Report on the Sector Review of the Earnings, Labour Cost and Job Vacancy Business Surveys in Azerbaijan

Final Report
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LIST OF ABBREVIATIONS

AGA	Adapted Global Assessment
AR	Autonomous Region (Nakhchivan)
CISSTAT	Interstate Statistical Committee of the Commonwealth of Independent States
EES	Employment and (Structure of) Earnings Survey
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
ICSE	International Classification by Status in Employment
ILO	International Labour Organisation
IMF	International Monetary Fund
ISCO	International Standard Classification of Occupations
ISCED	International Standard Classification of Education
ISIC	International Standard Industrial Classification
JVS	Job Vacancy Survey
LCS	Labour Cost Survey
LPR	Light Peer Review(s)
NACE	Statistical Classification of Economic Activities in the European Community
RA	Republic of Azerbaijan
SAQ	Self-Assessment Questionnaire
SNA	System of National Accounts, 2008
SC	Statistical Council (advisory body of the State Statistical Committee)
SSC	State Statistical Committee of the Republic of Azerbaijan
UNECE	United Nations Economic Commission for Europe
UNSD	United Nations Statistics Division

PREFACE

1. EUROSTAT supports both enlargement countries (Albania, Bosnia and Herzegovina, the Republic of 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 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 assessment and sector reviews. Sector reviews are conceived to support the partner countries in their efforts to align core sectors of statistics (e.g. labour statistics from business) with EU principles (e.g., European Statistics Code of Practice) and international standards (e.g., 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* 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 global assessments) are published on the EUROSTAT website (http://ec.europa.eu/eurostat/web/european-neighbourhood-policy/publications/reports). Sector reviews so far conducted in various fields - incl. labour force surveys, e.g., Egypt, Jordan, Tunisia and Armenia – have shown the importance of such a tool 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 earnings, labour cost and job vacancy statistics on the basis of business surveys of the State Statistical Committee (SSC) in 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 (ESCoP).

5. This review was organised implementing a recommendation of the 2017 Adapted Global Assessment on a sector review of labour market statistics in Azerbaijan. It was conducted by two international reviewers – Ms. Zaiga Priede and Dr. Aloïs Van Bastelaer – with a wide experience in the management of surveys on labour statistics on the one hand, and on the other hand in statistical assessment, communication and report writing at the international level.

6. October 2018, a request for a sector review was received from the SSC of Azerbaijan. The review then started with the preparation of the self-assessment questionnaire and the agenda for the meeting with the statisticians of the SSC of Azerbaijan (☞ Annex 1).

7. The website of the SSC only provides links to documents in English on horizontal institutional topics, annual flagship publications, a database with tables and overall metadata. The completed assessment questionnaire and the meeting with the colleagues of the department of labour statistics were therefore the main source and opportunity for the description of the design and processing of business surveys;

at the meeting itself, the main annual questionnaire form on earnings, labour costs and job vacancies was provided in English which was very useful.

8. The purpose of the self-assessment questionnaire was to collect extensive preliminary information on the business surveys on earnings, labour costs and job vacancies 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 the 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 business surveys on labour statistics, 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 same questionnaire and the availability of the reviewers to provide any additional support in case of need. The questionnaire consisted of 235 mainly closed ended questions to streamline the answering of the questionnaire, 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 (incl. budget). All questions were formulated in compliance with the EU regulations and guidelines, in order to specifically assess the status of the business surveys on earnings, labour costs and job vacancies in Azerbaijan vis-à-vis the *acquis.*

9. End of January, the SSC, Ms. Elnura Tagiyeva returned the answers on the self-assessment questionnaire well before the mission in Baku. The field mission took place from 8 to 11 April 2019 at the central office of the SSC (Baku).

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 data on earnings, labour costs and job vacancies from business surveys in order to assess institutional, organisational, methodological, communication and planning issues relating to these business surveys 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 self-assessment questionnaire.

11. The last day of the meeting, 11 April 2019, a summary debriefing from the review team occurred 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 16 May 2019, the summary report «Assessment of the Employment and Earnings Survey, Labour Cost Survey and Job Vacancy Survey: summary, recommendations and actions» was sent by ICON to the SSC. On 21 May 2019, 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 business surveys on earnings, labour costs and job vacancies 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 an overall set of labour statistics from business surveys is compiled to describe the outcomes of the interaction between businesses and individuals on the labour market, labour costs, wages and labour demand. Initially, the focus was on wages on which timely short-term and annual structural results are available since 1999; later in 2011 and 2012, the data collection was expanded with annual data on labour costs and job vacancies. These labour cost and wage statistics are in general produced according the 1973 ILO framework on integrated wages statistics (12th ICLS) [1]. The early surveys lasted over 20 years and were designed under different policy contexts than now, a redesign may therefore impose itself.

14. The collection of data on employment, earnings, labour costs and job vacancies is organised in two flows: a first data collection concerns legal entities, the second data collection concerns natural entities (unincorporated businesses). Data from the legal entities are collected monthly, quarterly or annually in a stand-alone survey under the responsibility of the department of labour statistics, data on employment, earnings and labour costs from the natural entities are part of larger survey vehicles on short-term and annual business statistics to avoid duplicating requests for data; these larger business surveys are the responsibility of the subject-matter departments for industry and market services statistics. The target population of the business surveys consists of employees with a written contract, but employees with an oral contract are not covered. The scope of the quarterly and annual surveys comprises all economic activities and all enterprises without a threshold on the number of employees, the monthly surveys are limited to large and medium-size enterprises. The State Register of Statistical Units is a complete, efficient and coordinated sample frame [2] that is updated yearly, non-active enterprises are regularly deleted.

15. The employment and earnings survey has several objectives and addresses several topics. The first objective according to the SSC is to describe working hours and working conditions of employees. Besides the stratification variables of the enterprises, the annual questionnaire forms capture information on the level and flows of employment (hirings, separations and the number of job vacancies), the wages and salaries, the working hours and holidays, the labour costs, vocational training and occupational injuries; all these data are accumulated data for the entire year. Other data, the distribution of full-time employees by sex and detailed wage classes refers to November, finally, the level of employment by sex, age and level of education refers to end December. All these data are captured on the level of the enterprise by a fixed set of tables, the data are not collected for (a sample of) individual employees within the enterprise as in the design of the EU structure of earnings survey. The monthly and quarterly survey capture similar information on the level and flows of employment and the wages and salaries as in the annual survey, additional data on employment and wages and salaries by occupation are captured monthly (several recommendations concern the survey design).

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[1] See also ILO Labour Statistics Convention no 160, 1985
http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:312305.
[2] Its importance was already underlined in the 2010 UNECE global assessment of the system of official statistics besides other recommendations in relationship with business surveys concerning the improvement of the metadata and the dissemination of detailed tables statistics (Šlégrová H. (CZSO), P. Hackl, C. Hansen (UNECE) and J. Byfuglien (EFTA), 2010).

16. The second use of the employment and earnings survey is the macro-economic monitoring on the basis of the <u>short-term indicator on average monthly wages and salaries</u>; this indicator is disseminated as one of the macro-economic indicators besides, for example, GDP. The Central Bank is currently a regular user of the results concerning wages and salaries but not of the data on labour costs. Data on the structure of labour costs are currently collected annually; the main use of these data according to the SSC is for income policy (social contributions and taxes). The labour cost index is a more widely internationally used short-term indicator that is also included in the generation of income account of national accounts. The main uses of the job vacancy data according to the SSC are the description of the regional situation and to provide data for collective bargaining although its relevance for macro-economic monitoring is also recognized (several recommendations concern the development, data collection and dissemination of short-term indicators).

17. A third objective of the employment and earnings survey is to provide data for the <u>formulation of welfare policy</u>, for example, in relationship with gender differences in earnings. Further objectives of the employment and earnings survey are to describe the <u>regional situation</u> and the use for <u>international comparison</u>. The application of and compliance with international standards and the integration of the national statistics into the global statistical system is a preoccupation of the SSC. In general, the measurement of earnings and labour costs complies with <u>international standards, concepts and classifications</u> – except for some detailed items in, for example, monthly earnings and total wages and salaries (D.11) and the explicit distinction of apprentices from full-time and part-time employees (a recommendation concerns the operationalization of the concepts).

18. The uses of the results from the employment and earnings and the labour cost survey as input for national accounts or to describe long-term trends of business development are considered by the SSC as less important objectives. Without prejudice to these views, the compensation of employees is input for the generation of income account in national accounts; a comparison of the results from the business surveys with national account serves two purposes: it illustrates the quality dimension of the <u>data coherence</u> and it will underpin the validity of the estimates on the compensation of employees from the business surveys (a recommendation concerns the comparison of business survey results with data from national accounts).

