activity. Matching of the responses

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[25] *Fəaliyyət Növləri Təsnifatı (Classification of activities).*
[26] Law on Official Statistics of RA, article 6 § 10.

on the name and address with the business register would require an explicit question (*recommendation g*).

71. The question on the job title is an open format question (*questions 26 and 35*). The text answers on this question are coded by the interviewers according to ISCO-08 on the 4-digit level of unit groups. The ISCO-08 classification was implemented in 2011. The custodian of the Azerbaijani edition of the state classification of occupations [27] is the metadata and classification sector. A coder of occupations must have a good knowledge of the elements, job tasks and duties, and skill levels of all occupations and of the characteristics of the boundaries between occupations. The objective is to code jobs with similar tasks and duties under the same occupation but it is not a reproducible process. A sample of the text answers on the question on the occupation should be recoded to cross-check the quality of the coding by the interviewers (*recommendation j*).

72. Because the question on the job title may be insufficient for the coding of occupations, an additional question on the main tasks ad duties is more effective to code occupation on a detailed level [28] (*recommendation i*).

73. The level of successfully attained education (*question 6*) is a closed-ended question with a list of eight educational levels and an extra category for no education successfully attained; these categories correspond with the labels in the mapping of the national Azerbaijani educational system on the levels of ISCED 2011.

74. One more week is needed after the data entry until a clean dataset is available including the codes for the industrial activity and occupation.

Principle 10: Cost effectiveness

75. All interviews are conducted face-to-face with a paper-and-pencil questionnaire. The average duration of an interview is 15 - 25 minutes. When the data collection is computer assisted, data are immediately available for processing, routing errors are avoided, and the follow-up of the data collection can be centralised (*recommendation k*).

Statistical output

Principle 11: Relevance

76. The main and regular users of Labour Force Survey data are the Cabinet of ministers of Azerbaijan (composed of the prime minister, deputy prime ministers, ministers, and chairmen of state committees), the ministry of labour and social protection, the ministry of economic development, the press, researchers from universities and other research institutes, trade union and employers' associations and International Organisations.

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[27]*Məşğulluq təsnifatı (Classification of employment).*
[28] http://www.ilo.org/public/english/bureau/stat/isco/isco08/index.htm part 1, §257.

77. The content of the Labour Force Survey is determined after consultation and in agreement with the ministry of labour and social protection and the ministry of economic development (a member of the scientific and methodological council). Moreover, ad-hoc meetings with an established network of users can be organised and convened by the SSC. [29]

78. Labour market statistics are ranked at fourth rank in the list of most frequently visited domains on the SSC website with 8% of all users [30], National Accounts and population statistics are on the first and second rank.

79. In 2017, a user survey was carried out; 1700 users participated, about one third from civil service, one third from private companies, and 2% researchers. The level of confidence in the unemployment rate is lower than for example, in the data of the population size. The proportion of views that the statistics of the SSC are impartial are similar to the proportion of views that they are describing important events but smaller than the proportion of positive views on the quality. According to the users, the website of the SSC is interesting and has easy access and they are satisfied about the service of the SSC (table 5).

Table 5. User views on the statistics and the website of the SSC Source: https://www.stat.gov.az/source/others/sorqu-yekun_06.12.2017.pdf.				
Level of confidence (%)	**belief**	**partial belief**	**doubtful**	**doesn't know**
Population size	88	6	5	1
Industrial production	79	12	2	7
Average monthly wages	77	14	4	5
Inflation	68	17	6	9
Unemployment rate	62	21	8	9
Attitude towards SSC statistics (%)	**yes**	**somewhat**	**no**	**doesn't know**
Good quality statistics	87	10	1	2
Describing important events	78	13	1	8
Impartial	78	10	6	6
Website is:				
Interesting	86	-	2	12
Quick access	84	-	9	7
Information provided by SSC by telephone or e-mail about statistics (%)				
Clear	90	-	1	9
To the point	43	43	13	1

Table 5. User views on the statistics and the website of the SSC.

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[29] For example, high-level stakeholder meeting to discuss objectives of the new LFS of the RA, October 2014, http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/newsitem/wcms_321094.pdf.
[30] https://www.stat.gov.az/link_click_counter/.

Principle 12: Accuracy and reliability

80. The re-weighting of the Labour Force Survey consists of three steps. [31] In a first step, effective unequal sampling probabilities are adjusted by the stratification by region and type of area. Next, a post-stratification or calibration on the population benchmarks by region, sex, and age is applied; eleven 5-year age bands are distinguished. In a last step, a further calibration by region, type of area, and sex is applied (table 6). The population benchmarks are an extrapolation of the regional population pyramid by sex and age categories from the population census taking into account total natality and mortality and net interregional migration; these population benchmarks are updated annually.