19. The source for all data on employment, earnings, labour costs and job vacancies are the reports from businesses; legal entities are <u>surveyed exhaustively with practically a 100% response</u> but for <u>natural entities, a sample</u> is selected. Survey participation is compulsory. The estimates are not re-weighted, a Horvitz-Thompson estimator is applied (a recommendation concerns the reweighting of the estimates, particularly in the case of a subsample of employees within an enterprise). Data are collected with <u>electronic questionnaire forms</u> on the website of the SSC. To complete the questionnaire forms, businesses have two or two and a half weeks for short-term surveys to eleven weeks for annual surveys. Data control is done by the regional offices and the labour statistics department in the central office, but corrections can only be inserted by the respondent business. In an additional file, indicators on the causes of the data editing or revision will be useful to monitor and adjust operations where necessary. The retrieval of administrative data and a sample of small and micro enterprises instead of an exhaustive survey will reduce the survey burden and increase efficiency (several recommendations concern the data processing).

20. The labour market domain is the <u>fourth most frequently visited statistical domain</u>. Data on employment, earnings and labour costs are disseminated on multiple data carriers. A press release with the short-

term monthly employment and average monthly earnings by economic activity is disseminated six weeks after the reference period according to an advance release calendar; average monthly earnings are also disseminated online as one of the macro-economic indicators; the indicator is compared with the same period of the previous year, a comparison of the seasonally adjusted short-term indicator with the preceding month or quarter will be more relevant to determine the underlying trend (recommendations concern the statistical processing of short-term indices). Furthermore, a quarterly statistical bulletin on employment and monthly average salary includes a set of twelve tables with breakdowns by type of ownership, economic activity and region; this quarterly statistical bulletin is disseminated seven weeks after the reference quarter. The same indicator by economic activity is included in another, quarterly statistical bulletin on the "socio-economic development" (table 59 in this bulletin). Time series of monthly or quarterly indicators are not available online except the average monthly earnings with a quarterly frequency from 2010 onwards on the domain of the "National Summary Data Page" on the website of the SSC, disseminated according to the standards of the IMF (a recommendation concerns the dissemination of time series with sub-annual results).

21. A time series with the annual results on earnings by economic activity is available from 1999 onwards and on hourly labour costs by economic activity from 2011 onwards. In 2009, this classification by economic activity, viz., NACE rev.2, was implemented; previous results by economic activity were backwards revised. Furthermore, more than thirty tables with current annual data as well as data for the previous year are disseminated; these tables describe the level of employment, labour turnover, working conditions, occupational accidents, vocational training, wages and salaries and the structure of labour costs. Usual breakdowns are by sex, economic activity and type of ownership. First data are available at the beginning of June and at the beginning of August, they become final. Besides the tables available online, they are disseminated in a digital publication, "Statistical Yearbook of the Labour Market" ("*Əmək Bazarı*„. The structural description of earnings in terms of distributions is limited because just one table is collected describing the distribution of (full-time) employees by detailed classes of wages and salaries; furthermore, results describe the total monthly earnings without distinguishing supplementary wages due to shift work or overtime (several recommendations concern the data collection on the level of individual employees (within the surveyed enterprises) by different characteristics and payment periods). A more comprehensive database with data on the distribution of wages and the composition of labour costs with detailed breakdowns by characteristics of the enterprises and their employees can then be disseminated.

22. The hardcopy publications include symbols when estimates are not available or when they do not apply. Flags can also be included in the cells of the online tables and they can indicate more data particularities, for example, time series breaks and confidential estimates.

23. Metadata are available online on the website of the SSC for three variables, the average monthly wages, the annual labour cost and the number of employees, they are also disseminated on the website of dissemination standards bulletin board of the IMF. They were last updated early 2019. They are lacking precision and they are incomplete, particularly in the description of the coverage, the survey design (for example, the sampling of natural entities), time series breaks, the revision practice and the statistical processing and compilation (a recommendation concerns the metadata).

24. 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

25. 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 SSR of Azerbaijan. February 1994, the Law on statistics of the Republic of Azerbaijan was signed [3]; 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 UN.

26. The "Law on Official Statistics" determines the mandate of the SSC. It is the task of the SSC to organise the centralized 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 organizations. 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 organization 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 article 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, among them unincorporated businesses, within the territory of Azerbaijan owe to submit the data in the 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),

27. The annual work programme [4] is drawn up after consultation of the statistical council (*statistika surası*); this statistical council acts under the SSC, it delivers its opinion, makes recommendations and gives advice [5]. It is composed of representatives of government, statistical and financial bodies, banks, unions or federations, academic institutions and representatives of the press agencies. It consists of fifteen members; their membership is approved by the government (art. 8).

28. Official statistics are autonomous: the state and non-governmental organizations 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,

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[3] https://www.stat.gov.az/menu/3/Legislation/law_az_en.pdf.
[4] For example, the programme for 2016: https://www.stat.gov.az/menu/2/work_program/St_req_2016.pdf.
[5] https://www.stat.gov.az/menu/2/statistic_council/.

confidentiality and transparency of the statistical product (art. 9). Finally, it is mentioned that data collected, processed and stored are confidential (art. 16).

29. 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 (AR) and 74 regional statistical departments. The subject-matter oriented departments are grouped into three major domains: macro-economic statistics (for example, national accounts, agricultural and service statistics), social (for example, labour statistics) and business statistics (for example, industry statistics and service statistics); each domain is managed by a member of the board, the deputy chairman.

30. Since August 2015, the chairman of the SSC is Mr. T. Budagov. Besides the chairman, the governing board (*kollegiyası*) 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.

31. The "Law on Official Statistics" is elaborated in the multi-annual strategic plan of the SSC [6] including the objectives to improve the statistical information, the expected results in the different statistical domains and a plan of actions. Two objectives concern the labour statistics: the analysis of the status of micro, small and medium-size enterprises and the improvement of the available information for decision making on labour market development.

32. The specific formal basis of the business surveys on earnings, labour costs and job vacancies (in Azerbaijan: "Survey on level and changes of employment and wage fund") is determined in the annual work program [7], this annual work program is agreed with the cabinet of ministers. Concerning labour statistics, the indicators are mentioned, the level of employment, the wage sum, the distribution by wage categories and labour costs by monthly, quarterly or annual frequency, furthermore their breakdowns, e.g. by region, economic activity and type of ownership and the delay of the availability of the results are mentioned.

Principle 3: Adequacy of resources

33. The business surveys on employment and earnings, labour costs and job vacancies of the State Employment Service are designed and implemented by the SSC given its institutional organisation and human resources.

34. The central SSC employs 276 civil servants, nearly as many women as men, while the staff in the 74 regional offices is four times larger than in the central office; about ¾ of the staff have higher education [8].

35. The Department of Labour statistics is responsible for the design, statistical processing, dissemination and analysis of the business surveys on employment and earnings, labour costs and job vacancies

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[6] For example, the 2018 – 2025 state program on improvement of official statistics https://www.stat.gov.az/menu/2/state_programs/2018_2025/source/en/2018-2025_DP_ENG.pdf.
[7] For example, the work program 2016: https://www.stat.gov.az/menu/2/work_program/St_req_2016.pdf.
[8] AGA of the National Statistical System of RA, p. 36.

except for the data collection from natural entities (unincorporated enterprises). Data on employment, earnings, labour costs and job vacancies are part of larger survey implemented by subject-matter departments for industry and service statistics. The work of the department of labour statistics is not limited to the business surveys and data compilation on the basis of reports from the businesses; besides those business surveys the department also processes the labour force survey. The staff in the sector of the business surveys consists of the head of the department and five statisticians with a university background. The head of the department is competent and skilled, particularly with regard to the conceptual framework of the labour statistics [9]. Knowledge of sampling methods and statistical estimation is concentrated in the Centre of Scientific Research and Statistical Innovations [10] to ensure the application of uniform statistical methodological techniques but with a possible inconvenience of being less involved in the statistical process and practice of the subject-matter departments.

36. The 2016 SSC total operational budget amounts to 18 million Azerbaijan manat (about 9 million euro); about 60% for salaries. The salary related cost of the sector of business surveys on earnings, labour costs and job vacancies represents 0.6% of the total salary related costs of the SSC.

Principle 4: Statistical quality

37. The law on state statistics of Azerbaijan 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 (art. 6).

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 [11]. In 2017 a user satisfaction survey was conducted; 78% mentioned that the information provided by the SSC was impartial and described important events (☞ § 69 on relevance). The goals of the SSC in relationship with quality management are specified yearly [12], currently they concern, e.g., a wider user audience through dissemination of up-to-date data and metadata, the reduction of error in source data and increased data quality through improvement of quality control tables and satisfying user needs and taking relevant action to study users demands..