81. This post-stratification yields individual weights – they are, for example, different for men and women – because the population benchmarks exist at two levels of aggregation, individuals, and households. Therefore, estimates of e.g. married men and married women will differ when sex is used as an auxiliary variable for calibration. In an additional step, household weights can be estimated by using average values of the auxiliary variables age and sex for the calibration [32] (*recommendation o).*

Table 6. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulation no 577/98 of March 9 concerning statistical estimation and the recommendations of the task force on the quality of the labour force survey, June 2009			
Survey characteristics	Currently implemented	Recommended and considered by the SSC for implementation on the short-term	Recommended and considered by the SSC for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Relative standard error of the annual average of unemployed persons representing 5% of working age population at a regional level ≤ 8%	✓		
Relative standard error of the net quarterly change [will be substituted by a requirement on the rotation pattern]		✓ (4 consecutive quarters)	
Imputation rate (of missing data)	✓ (no imputation)		
Post-stratification by sex, age (5-year classes) and region	✓		

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[31] https://www.stat.gov.az/menu/7/other_metadata/, sub-site: "Demographic and social statistics/labour statistics".

[32] G. Lemaitre and J. Dufour. An integrated method for weighting persons and families. Survey methodology 13, 1987, p. 199 – 207.

Table 6. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulation no 577/98 of March 9 concerning statistical estimation and the recommendations of the task force on the quality of the labour force survey, June 2009			
Separate treatment of collective and private household, for example, when weighting			✓ (comparison on basis of census)
Single weight for all household members		✓	
Optimal weighting schemes to reduce non-response bias	✓		
Regular collection of information on non-respondents		✓ (non-response < 2%)	

Table 6. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulation no 577/98 of March 9 concerning statistical estimation and the recommendations of the task force on the quality of the labour force survey.

82. Due to the statistical processing, one week passes between the availability of a clean dataset and the production of a first set of results. For plausibility control, main aggregates for the last reference period are then compared with previous data on total population, active population, employment, and unemployment. Standard errors are estimated for the levels of employment and unemployment and for the employment and unemployment ratios. The standard error takes into account the design effect due to stratification and clustering estimated on the level of the regions. The precision of the quarterly estimates does not meet the EU requirements on the standard error of quarterly averages on a national and regional level, particularly for unemployment (table 7). The proposed precision requirements are specified in terms of the minimum standard error of the unemployment and employment ratios as a continuous function of the actual estimates and the size of the working age population at a national and a regional NUTS-2 level. [33] They will replace the current precision requirements in terms of the coefficient of variation.

83. The precision requirements for the Labour Force Survey for the whole country and for the *iqtisadi rayonu* are presented in the last column "threshold". The estimated standard errors for the employment and unemployment ratios are presented in the second last column "sdev $(\hat{p})$" of Table 7. In seven of the eleven regions, the standard error of the unemployment ratio is larger than the EUROSTAT threshold. However, the standard errors are overestimated because the design effect is estimated on the level of regions, *iqtisadi rayonu*. One component of the design effect is the cluster effect. This cluster effect depends on the homogeneity of the cluster and the size of the clusters. Large clusters, for example regions,

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[33] Report of the task force on EU labor force survey precision requirements, to be inserted in the proposal for a framework regulation on integrated European social statistics http://europa.eu/rapid/press-release_IP-16-2867_en.htm.

increase the cluster effect. The cluster effect should be estimated on the level of the primary sampling units, the enumeration areas (*recommendation n)*. Another component of the design effect is the stratification; the regional stratification reduces the design effect because the within-stratum variance is smaller than the total variance.

84. The regions, *iqtisadi rayonu* are treated here as regions on a NUTS-2 level; this is a reasonable interpretation because the average size of the *iqtisadi rayonu* is equal to the minimum of 800 thousand inhabitants of the average sizes of NUTS-2 level regions in the Member States.

85. On the basis of the sample size of 20845 households, the tentative conclusion is that the precision of the estimates of the Labour Force Survey in Azerbaijan meets the European standard; a sample size of 20845 households is nearly equal to the median size of the samples of the European Labour Force Surveys.