Principle 5: Statistical confidentiality

39. The general obligation of statistical confidentiality is inserted 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 [13].

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[9] 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).
[10] http://www.etsim.az/en.
[11] https://www.stat.gov.az/menu/2/quality/en/policy_en.pdf.
[12] https://www.stat.gov.az/menu/2/quality/en/goals_en.pdf.
[13] https://www.stat.gov.az/menu/3/Legislation/ethic_rules_en.pdf.

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 [14].

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 sure that disclosure of the data will not harm the individual provider because this is an important guarantee for trustworthy and reliable statistics.

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 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 participated in international meetings, seminars or workshops on the labour force survey organised by, e.g., ILO, UN or CIS, therefore they have a good knowledge of international standards, guidelines, statistical processes and good practices. Staff members of the labour statistics department attended the 61st ISI congress in Marrakech (July 2017) with an invited paper on the measurement of decent work, the 20th International Conference of Labour Statisticians (Geneva, October 2018), the 2nd technical workshop on European statistics for the EECCA countries (Vilnius, July 2017) and the 4th workshop on international labour migration in the Asia-Pacific region (Daejeon, October 2018).

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[14] Resolution of the State Council of Statistics of RA, June 25, 2001, §13-15.

Principle 8: Appropriate statistical procedures

Population coverage

47. The target population of the business surveys on employment, earnings, labour costs and job vacancies comprises all enterprises in all economic activities. For the quarterly and annual surveys, no threshold on the size of the enterprise is applied; the monthly survey is carried out only among medium-size and large enterprises (tables 1A, 1B and 1C). Employees with a written contract are covered but employees with a verbal contract are excluded [15].

Survey frequency and reference period

48. All four data types, employment, earnings, labour costs and job vacancies are collected in a single business survey but with different frequencies. Since 1999, the employment and earnings survey is carried out monthly, quarterly and annually, it was already launched in 1992 but with an entirely different design and data process. The target population of the quarterly and annual surveys consists of all enterprises without a threshold on the size of the enterprise; the target population of the monthly survey is limited to medium-size and large enterprises. Since 2011 an annual labour cost survey is carried out. One year later, in 2012, the annual collection from business surveys of data on job vacancies started.

49. The size classes of the enterprises are slightly different from the EU classification, the upper limit of the size classes of micro, small and medium-size enterprises [16] corresponds with the lower limit of the small, medium-sized and large enterprises according to the EU classification.

50. The data are accumulated referring to an entire reference month, quarter or year except for some data, e.g., the distribution of employees by wage classes, the description of employees by their background characteristics of gender, age and level of education and the number of job vacancies. The distribution of employees by wage classes refers to November, this is a month without holidays. The breakdown of employees by gender, age and level of education and the number of job vacancies refers to the end of the year (☞ *recommendation g*).

Sample design

51. The sample frame of the business surveys on earnings, labour costs and job vacancies is the business register, the state register of statistical units [17]. It is a key tool for the coordinated sampling of business surveys. The custodian of the business register is the department of statistical works coordination and strategic planning. It is updated yearly in May, the main source to update the business register is the ministry of taxes that issues a tax identification number to all legal entities and natural persons starting an entrepreneurial activity. Non-active enterprises are regularly identified and marked.

52. The total population of businesses consists of 27 thousand operational legal entities and about 315 thousand active natural entities (unincorporated businesses). Of those 27 thousand legal entities, 5%

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[15] According to the 1999 Labour Code of Azerbaijan (sections 3 and 44), a labour contract is restrictedly defined as a written contract, https://www.ilo.org/dyn/natlex/docs/MONOGRAPH/54131/97671/F818125805/AZE54131.pdf.

[16] Decision 556 of the cabinet of ministers of the RA, December 21, 2018.

[17] Law on Official Statistics of RA, article 6 § 10.

are large enterprises, 10% medium-size enterprises, 21% small enterprises and 63% micro enterprises. Natural entities are usually micro enterprises, mainly in the trade and repair sector, transportation and other services. Legal entities are exhaustively surveyed, a 5% sample is selected of natural entities. A single-stage sample of businesses is selected; there is no subsampling of employees within the enterprise, data on, e.g., earnings of employees and their characteristics always refer to the complete payroll (☞ *recommendations a and b*). The sample is stratified by groups of economic activity (NACE rev.2), size class, annual turnover and administrative region (*rayonu*). The sample size in each sample is determined by a Neyman allocation.

53. Earnings data are collected for outworkers or contractors who are remunerated on the basis of the products or services they delivered or who are paid by fees although they should be excluded from the data collection because their remuneration implies that they are self-employed [18](☞ *recommendation c*).

Table 1A. Assessment of the correspondence between the Employment and Earnings Survey and the specifications in Council Regulation no 530/99 of March 9, 1999, Commission Regulation no 1738/2005 of October 21, 2005 and the gentleman's agreement of September 2006 concerning the survey and sample design				
Survey	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)
Employment and earnings survey (4-yearly)	Coverage: NACE rev.2 B-N	✓ (incl. A)		
	Supplementary coverage of NACE rev.2 P-S	✓		
	Coverage of enterprises with ≥ 10 employees	✓		
	Supplementary coverage of micro-enterprises (< 10 employees)	✓		
	Further research into exhaustive coverage of NACE rev.2 sections), size classes and type of ownership	✓ (in fact, a complete coverage)		
	Coverage of employees on the payroll and apprentices		✓ (but incorrect incl. outworkers paid for products/services delivered)	

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[18] ESA 2010. § 4.07e.

	Reference period: October (a representative month)	✓ (November)		
	2-stage sample or an exhaustive enumeration of employees	✓		
	Stratification by NACE rev.2 and size category	✓ (+ region and turnover)		
	Data collection on employment and earnings is part of a larger survey vehicle (*Ind. 9.5*)	✓		
Employment and earnings survey (yearly), particularly the gender pay gap	Coverage: NACE rev.2 B-S	✓ (incl. A)		
	Supplementary coverage of NACE rev.2 O	✓		
	Coverage of enterprises with ≥ 10 employees	✓ (incl. micro enterprises)		
	Coverage of employees on the payroll and apprentices		✓ (but incorrect incl. outworkers paid for products/services delivered)	
	Reference period: October (a representative month)	✓ (accumulated data)		
	2-stage sample or an exhaustive enumeration of employees		✓	
	Stratification by NACE rev.2 and size category	✓		

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 1B. Assessment of the correspondence between the Labour Cost Survey and the specifications in Council Regulation no 530/99 of March 9, 1999, Commission Regulation no 1726/99 of July 27, 1999, Commission Regulation no 1737/2005 of October 21, 2005, Council Regulation 450/2003 of February 27, 2003 and Commission Regulation 224/2007 of March 11, 2007 concerning the survey and sample design			
Coverage: NACE rev.2 B-S excl. O	✓ (incl. A)		
Supplementary coverage of NACE rev.2 O	✓		
Coverage of enterprises with ≥ 10 employees	✓		
Supplementary coverage of micro-enterprises (< 10 employees)	✓		
Coverage of employees on the payroll and apprentices		✓	
Further research into exhaustive coverage of NACE rev.2 sections), size classes and type of ownership	✓ (in fact, a complete coverage)		
Reference period: whole year or quarter (accumulated data)	✓		
Quarterly Labour Cost Index: Coverage: NACE rev.2 B-S		✓ (no sub-annual survey)	

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 1C. Assessment of the correspondence between the Job Vacancy Survey and the specifications in the European Parliament and Council Regulation 453/2008 of April 23, 2008 and Commission Regulation 1062/2008 of October 18, 2008 and 19/2009 of January 13, 2009 concerning the survey and sample design			
Coverage: NACE rev.2 B-S	✓		
Supplementary coverage of NACE rev.2 A	✓		
Coverage of all enterprises with (3) employees (without lower threshold)	✓		
Survey frequency: quarterly		✓	
Reference period: average of (3) reference days		✓	
stratification by NACE rev.2 A*21 and size category	✓ (+ region and turnover)		

Fieldwork

54. One single method is used to capture the data, viz., an electronic questionnaire form on the website of the SSC [19] (table 2). An invitation letter is sent to the businesses prompting them to provide the monthly, quarterly or annual data, specifying contact information for any questions the respondent business may have and assuring confidentiality. In the regional offices, a helpdesk is available, one or two administrators are assisting in each regional office. Regular refresher training and debriefing sessions are organised when, e.g., changes are made in the design or questionnaire or new data collections are launched.

55. Participation in the survey is obligatory according to the "Law on official statistics" (art. 3) [4]. Reminder letters are sent until one week before the date when the complete questionnaire forms are due. Businesses have two to two-and-a-half-weeks to complete the questionnaire forms for the monthly and quarterly surveys and 11 weeks for the annual surveys. A response rate of 100% is practically achieved.