Table 7. Thresholds of standard error of employment (E) and unemployment rate (U) by *Iqtisadi Rayonu*

		Density/km²	N[15-74] x 10⁶	N [15+] x 1000	N (POP) x 1000	N HH x 1000	n(sample) persons	n HH	ŷ x 1000	ŷ/N[15-74]	p̂	sdev (p̂)	Threshold
Azerbaijan	E	113	7.315	7274.3	9810	2214	68474	20845	4759.9	0.65	0.66	0.012	0.004
	U								252.8	0.03	0.05	0.002	0.001
Baku	E	1049	1.739	1691.2	2246	548	15975	5174	1141	0.66	0.68	0.032	
	U								72	0.04	0.06	0.005	0.006
Absheron	E	151	0.429	429.1	563	124	4192	1209	277	0.65	0.65	0.062	
	U								15	0.04	0.05	0.012	0.005
Ganja-Gazakh	E	103	0.937	954.5	1265	281	8904	2617	631	0.67	0.68	0.03	
	U								33	0.04	0.05	0.007	0.005
Shaki-Zagatala	E	69	0.462	470	612	134	4654	1323	307	0.66	0.66	0.039	
	U								14	0.03	0.04	0.004	0.005
Lankaran	E	151	0.666	626.3	918	200	5137	1640	424	0.64	0.69	0.037	
	U								21	0.03	0.05	0.007	0.005
Guba-Khachmaz	E	77	0.390	395	539	117	3743	1105	253	0.65	0.65	0.042	
	U								11	0.03	0.04	0.005	0.005
Aran	E	94	1.413	1441.5	1985	434	12932	3897	937	0.66	0.66	0.023	
	U								49	0.03	0.05	0.005	0.005
Yukhari-Garabagh	E	91	0.500	521.5	670	144	5738	1585	289	0.58	0.56	0.046	
	U								16	0.03	0.05	0.006	0.005
Kalbajar-Lachin	E	36	0.185	193.7	251	59	1874	567	120	0.65	0.63	0.057	
	U								8	0.04	0.06	0.011	0.004
Daghlig-Shirvan	E	47	0.224	220.1	312	69	1917	601	149	0.66	0.68	0.039	
	U								12	0.05	0.07	0.01	0.005
Nakhchivan	E	75	0.326	331.4	449	102	3664	1126	234	0.72	0.71	0.046	
	U									-	-	-	

Table 7. Thresholds of standard error of employment (E) and unemployment rate (U) by *Iqtisadi Rayonu*.

Principle 13: Timeliness and punctuality

86. Headline short-term, quarterly indicators are the absolute levels of employment and unemployment and on the basis of the Labour Force Survey and the level of registered unemployment. Ready and equal access to data requires the dissemination of a release calendar and the simultaneous release to all interested users. A first, quarterly news release, the "Statistical bulletin of socio-economics" with the main aggregates by sex, age and economic activity, is published eight weeks after the reference quarter according to the annual advance release calendar [34] (table 8). There is no preliminary access for privileged stakeholders to the quarterly news release. The total time lag of eight weeks between the reference quarter and the release of the first results is due to three weeks until the data entry, one week for data editing and coding, one week for the statistical processing (re-weighting), and three weeks for statistical plausibility control and analysis of the data.

Table 8. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulation no 577/98 of March 9, 1998 concerning the timeliness			
Survey characteristics	Currently implemented	Recommended and considered by the SSC for implementation on the short-term	Recommended and considered by the SSC for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
First data release within 12 weeks	✓ (after 8 weeks)		
Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the Labour Force Survey, June 2009			
More timely LFS results in relationship with their relevance for short-term analysis		✓ (dependent on introduction of computer-assisted interviewing)	
Advance release calendar	✓		
[Exchange of data control and validation programs between Eurostat and Member States]	does not apply		

Table 8. Assessment of the correspondence between the Labour Force Survey and the specifications in Council Regulation no 577/98 of March 9, 1998 concerning the timeliness.

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[34] https://www.stat.gov.az/menu/4/publications/#001, "real sektor: Məşğulluq üzrə göstəricilər" and „real sektor: İşsizlik üzrə göstəricilər".

Principle 14: Coherence and comparability

87. A time series with the annual results from 2007 onwards on the economically active population, employment and unemployment is available (table 9). This time series can be extended on more year back to 2006 when the Labour Force Survey was launched but the 2006 data are not strictly comparable with the annual averages from 2007 onwards because the 2006 data refer to spring. These time series are disseminated in the digital publications "Statistical Yearbook of RA" and "Labour market in RA".

88. Data are revised backwards when the population totals were updated after the population census 2009 (next census is planned for October 2019).