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[19] https://www.stat.gov.az/menu/11/.

Principle 9: Non-excessive response burden

56. It is the intention to explore the use of an administrative source, a register of the Ministry of Labour and Social Protection of the Population, to retrieve data on earnings, thereby reducing the survey burden dependent on the conceptual coherence and the timeliness (☞ *recommendation j*).

Table 2. Assessment of the data collection of the Employment and Earnings Survey, Labour Cost Survey and Job Vacancy Survey in comparison with good practice			
Good practice	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	✓		
Electronic questionnaire form accompanied by an e-mail notification letter, including contact information and emphasizing the confidentiality *(Ind. 5.4 and 9.3)*	✓		
Questionnaire form contains a detailed list of items included in the main variables *(Ind. 8.4)*	✓		
Helpdesk to answer questions from respondent business *(Ind. 8.4)*	✓ (in regional office)		
Reminder letters or calls in the case of imminent non-response *(Ind. 8.4)*	✓		
Exploring the causes of errors when editing errors *(Ind. 8.5)*		✓	
maximum delay between the day when the completed questionnaire is due and the reference period (for the monthly, quarterly and annual survey)	✓ (15 resp. 18 and /75 days)		
Test of changes of the questionnaire forms before using this for the regular data collection *(Ind. 8.2)*	✓		
retrieval of administrative information in agreement with the owners wherever feasible	✓		
Job Vacancy Survey: data collection from local units		✓	

Questionnaire and variables

57. Two main questionnaires are used to capture the data: an extensive annual questionnaire for the structural data collection and a reduced monthly and quarterly questionnaire for short-term data (table 3a). The annual questionnaire consists of eleven parts:

(i) the average annual number of employees (distinguishing women and foreigners) and their total wages and salaries in cash and kind;

(ii) the number of employees by sex on January 1 and December 31 in public enterprises, the average annual number of employees, their total wages and salaries and social contributions;

(iii) the number of employees by sex on January 1 and December 31 (in private enterprises), the flows during the year, the number of hirings (distinguishing placements by the public employment service) and the number of dismissals by their reason and the number of job vacancies on December 31;

(iv) the total number of hours worked by sex, the number of part-timers, the total number of holidays and the number of days not worked due to accidents at work;

(v) full-time employees by detailed wage classes in November;

(vi) labour costs with a breakdown by wages and salaries (D.11), social contributions (D.12) and costs on vocational training (intermediate consumption);

(vii) number of employees on December 31 by sex, age, and level of education (ISCED 2011)

(viii) number of employees who participated in continuous vocational training by location of this training and broad occupational major group;

(ix) occupational injuries and accidents at work;

(x) expenditures on occupational safety and

(xi) the characteristics of the local unit.

58. The variables in the annual questionnaire are measuring fixed aggregates of employment, wages and salaries, labour costs and hours worked except for one distribution of full-time employees by wage classes. For a more flexible compilation of employment and earnings in terms of distributions (median, deciles and low-wage earners) by characteristics of the employees (for example, in relationship with the gender pay gap by sex, age and full-time/part-time) a different method is needed to collect the data: individual data should be recorded for the employees (☞ *recommendation b*).

59. The annual questionnaire covers 60% of the variables in the EU structure of earnings survey (table 3a). A few variables are missing, for example, on specific earnings for overtime or shift work, on employees' characteristics, length of service in the enterprise, the type of employment contract and the share of part-time, Furthermore, apprentices are not distinguished although their earnings are less than the earnings of their colleagues in similar jobs (table 3b). Finally, hours worked are measured but hours paid are missing, for example, to estimate gross hourly earnings (☞ *recommendation f*).

60. The monthly and quarterly questionnaire is restricted to the sections (i) and (iii) of the annual questionnaire, capturing data on the average number of employees and their total wages and salaries in cash and in kind as well as on the gross flows of employment but leaving out the question on the

number of vacancies (☞ *recommendation g*). The level of employment and the wages and salaries is monthly recorded with a breakdown by occupational unit group (ISCO-08), a selection of relevant occupational unit groups is specified dependent on the economic activity.

61. Only annual data are captured on labour costs, short-term quarterly data on the labour costs are missing. This short-term indicator, the labour cost index is a widely used international key macro-economic indicator and it is included in national accounts, it can replace the current indicator of average monthly wages that is being calculated as the total wage sum divided by the average number of employees in the reference month without taking into account the share of part-time – thereby improving the cross-national comparability (***Principle 14 of the Code of Practice***) (☞ *recommendation d*).

Table 3A. Assessment of the correspondence between the Employment and Earnings Survey and the Council Regulation no 530/99, Commission Regulation no 1738/2005 and the gentleman's agreement of September 2006 concerning the list of variables				
Unit concerned	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)
Local unit	region	✓		
	size of enterprise	✓		
	NACE rev.2 division A*88	✓		
	economic and financial control	✓		
	collective pay agreement (for ex., national, industry, local etc.)		✓	
	number of (payroll) employees (optional)	✓		
Earnings and working times for each employee	gross monthly earnings (D111 excl. payments in kind) (*)		✓ (incl. payments in kind)	
	monthly earnings for overtime		✓	
	supplementary monthly earnings related to shift work		✓	
	gross annual earnings (incl. irregular payments)	✓		
	total irregularly paid bonuses and allowances	✓		

Table 3A. Assessment of the correspondence between the Employment and Earnings Survey and the Council Regulation no 530/99, Commission Regulation no 1738/2005 and the gentleman's agreement of September 2006 concerning the list of variables				
	number of weeks being actually paid (in relationship with annual earnings)		✓	
	monthly actually paid hours (*)		✓	
	monthly paid overtime hours		✓	
	annual days of holiday entitlement	(may become optional in EU)		
	(*) gross hourly earnings = monthly earnings / monthly paid hours	✓		
	annual days of (other) paid absence	(optional in EU)		
Employee	sex	✓		
	age	✓		
	<u>gender pay gap</u>: age (<25 years, 10-year age bands)	✓		
	ISCO-08 (sub-major groups)	✓ (open question)		
	ISCED 2011	✓		
	Length of service in the enterprise (years)		✓	
	full-/part-time	✓		
	share of full-time normal hours		✓	
	type of employment contract		✓	
Completeness			15/25, 60%	

Table 3B. Assessment of the correspondence between the Labour Cost Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1726/99, Commission Regulation no 1737/2005, Council Regulation 450/2003 and Commission Regulation 224/2007 concerning the list of variables				
Survey	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)
Labour cost survey	region of local unit	✓		
	size of enterprise	✓		
	NACE rev.2 division A*88	✓		
	total annual labour costs: wages & salaries [D11] (excl. apprentices and apprentices only) with breakdown by components		✓ (apprentices are not distinguished)	
	employer's actual and imputed social contributions [D12] (excl. apprentices and apprentices only)		✓ (apprentices are not distinguished)	
	vocational training costs	✓		
	other expenditures	✓		
	taxes [D29c]	✓		
	subsidies [D39a]	✓		
	number of full-/part-time employees and apprentices		✓ (apprentices are not distinguished)	
	full-time equivalents of part-timers	✓		
	annual hours actually worked by full-/part-time and by apprentices		✓ (apprentices are not distinguished)	
	annual paid hours by full-/part-time and by apprentices		✓ (apprentices are not distinguished)	
	Completeness		9/16, 56%	
Quarterly labour cost	hourly labour costs: compensation of employees [D1] + taxes [D29c] - subsidies [D39a]		✓	
	wages & salaries [D11]		✓	

Table 3B. Assessment of the correspondence between the Labour Cost Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1726/99, Commission Regulation no 1737/2005, Council Regulation 450/2003 and Commission Regulation 224/2007 concerning the list of variables				
employer's actual and imputed social contributions [D12] + taxes [D29c] - subsidies [D39a]		✓		

Table 3C. Assessment of the correspondence between the Job Vacancy Survey and the specifications in the European Parliament and Council Regulation 453/2008 and Commission Regulation 19/2009 concerning the list of variables			
Survey data	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)
number of job vacancies by NACE rev.2 sections	✓		
number of job vacancies by region (optional)	✓		
number of occupied posts	✓		

Data editing

62. One week after the closing of the data collection, the staff in the regional offices and the labour statistics department of the central office are involved in data consistency checking and plausibility control at enterprise level until a clean dataset is available. Imputation is not applied to missing data due to item non-response. Detected errors or missing values can be edited only by respondent businesses, edited data are not flagged in the data file (☞ *recommendation h*). In-house developed software in Java is used to monitor the progress of the data collection, for data control and editing. Completed questionnaires received after the end of data collection are not inserted in corresponding data file for later revision of preliminary data

63. When a clean dataset is available, main aggregates for the last reference period are compared with data of previous period. Outliers are not identified and trimmed or substituted in order to reduce their impact on the results (☞ *recommendation i*).

64. Monthly and quarterly estimates are benchmarked on annual estimates, annual estimates become final in August of the year following the reference period (☞ *recommendation n*).

Principle 10: Cost effectiveness

65. All data are collected by electronic questionnaire forms on the website of the SSC and they are immediately available for data processing.

Statistical output

Principle 11: Relevance

66. The main and regular users of the business survey results on employment, earnings and labour costs are the Ministry of Labour and Social Protection, the Ministry of Economic Development, the Ministry of Education, the Central Bank, the press, trade union and employers' associations, researchers from universities and other research institutes and international organisations. The main and regular users of the government of the business survey data on annual labour costs are more limited: the Ministry of Labour and Social Protection and the Ministry of Economic Development.

67. The content of the business surveys on employment, earnings, labour costs and job vacancies 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). In June, an annual meeting with an established network of national users is organised and convened by the SSC where statisticians of international institutions, e.g., ILO and World Bank, are invited, too.

68. Labour market statistics are ranked 4 in the list of most frequently visited domains on the SSC website with 7% of all users [20]; national accounts, demographic statistics and trade statistics, respectively, are on the first, second and third rank.

69. In a user survey [21] in 2018, more than half of the respondents were individual persons, about one fifth civil servants, one sixth owners or employees from private companies and one sixth were students. The level of confidence in the results on wages is lower than for example, in the data on the population size but higher than for example, in the unemployment rate. The proportion of views that the statistics of the SSC are impartial is higher than the positive views on the quality or the proportion of views that they are describing important events (table 4).

Table 4. User views on the statistics and the website of the SSC				
Level of confidence (%)	belief	partial belief	doubtful	doesn't know
Population size	84	8	7	1
Industrial production	77	18	2	2
Inflation	77	12	6	5
Average monthly wages	77	11	7	5
Unemployment rate	62	25	8	5
Attitude towards SSC statistics (%)	yes	somewhat	no	doesn't know
Impartial	72	17	8	3
Good quality statistics	69	24	1	6
Describing important events	65	20	5	10

Source: https://www.stat.gov.az/source/others/sorqu-yekun_06.12.2017.pdf

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[20] https://www.stat.gov.az/link_click_counter/.

[21] Reports are compiled yearly.

Principle 12: Accuracy and reliability

70. The estimates of the business surveys on employment, earnings, labour cost and job vacancies are not re-weighted because the business surveys of the legal entities are exhaustive with a practically 100% response; for the sample of natural entrepreneurs, a Horvitz-Thompson estimator is applied ignoring changes in the benchmark totals of enterprises by stratum in the business register (☞ *recommendation k)*.

71. Furthermore, the business surveys are a single stage sample; dependent on a subsampling of employees (☞ par. 52) a re-weighting may become necessary (☞ *recommendation l)*.

Table 5A. Assessment of the correspondence between the Employment and Earnings Survey and the Council Regulation no 530/99, Commission Regulation no 1738/2005 and the gentleman's agreement of September 2006 concerning statistical estimation			
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)
earnings disseminated in PPS	✓		
post-stratification (or GREG) by economic activity, size of enterprise and region		✓ (exhaustive enumeration or dissemination of sample averages or proportions)	
optimal weighting schemes to reduce non-response bias			Ø (does not apply, 100% response)
coefficient of variation of gross monthly and gross hourly earnings lies between the 1st and 3rd quartile of these estimates for the EU Member States			✓ (exhaustive enumeration)
standard software applications for data and statistical processing, e.g., editing, weighting…			✓
transparent revisions, quantified effects		✓ (late received responses are not inserted; no quantified effects)	

Table 5B. Assessment of the correspondence between the Labour Cost Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1726/99, Commission Regulation no 1737/2005, Council Regulation 450/2003 and Commission Regulation 224/2007 concerning statistical estimation			
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)
labour costs disseminated in PPS	✓		
post-stratification by economic activity, size of enterprise and region			✓ (exhaustive enumeration or dissemination of sample averages or proportions)
optimal weighting schemes to reduce non-response bias			Ø (does not apply, 100% response)
coefficient of variation of the annual and hourly labour costs lies between the 1st and 3rd quartile of these estimates for the EU Member States			✓ (exhaustive enumerations)
standard software applications for data and statistical processing, e.g., editing, weighting…			✓
Quarterly Labour Cost Index: Laspeyres chain index by NACE rev.2 sections		✓ (no sub-annual survey)	
Quarterly Labour Cost Index: seasonally and working day adjusted index		✓ (no sub-annual survey)	
transparent revisions, quantified effects		✓ (late received responses are not inserted; no quantified effects)	

Table 5C. Assessment of the correspondence between the Job Vacancy Survey and the specifications in the European Parliament and Council Regulation 453/2008 and Commission Regulation 1062/2008 and 19/2009 concerning statistical estimation			
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)
post-stratification by economic activity, size of enterprise and region			✓ (exhaustive enumeration or dissemination of sample averages or proportions)
optimal weighting schemes to reduce non-response bias			Ø (does not apply, 100% response)
coefficient of variation of the number of job vacancies lies between the 1ˢᵗ and 3ʳᵈ quartile of these estimates for the EU Member States			✓ (exhaustive enumerations)
seasonally adjusted quarterly data by NACE rev.2 sections		✓	
standard software applications for data and statistical processing, e.g., editing, weighting…			✓
transparent revisions, quantified effects		✓ (late received responses are not inserted; no quantified effects)	

Principle 13: Timeliness and punctuality

72. Ready and equal access to data requires the dissemination of a release calendar and the simultaneous release to all interested users. A press release with the headline short-term, monthly indicators on employment and the average monthly salary by economic activity is disseminated six weeks after the reference period according to the annual advance release calendar [22] (table 6A). There is no preliminary access for privileged stakeholders to the press releases. A statistical bulletin, "Number of employees and average monthly wages" is also disseminated with twelve tables on employment and average monthly wages by economic activity, region and type of ownership of the enterprise without any comments or explanation on key trends (☞ *recommendation u*).

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22 https://www.stat.gov.az/menu/4/publications/indexen.php#003.

73. Six weeks after the reference period, the monthly indicator on the average monthly salary is disseminated in the domain of macro-economic indicators [23], the current indicator is compared with the same period in the previous year instead of the previous month (☞ *recommendation m*). A monthly statistical bulletin, "Economic and Social Development of the country" [24] is disseminated with a short description of the main trends besides the publication of the table 68 with the average monthly salary; a much larger quarterly statistical bulletin is disseminated including regional data. Other macro-economic indicators besides the average monthly wages measure GDP and the consumer price index; the quarterly labour cost index and the quarterly job vacancy rate will be obvious additional key indicators (☞ *recommendation r*).

Table 6A. Assessment of the correspondence between the Employment and Earnings Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1738/2005 and the gentleman's agreement of September 2006 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)
Employment and (structure of) earnings survey: first data release within 18 months	✓ (6/6/23 weeks for the monthly, quarterly and annual survey)		
Gender pay gap: first data release within 13 weeks	✓		
Advance release calendar	✓		
More timely results in relationship with their relevance for short-term analysis	✓		

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[23] "Determination calendar of data" on https://www.stat.gov.az/menu/6/.

[24] https://www.stat.gov.az/news/macroeconomy.php?page=1?lang=az.

Survey	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)
Labour cost survey	first data release within 18 months	✓ (11 weeks)		
	advance release calendar	✓		
Labour cost index	flash estimates		✓ (no sub-annual survey)	
	first data release within 70 days		✓ (no sub-annual survey)	
	advance release calendar		✓ (no sub-annual survey)	

Table 6B. Assessment of the correspondence between the Labour Cost Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1726/99, Commission Regulation no 1737/2005, Council Regulation 450/2003 and Commission Regulation 224/2007 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)
flash estimates within 45 days			(does not apply; < 3% EU total employees, 5800 thousand)
first data release within 12 weeks	✓ (after 11 weeks)		
more timely results in relationship with their relevance for short-term analysis		✓	
advance release calendar	✓		

Table 6C. Assessment of the correspondence between the Job Vacancy Survey and the specifications in the European Parliament and Council Regulation 453/2008 and Commission Regulation 1062/2008 and 19/2009 concerning the timeliness

Principle 14: Coherence and comparability

74. A time series with the annual results on monthly earnings by economic activity (NACE rev.2) is available from 1999 onwards and with quarterly results from 2010 onwards; this time series with quarterly results is disseminated according to the special data dissemination standard – where the labour market is part of the real sector - in a separate domain of the SSC website. A time series with the annual results on labour costs by economic activity is available from 2011 onwards (table 7A).