89. The published labour participation and employment rates concern persons of 15 and over, the same age range as the target population of the Labour Force Survey, in contrast to the EU operationalisation of these indicators with the age range between 15 and 64 [35] but obviously an upper age limit can be applied when needed. In a national context, the upper age limit of the working age population varied over time and it is different for men and women: Since 2011, 62 years is the upper age limit for men, for women in 2011 it was 57 and since then it is increased by half a year per calendar year, the upper age limit being 59 now.

90. In National Accounts, labour input is a necessary variable in the supply and use tables and for the calculation of labour productivity (System of National Accounts [SNA] 2008, par. 2.157 and 19.4). Tables on employment in the main and second job in units of employed persons and hours actually worked from the Labour Force Survey are transmitted yearly to National Accounts (table 9). The concepts and coverage of National Accounts diverge from the Labour Force Survey, e.g. the domestic concept of employment is used in National Accounts but a national concept in the Labour Force Survey. National Accounts measure jobs instead of persons and National Accounts may retrieve more reliable data on the number of employees from business surveys while the Labour Force Survey covers own account workers, unpaid family workers, and informal employment. A comparison of the Labour Force Survey estimates with employment according to (National Accounts on the basis of) business surveys or reports in the format reconciliation tables serves two purposes: It illustrates the quality dimension of the data coherence and it will underpin the validity of the employment estimates from the Labour Force Survey (*recommendation t*). Because labour statistics from business reports (earnings and labour cost surveys) and from the Labour Force Survey are produced by the same department, the comparison can be conducted in this department.

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[35] European Neighbourhood Policy – East – Labour market statistics, statistics explained 2016.

Survey characteristics	Currently implemented	Recommended and considered by the SSC for implementation on the short-term	Recommended and considered by the SSC for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Table 9. Assessment of the correspondence between the Labour Force Survey the recommendations of the task force on the quality of the Labour Force Survey, June 2009 concerning comparability and coherence			
<u>Cross-national comparability:</u> review of the principles for the formulation of the questions on the labour status, viz., Commission Reg. 1897/2000]	Does not apply		
<u>Comparability over time:</u> data validation, comparison of current main aggregates with previous data	✓		
Identification, description of design changes and time series breaks		✓ (update of metadata)	
To limit number of time series breaks; length of time series	✓ series of annual main aggregates since 2007 but breaks due to changes of classifications		
<u>Coherence:</u> explanation of differences between employment estimates from LFS and National Accounts (NA)	✓ (LFS is direct input in NA)		
Reconciliation table between employment estimates from LFS and business surveys or reports		✓	
Communication between statisticians from LFS and National Accounts			Ø (redundant because all employment data are available in

Table 9. Assessment of the correspondence between the Labour Force Survey the recommendations of the task force on the quality of the Labour Force Survey, June 2009 concerning comparability and coherence			
			the department)
Further research on (employment in) non-observed economy in relationship with exhaustiveness of NA	✓		

Table 9. Assessment of the correspondence between the Labour Force Survey the recommendations of the task force on the quality of the Labour Force Survey, June 2009 concerning comparability and coherence.

Principle 15: Accessibility and clarity

91. The SSC website is easily accessible (table 5); besides the website in Azerbaijani, only mainly horizontal institutional documents, annual flagship publications, the database with annual data, and metadata are available in English.

92. The results of the survey are published on various carriers: Tables and digital publications on the website of the SSC and hardcopy publications. The sub-domain "Labour market: the sample statistical survey of the economic activity of the population" of the domain of "Demographic and social statistics" contains 18 tables with annual results from the Labour Force Survey. Tables are built with breakdowns by gender, age, educational level, and type of region; data on employment are disseminated by the same breakdowns, by section of economic activity and marital status, data on the economically inactive population are also disseminated by the reason of their inactivity (table 10). The same tables are included in the digital publication on the labour market, chapter 7. [36] In the tables, the labels for the levels of educational attainment in English do not correspond with the labels according to the matrix of the mapping of the Azerbaijan educational programmes on the ISCED 2011 levels [37] (*recommendation u*).

93. The database on the labour market and the yearbooks contain annual data. The quarterly Labour Force Survey not only provides a structural description but also up-to-date quarterly results about recent developments on the labour market; a full exploitation of the Labour Force Survey entails the online dissemination of tables with time-series of quarterly results (*recommendation p*). A limited set of the main aggregates by sex, age, and economic activity are disseminated in the hardcopy quarterly "Statistical bulletin on the socio-economics" but these are published as bare estimates without any comments or explanation on key trends (*recommendation w*).

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[36] https://www.stat.gov.az/menu/6/statistical_yearbooks/.
[37] http://uis.unesco.org/en/isced-mappings.

94. The unemployment level and rate yield an incomplete description of the unmet labour supply. Supplementary indicators of labour market performance, i.e. time-related underemployment, non-available job seekers, and persons available to work but who are not seeking work (the potential labour force) [38] are invaluable information (*recommendation q*).

95. The domain "Labour" of the statistical database with the main socio-economic indicators contains a table on the economic activity of the population by sex, one indicator is the number of registered unemployment persons described as a sub-population ("of which", "*onlardan*") of unemployment according to ILO methodology although registered unemployment may include persons who are not meeting the conditions of ILO unemployment (*recommendation r*). The layout of another summary table with all the main socio-economic indicators in the same domain is correct, the two categories being presented separately. That same error occurs in the digital publication on the labour market, chapter 8 on gender data, and in the digital publication on "Women and men", chapter 4.

96. In recent years, registered unemployment was about 12% of ILO unemployment. A disaggregated comparison of the two categories can clarify which unemployed persons are more frequently also registered unemployed (*recommendation s*).

Table 10. Annual data of the Labour Force Survey 2016 published on the sub-domain "Labour market: sample statistical survey of the economic activity of the population" Source: https://www.stat.gov.az/source/labour/?lang=en (last access: May 2018).
Tables 7.1 and 7.2: *Economically active and non-active population (in working age: men aged 15-62, women aged 15-59) by sex and type of region – thousands and %*
Table 7.3: *Economically active population by labour status, sex and age – thousands*
Table 7.4: *Economically active population by sex and age – %*
Tables 7.5 and 7.6: *Economically active population by sex, age and educational level) 2016 – thousands*
Table 7.7: *Employment by sex and economic activity (proxy of the A*21 industry breakdown) 2016 – thousands*
Tables 7.8 - 7.11: *Employment by sex, age, educational level and marital status – thousands*
Tables 7.12 - 7.14: *Unemployment by sex, age and educational level 2016 – thousands*
Table 7.15: *Unemployment rate by sex, age and type of region 2016 – %*
Tables 7.16 - 7.18: *Economically inactive population by sex, age, educational level and reason of inactivity, – thousands*
Table 8.17. *Employment, unemployment and registered unemployment by sex – thousands and %*

Table 10. Annual data of the Labour Force Survey 2016 published on the sub-domain "Labour market: sample statistical survey of the economic activity of the population".

97. Data on employment and unemployment by sex and age as well as on employment by status in employment and by sector of economic activity and unemployment by educational level are transmitted yearly to EUROSTAT. The last data transmission end 2017 concerns 2016;

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[38] ILO resolution concerning statistics of work, employment and labour underutilization, 2013, § 51.

early 2019, the next update of the labour market statistics of the European Neighbourhood Policy – East countries is planned by EUROSTAT.

98. The integrity of the data requires a description of the conditions under which the official statistics are produced or disseminated and the policy and procedure of data revision according to the fundamental transparency principle. The metadata structure (formal characteristics of the metadata, concepts, definitions, and synthetic methodological issues) consists of 21 domains. Metadata are available online on the SSC website for two variables: the economically active population and employees; they were last updated in October 2016 (table 11). Furthermore, general metadata on labour market statistics and partly describing the survey on "economic activity of the population" are disseminated on the website of dissemination standards bulletin board of the IMF; they were last updated in September 2011. [39] The metadata need updating and they ought to be more complete, specific, and technical (*recommendation v*).

99. The SSC may grant access to statistically confidential micro-data that do not allow direct identification (by formal identifiers). Access is granted dependent on the submission of a research proposal, a recognised research practice of the applicant and a confidentiality declaration by the researcher. The scientific and methodological council of the SSC reviews the application and may give a positive advice on the access to the microdata.

100. An online publication of the "Catalogue of statistical publications" for 2018 is disseminated to inform the public in detail on the periodicity, brief content, language, and the expected date of the release of statistical publications. The annual hardcopy publication "Statistical Yearbook of Azerbaijan" ("*Azərbaycanin Statistik Göstəriciləri*") includes five tables with results from the Labour Force Survey by sex and educational level; its publication is planned in August. Another hardcopy publication "Women and men in Azerbaijan" ("*Azərbaycanda qadınlar və kişilər*") includes twelve tables with results from the Labour Force Survey with breakdowns by gender, age, and educational level; data on employment are disseminated by the same breakdowns, by marital status and full-time/part-time, data on persons outside the labour force are disseminated by reasons why they are outside the labour force.