75. 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. The classification of the data on earnings and labour costs with the breakdown by economic activity are revised backwards when the NACE rev.2 classification was introduced.

76. In national accounts, compensation of employees and the level and volume of labour input are necessary variables in the generation of income account (SNA 2008, §2.91, §7.3 and §19.20; ESA 2010, §1.120 and §8.18). National accounts include a table on the production and generation of income account with results on the compensation of employees (table 7B). A comparison of the estimates from the business survey on employment, earnings and labour costs with national accounts will show the adjustments, this serves two purposes: it illustrates the quality dimension of the data coherence and it will underpin the validity of the employment estimates from the business survey (☞ *recommendation p*).

Table 7A. Assessment of the correspondence between the Employment and Earnings Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1738/2005 and the gentleman's agreement of September 2006 concerning comparability and coherence				
Dimension	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)
Cross-national comparability	definition of concepts of earnings (D.11) according to ESA 2010, viz., European Parliament and Council Reg. 549/2013 and of paid hours		✔ (gross monthly earnings include payments in kind)	
Comparability over time	data validation, comparison of current main aggregates with previous data	✔		
	Identification of representative outliers		✔	

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[25] Fəaliyyət Növləri Təsnifatı (Classification of Activities).

Table 7A. Assessment of the correspondence between the Employment and Earnings Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1738/2005 and the gentleman's agreement of September 2006 concerning comparability and coherence				
	Identification, description of design changes and time series breaks		✓	
	to limit number of time series breaks; length of time series	✓ (since 1999)		
	back-casting data from 2007 by economic activity	✓		
Coherence	explanation of differences between the estimate of average **annual** earnings and wages and salaries [D.11] in National Accounts		✓	
	Reconciliation table between employment estimate from the Employment and Earnings business survey and National Accounts			

Table 7B. Assessment of the correspondence between the Labour Cost Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1726/99, Commission Regulation no 1737/2005, Council Regulation 450/2003 and Commission Regulation 224/2007 concerning comparability and coherence				
Dimension	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)
Cross-national comparability	definition of concepts of labour costs (D.1) according to ESA 2010, viz., European Parliament and Council Reg. 549/2013 and of hours worked		✓ (excl. some performance and exceptional payments)	
Comparability over time	data validation, comparison of current main aggregates with previous data	✓		

		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
Table 7B. Assessment of the correspondence between the Labour Cost Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1726/99, Commission Regulation no 1737/2005, Council Regulation 450/2003 and Commission Regulation 224/2007 concerning comparability and coherence				
	Identification of representative outliers		✓	
	Identification, description of design changes and time series breaks		✓	
	to limit number of time series breaks; length of time series	✓ (since 2011)		
	back-casting data from 2007 by economic activity	✓		
	back-casting data of quarterly LCI from 2000 by economic activity		✓ (no sub-annual survey)	
Coherence	explanation of differences between the LCS estimate of compensation of employees [D.1] and National Accounts		✓	
	Reconciliation table between the estimate of labour costs from the LCS and National Accounts			

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 7C. Assessment of the correspondence between the Job Vacancy Survey and the specifications in the European Parliament and Council Regulation 453/2008 and Commission Regulation 1062/2008 and 19/2009 concerning comparability and coherence			
Cross-national comparability: definition of job vacancy according to European Parliament and Council Reg. 453/2008, art.2]	✓		
Comparability over time: data validation,	✓		

Table 7C. Assessment of the correspondence between the Job Vacancy Survey and the specifications in the European Parliament and Council Regulation 453/2008 and Commission Regulation 1062/2008 and 19/2009 concerning comparability and coherence			
comparison of current main aggregates with previous data			
Identification, description of design changes and time series breaks		✓	
to limit number of time series breaks; length of time series	✓ (since 2012)		

Principle 15: Accessibility and clarity

77. The SSC website is easily accessible according to 90% of users in a users' survey (SSC, December 2018). Besides the website in Azerbaijani, mainly horizontal institutional documents, annual flagship publications, the monthly press releases, the database with annual data and metadata are available in English.

78. The survey results are published on various carriers: tables and digital publications on the website of the SSC and hardcopy publications. The sub-domain "Labour market: wages and salaries and expenditures spent for labour force" of the domain of "Demographic and social statistics" contains tables with annual data on monthly minimum wages; average monthly nominal wages by section of economic activity and type of ownership, by section of economic activity, type of ownership and by sex; hourly labour costs and structure of labour costs by section of economic activity; average monthly nominal wages by CIS countries; full-time employees by section of economic activity and detailed classes of monthly wages; average monthly nominal wages by sex and section of economic activity (table 8). The only result in the form of a distribution is the distribution of full-time employees by wage classes; this is limited in comparison with the tables on the Eurostat website showing median earnings, deciles and low-wage earners (table 10A). Furthermore, just two tables are disseminated on hourly labour costs by economic activity and on the structure of labour costs, distinguishing six components; again this is limited in comparison with the tables on the Eurostat website with results for different components of labour costs by different payment periods (table 10B) (☞ *recommendation q*).

Table 8 – Annual data of the Employment and Earnings Survey, Labour Cost Survey and Job Vacancy Survey published on two sub-domains "Demography and social statistics: labour market: wages, salaries and expenditures and job placement"
Table 4.1: *Monthly minimum wages (1991- now) – manat*
Tables 4.2 and 4.3: *Average monthly nominal wages by NACE rev.2 A*21 (2005 – now) – manat, levels and relative compared with total economy*
Table 4.4: *Hourly labour costs by NACE rev.2 A*21 – manat*
Tables 4.5:and 4.6: *Average monthly nominal wages by NACE rev.2 A*21 and type of ownership – manat*
Table 4.7 and 4.8: *Female and male average monthly nominal wages by NACE rev.2 A*21 and type of ownership – manat (basis for a proxy calculation of gender pay gap)*
Tables 4.9 and 4.10: *Average monthly nominal wages by CIS countries – national currency and USD*
Tables 4.12 and 4.13: *Full-time employees by NACE rev.2 A*21 and detailed classes of monthly wages – %*
Table 4.14 and 4.15: *Structure of labour costs by NACE rev.2 A*21 – %*
Table 8.3. *Average monthly nominal wages by sex and NACE rev.2 A*21 - manat*
Source : https://www.stat.gov.az/source/labour/?lang=en (last access: April 2019).

79. A second sub-domain "Labour turnover, labour conditions and vocational training" contains more than twenty tables with annual data (table 9). The same tables are included in the chapters 3 and 4 [(26)] in the digital yearly publication on the labour market, available each year in August. Results on the number of job vacancies at the end of the year are not disseminated, instead the total number of job vacancies during a year according to the public employment service are disseminated; the (quarterly) unmet labour demand indicator on the basis of business surveys is a more accurate estimate (☞ *recommendation r*).

80. The two tables on average monthly wages of men and women enable to estimate the gender pay gap by section of economic activity. The same data are included in the yearbook "Women and men in Azerbaijan" ("*Azərbaycanda qadınlar və kişilər*"), table 4.8 as well as in the sub-domain "Gender data on labour"; the gender pay is presented as the percentage of the female wages on the male wages unlike the gender pay gap in EU publications as the difference of male and female wages as a percentage of male wages.

81. In those online publications results can be marked by symbols when they are not available or when they do not apply; flags could also be inserted in the online database to explain atypical cells in the overall pattern of a table, for example time series breaks or confidential data (☞ *recommendation s*)

82. The database on the labour market and the yearbooks contain annual data. But time series of quarterly results are missing in the online database and publications – except the quarterly time series on monthly average wages (☞ §74; ☞ *recommendation q*).

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[26] https://www.stat.gov.az/menu/6/statistical_yearbooks/.

Table 9 – Annual data of the Employment and Earnings Survey published on the sub-domains "Demography and social statistics: labour turnover, labour conditions and vocational training"
Table 3.1: *Labour turnover, hirings and separations by NACE rev.2 A*21 (2010- now)*
Tables 3.4 and 3.5: *Labour turnover, separations by reason by NACE rev.2 A*21 (2010 – now)*
Tables 3.6 - 3.10: *Foreign employees and employees with country of birth other than Azerbaijan by NACE rev.2 A*21, by country of birth, by age and by sex and age*
Tables 3.11- 3.17: *Employees working in harmful labour conditions by type of harmful condition and NACE rev.2 and by sex and NACE rev.2 (2010 - now)*
Table 3.18: *Employees working in harmful labour conditions by adapted working time schedule or additional holidays by NACE rev.2 A*21 (2010 - now) – %*
Table 3.19: *Occupational accidents by NACE rev.2 A*21 (2010 - now) – persons and %*
Tables 3.20: *Employees recognized as disabled by age (< 18 years/ ≥ 18 years) (2010 - now) – persons and %*
Tables 3.21: *Vocational training by training provider (2010 - now) – persons*
Source: https://www.stat.gov.az/source/labour/?lang=en (last access : April 2019).