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[39] https://dsbb.imf.org/e-gdds/dqaf-base/country/AZE/category/EMP00.

Table 11. Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the Labour Force Survey, June 2009 concerning relevance and accessibility			
Survey characteristics	Currently implemented	Recommended and considered by the SSC for implementation on the short-term	Recommended and considered by the SSC for implementation on the medium-term dependent on conditions (✓) or objections (Ø)
Production and dissemination of time series of headline short-term employment and unemployment indicators		✓	
Supplementary indicators of employment and unemployment, i.e. time-related underemployment, job seekers not available and persons available to work but not seeking		✓	
Information on new user demands	✓		
Published results (number of tables compared with EU dissemination)	✓ 82% (except by household characteristics, participation in education, duration of temporary job and nationality)		
Published results: transmission of data to international organisations on request	✓		
Metadata, ratio of available on applicable metadata		✓ (80%)	

Table 11. Assessment of the correspondence between the Labour Force Survey and the recommendations of the task force on the quality of the Labour Force Survey, June 2009 concerning relevance and accessibility.

RECOMMENDATIONS

The recommendations in comparison with the *acquis in statistics* of the Labour Force Survey are the following:

Principle 8: Appropriate statistical procedures

Sample design, reference period and coverage

a. The "Labour Force Survey" ("Survey of Economic Activity of the Population") should be a continuous survey where the reference weeks are uniformly distributed over a quarter instead of a single reference week per quarter. The sum of all the responses in a continuous survey is (mathematically) a true estimate of, for example, total employment or labour input per quarter.

    Corollary: The reference week should be determined when the sample is selected (it is not strictly related with the interview date). This is a condition for unbiased estimates. When the reference week depends on the interview date, specific labour market events, e.g. hires or dismissals may be oversampled when they occur in specific weeks when more interviews are conducted.

b. The monthly and weekly samples should be balanced over geographical areas, viz. by region (*rayonu*) and urban/rural settlement to avoid the interaction effects of seasons and areas.

c. Institutional or collective households are not surveyed; however, the data are reweighted to the total population. On the basis of the (next) census, labour estimates for the total population including institutional or collective households should be compared with the grossed-up estimates for the non-institutional population to assess the effect of the exclusion of the institutional households.

Fieldwork

d. An advance letter should be sent to the sampled households explaining the purpose of the survey, emphasizing the confidentiality [40], describing the use of the results and announcing the visit of the interviewer. The consent of the interviewers with this advance letter should be sought.

Questionnaire and concepts

e. The following additional variables should be captured by the questionnaire:

    1) The reasons for a temporary job and its total duration, the contract with a temporary work agency, and also the (country and) region of the place of work and number of

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[40] Referring to the Law of Official Statistics, art.3, art. 6 §7 and art. 16.

persons working at the local unit [41] because they identify different labour market segments;

2) The status in employment in the last job of persons without a current job and the occupation in this last job (to be inserted after the question on the year and month when the person last worked) and the industrial activity of the local unit for the second job [42] should also be captured because they similarly identify different labour market segments;

3) The involvement of the state employment service in finding the current job;

4) Supervisory responsibilities, working at home, and atypical working hours because these characteristics are relevant to describe labour from a social perspective [43];

5) Monthly take home pay as a basic characteristic of a job [44], a double question: the net amount and the period of these wages;

6) The availability to start working more hours as the second condition to measure time-related underemployment besides the willingness to work more hours, the search for another job, and the reasons because they are a complementary indicator of time-related underemployment explicitly verifying the availability of jobs, the pressure on the labour \market, and the related effort of person willing to work more hours;

7) The number of hours a person would like to work in total because this would allow to calculate the volume of (unmet) labour supply;

8) A separate question or an explicit response category to identify persons without a current job who will start working in a job already found within a period of three months (question 44=1) - this situation is defined as unemployment;

9) Unemployment duration is the minimum duration of the number of months a person does not have a job (question 45) and the number of months the person was looking for a job, this last question should therefore be added;

10) The year and month when a person started working for this employer or in the current business;

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[41] This is an expansion of the target sample of question 18, the question being asked to employees, too.

[42] The industrial activity in the second job is an essential variable to assign main job and second job to their industrial activity when jobs are described instead of persons, e.g. in business statistics; some questions on the second job can be deleted, e.g. question 34 on temporary job and question 35 on occupation.

[43] See presentation on the "Conceptual and Operational Framework of the Labour Force Survey" by A. Van Bastelaer and Z. Priede on April 19, 2018.

[44] Wages are a major consideration when applying for a job or in relationship with job turnover, average hourly earnings of employees is an additional decent work indicator in relationship with adequate earnings and productive work.

11) The year when the highest level of education or training was completed and the field of completed education or training, a closed version of this question can be used with a list of fields (eleven broad groups of the ISCED-Fields 2013);

12) Current training or education, student or apprentice [45], the level of this education and the number of hours spent on these learning activities in the past four weeks;

13) The citizenship [46], country of birth, and the number of years of residence in Azerbaijan, they are relevant background variables to describe the composition of the labour force and immigrants [47];

14) Questions 20 to 24 on informal jobs could be asked as an ad hoc module in a subsample, e.g., the last wave [48] in the years between future special surveys on the informal sector; and

15) An item on self or proxy response because this is relevant to assess the quality of responses.

A test survey of these additional variables should be carried out to determine the appropriate formulation of these questions before they are included in the regular survey questionnaire.

f.   The routing of persons available to start working and job searchers should be verified: The questions on availability to start working and on job search (questions 40 and 42) should be asked all persons without employment irrespective of the answers on willingness to work (question 39), this filter may have an effect on the estimation of unemployment.

Data processing: Classifications and coding

g.   The basis of the business register is the state register of statistical units [49]; (this business register should therefore be used more for the coordinated coding of the industrial activity of the establishment where persons are working; this would require an explicit question on the name and/or address of the establishment where persons are/were working.

h.   The industrial activity of the local unit should be coded at least on the level of divisions (2 digits) to adequately describe trends in the structure of the labour market and to convert the industrial activity coding to the SNA/ESA*38 coding.

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[45] To calculate the Youth not in Employment, Education or Training (NEET) sustainable development indicator.

[46] An additional decent work indicator of equal opportunities.

[47] Azerbaijan: 8.4% foreigners according to the 2009 population census.

[48] Households are interviewed four times in consecutive quarters, the last wave is the last interview.

[49] Law on state statistics, April 26, 2000.

i. A question should be added on the main tasks and duties [50] besides the job title (question 26) in order to code the occupation on the level of minor groups; the question on the job title may be insufficient.

j. A sample of the answers on questions on occupation should be coded again by coding specialists to cross-check the quality of the coding by the interviewers.

Principle 10: Cost effectiveness

k. Computer-assisted interviewing with laptops or tablets [51] should be used to collect the data instead of paper-and-pencil questionnaire. The investment costs are offset by the efficiency gain, the error-prone steps of the manual data entry are skipped, routing errors are avoided, and the control and supervision of the interviewers can be centrally organised.

l. In later waves, some questions on selected job characteristics and household composition can be simply asked with reference to the answers in the previous wave (dependent interviewing) in order to reduce the response survey burden; the coding of the economic activity and the occupation can also be copied forward. Furthermore, households in later waves can be interviewed by telephone or web-based interviews, thereby reducing costs of fieldwork (no travel costs).

Principle 12: Accuracy and reliability

m. The response rate should be calculated on the basis of the gross sample.

n. A household identification number should be determined when the sample is selected, identifying the sample stratum, the enumeration area and in later waves the number of household members of working age, e.g. in order to estimate the design effect.

o. A household weighting method should be applied as a final step of the weighting procedure in order to derive equal weights for the members within a household because the Labour Force Survey is also a source for data by household composition.

Principle 14: Coherence and comparability

p. An online dataset of tables with a time-series of quarterly data [52] should be disseminated to do fully justice to the design and content of the Labour Force Survey because users are mainly interested in trends and changes. [53]

q. Supplementary indicators of labour market performance, i.e. time-related underemployment, non-available job seekers and persons available to work who are not seeking work [54] should

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[50] ISCO-08: Introductory and methodological notes §257.
[51] Dependent on tests and practical experience.
[52] "*Preliminary data*".
[53] Quarterly data are available since 2007.
[54] These two categories together form the potential labour force.

be disseminated to better describe the unmet labour supply (19th ICLS, Resolution I, art. 51 and 73).

r. The registered unemployed cannot be presented as a subpopulation of the unemployed persons ("*of which*") because the characteristics of the registered unemployed may deviate from the conditions of ILO unemployment.

s. Data from the state employment service should be compared with the estimates on registered unemployment according to the Labour Force Survey in order to understand their similarity or difference.