83. Gross monthly earnings by sex and economic activity, hourly labour costs and monthly minimum wages are transmitted to ILO but monthly and hourly earnings by occupational groups, data on low wage earners and the gender pay gap by occupation are missing because the breakdown by occupation is limited to a selection of occupations dependent on the economic activity (table 10A and 10B). The average nominal monthly wages is the only labour indicator from business surveys that is transmitted to Eurostat; the most recent result in the domain of the European Neighbourhood Policy – East countries refers to 2017.

84. 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 twenty domains. Metadata are available online on the SSC website [27] for three variables, the average monthly wages, the annual labour costs and employees; April 2019 they were last updated (tables 9A, 9B and 9C). Furthermore, metadata on wages on the basis of business survey are disseminated on the website of dissemination standards bulletin board of the IMF; they were last updated in January 2019 [28]. The metadata ought to be more complete, precise and technical, particularly the coverage, the survey design (partly exhaustive survey, partly a sample), time series breaks, the actual revision practice, the coherence of the monthly and quarterly with annual results and the statistical processing (☞ *recommendation t*).

85. 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

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27 https://www.azstat.org/MetaDataInd/.

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

on the access to the microdata. This access to microdata on employment, earnings or labour costs has not occurred in practice.

86. An online publication of the "Catalogue of statistical publications" for 2019 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 chapter on labour in the annual online flagship publication "Statistical Yearbook of Azerbaijan" ("*Azərbaycanin Statistik Göstəriciləri*") includes two tables results on average monthly wages by economic activity, type of ownership and region; its publication is planned for August 2019.

Table 10A. Assessment of the correspondence between the Employment and Earnings Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1738/2005 and the gentleman's agreement of September 2006 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)
Published results: number of tables compared with EU dissemination: hourly, monthly and annual earnings and paid hours and annual holidays (by 8 or 10 breakdowns)		✓ (SSC compared with EU: 27%) (data on distributions, median and deciles and overtime and shift payment are missing)	
Supplementary data on gender pay gap, low-wage earners by 3 or 5 breakdowns and minimum wages		✓ (low-wage earners and gender pay gap of hourly earnings are missing)	
Flags to indicate provisional estimates or time series breaks		✓	
Limited privileged pre-release	✓		
Information on new user demands	✓		
Published results: transmission of data (average hourly and monthly earnings (*); low-wage earners, gender pay gap and minimum wages) to international organisations on request (*) to Eurostat: "ENP-East"		✓ (ILO: 2/6)	
Metadata		✓	
Access to (anonymised) microdata file dependent on conditions	✓		
Multiple information carriers, including hard copy	✓		

Table 10B. Assessment of the correspondence between the Labour Cost Survey and the specifications in Council Regulation no 530/99, Commission Regulation no 1726/99, Commission Regulation no 1737/2005, Council Regulation 450/2003 and Commission Regulation 224/2007 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)
Labour Cost Survey: Published results (number of tables compared with EU dissemination: total, D11 excl. and incl. apprentices, D1111, structure, number of employees, hours worked and paid by NACE rev.2 and region) and ILO		✓ (SSC compared with EU: 12%)	
Labour Cost Index (quarterly): Published results (number of tables compared with EU dissemination: D1+D29c-D39a, D12+D29c-D39a, D11, index and quarterly change)		✓ (no sub-annual survey)	
Flags to indicate provisional estimates or time series breaks		✓	
Limited privileged pre-release	✓		
Information on new user demands	✓		
Published results: transmission of data (hourly labour costs) to international organisations, ILO on request		✓	
Multiple information carriers, including hard copy	✓		
Metadata		✓	

Table 10C. Assessment of the correspondence between the Job Vacancy Survey and the specifications in the European Parliament and Council Regulation 453/2008 and Commission Regulation 1062/2008 and 19/2009 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)
Published results (number of tables compared with EU dissemination: number of vacancies and of occupied		✓ (public employment service reports;	

Table 10C. Assessment of the correspondence between the Job Vacancy Survey and the specifications in the European Parliament and Council Regulation 453/2008 and Commission Regulation 1062/2008 and 19/2009 concerning relevance and accessibility			
posts, job vacancy % and quarterly change)		annual by NACE A*21 and monthly by region)	
Flags to indicate provisional estimates or time series breaks		✓	
Limited privileged pre-release	✓		
Information on new user demands	✓		
Multiple information carriers, including hard copy	✓		
Metadata		✓	

RECOMMENDATIONS

The recommendations in comparison with the *acquis in statistics* of the employment and earnings survey, labour cost survey and job vacancy survey are the following:

Principle 8: Appropriate statistical procedures

Sample design, reference period and coverage

a. A (rotation) sample survey of small and micro enterprises [29] should be used for the Employment and Earnings Survey and the Labour Cost survey to reduce the survey burden.

   Corollary: in this case, the sample data should be reweighted to the population totals by industrial activity (at least at the level of sections), size class and region (*iqtisadi rayonu*) to improve the accuracy; this goes one step further than the application of a Horvitz-Thompson estimator because it takes into account the updated population totals of businesses in the business register.

   Corollary (bis): sampling errors should be estimated for the main estimates of the employment and Earnings Survey, the Labour Cost Survey and the Job Vacancy Survey to inform users about the precision of the estimates

b. In the (multi-)annual Employment and Earnings Survey, earnings data should be captured for a sample [30] of individual employees from a complete list of all employees on the payroll instead of aggregates for categories of employees [31] in order to estimate hourly earnings, to describe the distributional characteristics of earnings and to determine the low-wage earners.

c. Outworkers or contractors who are remunerated on the basis of products or services they delivered or who are paid by fees should be excluded from the Employment and Earnings Survey [32].

d. A quarterly survey should be launched to collect data for the short-term statistics on hourly labour costs, compensation of employees and employer's social contribution besides the current survey on the structure of labour costs.

Fieldwork

e. The local unit should be the preferred unit to collect quarterly survey data on job vacancies except for the public administration, NACE section O; one reference day per month is sufficient instead of a data collection of an average of observations on all calendar days.

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[29] There are over 100 thousand small and micro enterprises with 25 employees or less according to the SSC classification (https://www.stat.gov.az/menu/6/statistical_yearbooks).

[30] Even when administrative data could be retrieved for all payroll employees, some indicators and characteristics may be missing and must then be surveyed for a sample.

[31] In the current questionnaire form labour-1.

[32] ESA 2010, § 4.07e.

Questionnaire and concepts

f. The following additional variables should be captured by the Employment and Earnings Survey, the Labour Cost Survey and the Job Vacancy Survey:

1) in the Employment and Earnings Survey, whether a collective pay agreement is concluded and on which level because wage trends can be different in these settings;

2) in the (multi-)annual Employment and Earnings Survey, the gross monthly earnings per individual employee for overtime and shift work because they are different from the normal earnings; furthermore, the following individual employee characteristics should be distinguished: years of service in the enterprise, type of employment contract and the share of part-time to estimate full-time equivalents [33];

3) in the Employment and Earnings Survey, payments in kind should be excluded from gross monthly or hourly earnings; severance payments should always be excluded from earnings irrespective of the payment period;

4) in the (multi-)annual Employment and Earnings Survey, the number of weeks paid during the year to calculate annual earnings;

5) in the Employment and Earnings Survey, the number of hours paid should be captured to calculate the average hourly earnings; in the Labour Cost Survey, the number of hours paid by full-time/part-time should be captured besides the number of hours worked because it allows to describe formal entitlements;

6) in the Labour Cost Survey, the inclusion of the items included in the total wages and salaries (D11) should be verified in detail, e.g., exceptional length of service awards and employee recognition awards and remuneration not paid in each period, sales commission, duty or on-call payments etc.

7) in the Employment and Earnings Survey and the Labour Cost Survey: to distinguish apprentices from full-time or part-time employees because their earnings are concentrated in the left tail of the earnings distribution and because wages/salaries are only part of their remuneration

g. The estimates of the quarterly Job Vacancy Survey may be an average of the representative days for the reference months instead of an average of observations on all calendar days.

Data processing: data entry, editing and coding

h. Errors are edited by the respondent business subject to control by the statistical office, a table should be added on the causes of the errors to detect systematic errors, to monitor the data processing and to revise the data collection tools.

i. Representative outliers [34] should be identified and dealt with (e.g., trimmed or substituted) in order to reduce their excessive impact on the results.