t. Whereas employment data from the Labour Force Survey are used as input for employment in National Accounts, the results on wage employment from the Labour Force Survey and from establishment surveys or administrative reports should be compared [55] by the statisticians of the labour statistics department to measure the quality dimension of the coherence. This will corroborate the use of the labour force data.

u. It should be verified whether the breakdown by educational attainment in the tables could be disseminated according to the eight levels and labels of ISCED 2011 in English [56] instead of the current labels in order to improve the cross-national comparability

Principle 15: Accessibility and clarity

v. More specific metadata should be added [57], in particular on the definitions and applied classifications (item 3), the sample design and estimation [item 14, e.g. reweighting and design effect] and survey burden [item 18]. Other metadata should be verified, e.g. on the reference period, on time series breaks and the revision practice instead of the current general description. These metadata are necessary because users are not in a position to detect errors by observing the data alone.

w. Whereas data interpretation and reporting belong to the core business [58] of the statistical office, output should be increased, for example with analysis and description of the key dynamics on the labour market to supplement the current publications [59] limited to the dissemination of only data.

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[55] Comparison on the basis of a reconciliation table.
[56] A mapping of the national programmes on ISCED is available on the UNESCO UIS website http://uis.unesco.org/en/isced-mappings.
[57] https://www.azstat.org/MetaDataInd/bchapsdmx.jsp?prkod=61020&prskod=50, last update in October 2016.
[58] Transformation of statistics into information.
[59] Statistical Bulletins.

LIST OF ACTIONS TO IMPLEMENT THE RECOMMENDATIONS

The actions to implement the above short-term and medium-term recommendations are described in the following synopsis. Short-term recommendations involve changes concerning the sample design, the questionnaire, and the data dissemination which can be made parallel with the change to computer-assisted interviewing instead of a paper-and-pencil questionnaire:

Objective	Actions
Short-term:	
Computer-assisted data collection	• Specify a proposal on the basis of a cost-benefits analysis for use of tablets for data collection • Define the overall architecture of the redesigned Labour Force Survey • Define a project plan and process for the development of computer-assisted data collection • Obtain the agreement for an investment in the new hardware
Efficient sample design	• Uniformly distribute the reference weeks over a quarter • Inform users of the time series break • Verify the balanced coverage of the weekly samples over the geographical areas and to adapt it • Determine the household identification number and • Insert it on the cover page of the questionnaire
Introduction of the interview: advance information for the sample households	Advance letter
Accuracy	Calculate the response % on gross sample
Measurement of employment and unemployment and data dissemination	• Change the scope of questions 40 & 42 to all persons without employment • Quantify the effect on unemployment • Separate data on registered unemployment from ILO unemployment
Questionnaire	• Revise the questionnaire • Add new questions • Test the new questionnaire before using it in the regular survey
Business register for the coding of industrial activity	• Ask the name and location of the establishment • Match the responses on the name and location of the establishment with the records of the business register to retrieve a code for the industrial activity
Classification by industrial activity, NACE rev.2 and by level of educational attainment, ISCED 2011	• Code the industrial activity by division (on a 2-digit level) and to inform users of the time-series breaks • Verify and adapt labels of ISCED 2011 levels in the tables
Supplementary indicators on time-related underemployment, non-available job-seekers and persons available to work who are not seeking work	• Produce and evaluate the indicator on the potential labour force on the Labour Force Surveys since, for example, 2013 • Produce and evaluate the indicator on time-related underemployment after a change (of the routing) to include the question on the availability to work more hours, • Prepare a news release to introduce these new indicators • Disseminate these indicators
Up-to-date description of labour supply and (potential) labour force	Disseminate quarterly results with detailed breakdowns by individual background variables and job characteristics

Objective	Actions
Medium-term:	
Computer-assisted data collection	• Develop the software applications • Develop an application for dependent interviewing of selected job characteristics in later waves • Train the interviewers, their supervisors and the data editors in the new technology • Test the new environment for the computer-assisted data collection
Equal weights for household members (in each household)	• Apply statistical method as an additional and final step of the weighting • Inform users of the time series break
Employment from the Labour Force Survey and National Accounts	Compare employment estimates from the Labour Force Survey with data from business surveys
Metadata	Update and to add metadata
Analysis and description of key dynamics on the labour market	Analyze and to prepare a quarterly bulletin on key dynamics on the labour market
Coverage of institutional households	Compare labour force estimates including and excluding the institutional population on the basis of the population census

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