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[33] See presentation on the "Conceptual and Operational Framework of Business Statistics on Labour" by A. Van Bastelaer and Z. Priede on April 11, 2019.

[34] Correct observations for which similar values occur in the population.

Principle 10: Cost effectiveness

j. The data collection and data processing system for earnings and labour costs should be developed on a wider basis of administrative sources [35], for example, social security files [36] instead of surveys in order to reduce survey burden and to increase efficiency. This would require intensive cooperation with the stakeholders – mainly ministries but also the data suppliers.

Corollary: a formal, institutional and conceptual framework should be elaborated to be used for the retrieval of the statistical data.

Principle 12: Accuracy and reliability

k. In the case of (partial) non-response, for small and micro businesses, the sample data from small and micro businesses should be reweighted to the population totals by industrial activity (at least at the level of sections), size class and region (*iqtisadi rayonu*) to improve the accuracy; for large and medium-sized enterprises, data imputation should be applied, e.g., to copy forward data from the previous survey round, ratio estimation or (multiple imputations on the basis of) a sequence of regressions [37].

l. In the case of a second-stage sample of individual employees – instead of an exhaustive enumeration – or non-response in the Employment and Earnings Survey, the sample data should be reweighted by sex and possibly by age, full-time/part-time or non-manual/manual to improve accuracy when these population totals are available; when these are missing, a post-stratification should be applied where the strata refer to the categories in the business register. The initial weights should take into account the net sample – after exclusion of some employees who were not paid during the reference month.

m. Monthly and quarterly data should be seasonally adjusted using the Tramo & Seats method [38] or JDemetra+ [39]; in this respect, seasonally adjusted monthly or quarterly change estimates should be disseminated instead of the monthly year-to-year changes [40].

n. Revisions may occur when estimates from monthly or quarterly surveys are benchmarked on annual surveys or when additional data from late responses become available; the effects of a data revision should be quantified and reported [41] to be transparent on these improvements.

Principle 13: Relevance

o. A blueprint of the statistics to be disseminated should be drawn up, in particular the specific indicators, their detail and their frequency for consultation with the users where the statistical informational value is explicit.

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[35] Research into the statistical burden on enterprises is an objective of the 2018-2025 state program on the improvement of official statistics.

[36] Database of Ministry of Labour and Social Protection of the Population.

[37] Ragunathan T.E., Lepkowski J., Van Hoewyk J. and Solenberger P. Multivariate Technique for multiple imputing missing values using a sequence of regression models. Survey Methodology 27, June 2001, p. 85-95

[38] an autoregressive and moving average model, Banco de Espana (https://www.bde.es/bde/en/secciones/servicios/Profesionales/).

[39] National Bank of Belgium (https://www.nbb.be/en/publications-and-research).

[40] For ex., average monthly nominal salary https://www.stat.gov.az/news/macroeconomy.php?page=1&lang=en.

[41] Regulation for the review of the main statistical indicators, SSC, Baku April 2012.

Principle 14: Coherence and comparability

p. Whereas employment data from the employment and earnings survey and labour cost data from the labour cost survey are used as input for compensation of employees and employment in the generation of income account of national accounts, the results of the comparison of the business survey data with the national accounts data, viz., the adjustment of the compensation of employees and the level and volume of employment should be discussed by the statisticians of the labour statistics and national accounts departments. This may be a topic for the regular training sessions organised by the department of labour statistics. This will corroborate the use of the employment, earnings and labour cost data from the business surveys.

Principle 15: Accessibility and clarity

q. A comprehensive online dataset of tables with a time-series of quarterly and annual data on earnings and labour costs [42] with detailed breakdowns should be disseminated to do fully justice to the design of the employment and earnings survey and the labour cost survey and to avoid the compilation of custom-made tables.

r. In the domain of macro-economic indicators, a core set of short-term indicators on labour costs and job vacancies should be disseminated besides the current average monthly salary to monitor economic performance and labour market pressure. The labour cost index should be a chained [43] Laspeyres index at base year weights.

s. Provisional (flash) estimates, revised data, time series breaks, and confidential results should be flagged in the online dataset of tables to assist the data users.

t. The metadata should clearly distinguish the designs and the measured concepts of the Employment and Wages Survey from the Labour Cost Survey and the short-term labour cost index. The metadata should unambiguously specify the coverage [44], i.e., the target population consists of employees with a written contract. Other metadata ought to be more complete, precise and technical, particularly, the survey design (partly exhaustive survey, partly a sample), time series breaks, the actual revision practice, the coherence of the monthly and quarterly with annual results and the statistical. These metadata are necessary because users are not in a position to detect errors by observing the data alone. Metadata should be added on the job vacancy statistics based on a survey to distinguish these from the register-based data from the State Employment Service.

u. Whereas data interpretation and reporting belong to the core business [45] of the statistical office, an analysis and description of the key trends on the labour market should be added to the quarterly statistical bulletin, currently limited to the dissemination of only data – as this is the case already in, for example, the quarterly bulletin on "Socio-economic Development".

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[42] EES since 1999 but NACE rev.2 since 2009, annual LCS since 2008 (according SSC metadata) or 2011, JVS since 2012.

[43] Weights are updated yearly.

[44] Item 3.6 "statistical population" of the average monthly wages indicator on the SSC website [https://www.azstat.org/MetaDataInd/] and item 2.2 "Scope" on the IMF website (https://dsbb.imf.org/e-gdds/dqaf-base/country/AZE/category/WOE00), last update in January 28, 2019.

[45] Transformation of statistics into information.

List of actions to implement the recommendations

The short-term and medium-term action**s** to implement the above recommendations are described in the following synopsis. Short-term recommendations concern the specification of the indicators on earnings, labour costs and job vacancies, the development of the design and further operations for their measurement, the questionnaire and the data processing. Medium-term actions concern the later stages of statistical processing, dissemination and data analysis.

Object	Actions
Short-term:	
Blueprint of indicators to be disseminated	• Define short-term and structural indicators with their breakdowns • Balance statistical capabilities and response burden with user demands • Get feedback from the users
Wider use of administrative sources	• Build relationships with administrative data providers • Analyse the definitions in potential administrative sources • Establish service level agreements with the administrations • Develop procedures to retrieve the data
Sample survey of small and micro enterprises and estimation	• Determine the sampling fraction by stratum taking into account the desired precision • Select the sample • Apply a statistical method for (re-)weighting of the sample data
Earnings data for individual employees (distributional characteristics): data collection and estimation	• Decide on the frequency of the collection of structural data by individual employees (annual or multi-annual) • Specify a rule for the 2nd stage sample of individual employees to be applied by the business • Verify the exclusion of outworkers, contractors • Develop a questionnaire to capture data for individual employees • Implement this new design • Estimation: to reweight the raw data • Compare the corresponding estimates of the new design with the previous results from the exhaustive enumeration of employees • Disseminate the full results
Short-term statistics on labour costs (LCI)	• Determine which variables are available from other (monthly or quarterly) surveys, account systems or registers • Launch a complementary data collection • Compile the main indices by NACE section

Object	Actions
Quarterly data collection on job vacancies from local units	• Organise the quarterly data collection on the level of local units • Adapt the questionnaire form • Explain the new method to the respondent businesses
Questionnaire: additional variables in the Employment and Earnings Survey and Labour Cost Survey and compliance with international definitions	• Add variables • Verify the items included in specific labour costs components and gross earnings • Distinguish apprentices • Test the new questionnaire form before using it in the regular survey
Monitoring the editing, imputation and data revision process	• Build a log file for short descriptions of causes of edits, imputations or revisions
(Partial) non-response adjustment	Dependent on the size of the enterprises: • Apply post-stratification or • Apply imputation or ratio estimation
Medium-term:	
Representative outliers	• Identify representative outliers • Treat these outliers
Seasonal adjustment	• Graphical analysis of the time series of at least 4 years (for quarterly data) or 3 years (monthly data) • Apply the Tramo & Seats or JDemetra+ tool
Additional short-term, macro-economic indicators	• Prepare a news release on the LCI • Disseminate a core set of short-term indicators on labour cost and job vacancies
Comprehensive online dataset	• Specify the tables of a comprehensive database • Create the database • Load the data • Add flags for empty cells, provisional, revised, unreliable or confidential data and for time series breaks
Coherence of labour cost and employment estimates from the Labour Cost Survey and the Employment and Earnings Survey with National Accounts	• Compare labour cost and employment estimates from the business surveys with National Accounts • Analyse the adjustments of the labour cost and employment estimates
Metadata	• Verify and to update metadata

Object	Actions
	• Add specific and proper metadata
Analysis and description of key trends on the labour market	• Analyse and to prepare quarterly news releases on key trends on the labour market

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