

Sector Review of the Implementation of the Labour Force Survey in Israel

**Final report
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LIST OF ABBREVIATIONS

AGA	Adapted Global Assessments
BOI	Bank of Israel
CAPI	Computer-Assisted Personal Interviewing
ICBS	Israel's Central Bureau of Statistics
ICLS	International Conference for Labour Statisticians
CATI	Computer-Assisted Telephone Interviewing
EA	Enumeration Areas
ENP	European Neighbourhood Policy
ESA 2010	European System of Accounts 2010
ESCoP	European Statistics Code of Practice
ESS	European Statistical System
ESS QAF	Quality Assurance Framework of the European Statistical System (ESS QAF)
EU	European Union
EU-LFS	European Labour Force Survey
GDP	Gross Domestic Product
GS	ICBS Government Statistician
ILO	International Labour Office
IMF	International Monetary Fund
ISCED	International Standard Classification of Education
ISCO	International Standard Classification of Occupations
ISIC	International Standard Industrial Classification
LFS	Labour Force Survey
LPR	Light Peer Review
NACE	Statistical classification of economic activities in the European Community
NIS	New Israeli Shekel (national currency)
NSI	National Statistics Institute
NSS	National Statistics System
OSA	Other Statistical Agencies
PAPI	Paper and Pencil Interviewing
PSU	Primary Sampling Units
PCS	Public Council for Statistics
SAQ	Self-assessment Questionnaire
SDDS	Special Data Dissemination Standards
SR	Sector Review
SO	Statistics Ordinance
UNECE	United Nations Economic Commission for Europe

Preface

1. The scope of this Sector Review (SR) is to assess the Labour Force Survey (LFS) carried out by Israel's Central Bureau of Statistics (ICBS). This SR was undertaken in the Framework of the Eurostat funded project '*Assessment of the statistical systems and selected statistical areas of the enlargement and ENP countries*'. GOPA-Worldwide Consultants, under the contract (no. 60803.2012.002-2012.421) with Eurostat, was responsible for the organisation of all activities and tasks related to the SR. The SR process was initiated by Eurostat on the basis of a request made by ICBS.
2. This SR with had two main objectives, namely: (i) to assess the administrative and technical capacity of the ICBS to produce high quality statistics from the LFS, and (ii) to assess the implementation of the labour force survey against the acquis. The reviewers used the European Statistics Code of Practice (ESCoP), as the main guidelines for carrying out this SR. This approach also allowed the reviewers to assess whether the LFS-methodology implemented by the ICBS is coherent with that of the EU-LFS, which ultimately determines whether labour market statistics produced for Israel can be compared with EU figures.
3. This SR was carried out on the basis of a detailed self-assessment questionnaire (SAQ). The SAQ covered the following aspects: institutional environment, statistical processes, statistical outputs and future planning.
4. The review findings are the result of the analysis of documents provided by ICBS, documents available on the ICBS website, and information collected and discussed during the in-country mission 6-9 July 2015.
5. Discussions supplemented the information provided in the SAQ. ICBS provided additional documents during the in-country mission.
6. Collaboration between the review experts and the ICBS team was constructive throughout all phases of the SR

1. INTRODUCTION

1.1. The Labour Force Survey

7. The Labour Force Survey (LFS) is a large household survey, designed to produce timely statistics on the participation in the labour market, as well as on persons outside the labour force. In many countries, these statistics are collected on a continuous basis, and results are produced on a quarterly basis. Many of the countries even produce monthly estimates on the labour market, which are derived either directly from the LFS, or through mathematical models. The LFS can very well be regarded as one of the ‘oldest’ social sample surveys, having been carried out in many countries for quite a number of years.
8. Within the European Union (EU), this survey is governed by a Regulation (Council Regulation (EC) No. 577/98 of 9 March 1998) which ensures the highest possible quality results and full harmonisation of results compiled across the Member States. Definitions of employment and unemployment in the European Labour Force Survey (EU-LFS) also follow the guidelines issued by the International Labour Office (ILO), establishing principles for measuring employment and unemployment in a comparable way.

1.2. Sector Reviews

9. As part of its role in international cooperation in statistics, Eurostat also assists enlargement countries¹, as well as countries covered by the European Neighbourhood Policy (ENP)², through projects aimed at developing the production and dissemination of statistics in line with European and international standards. As part of this strategy, Eurostat has already carried out a series of adapted global assessments (AGA’s) and light peer reviews (LPR’s) in the enlargement and ENP countries.
10. Further to these reviews, Eurostat launched a series of Sectoral Reviews (SR’s) which focus on statistical processes, rather than on the entire statistical system. More specifically, a SR comprises:
 - An assessment of the statistical production of the relevant sector;
 - An assessment of the statistical production against the acquis;
 - A review of medium and long-term plans within this sector;
 - A proposal of a list of actions to be undertaken in order to improve the data delivery and functioning of the sector under review.

¹ Enlargement countries are: Albania, Bosnia and Herzegovina, the former Yugoslav Republic of Macedonia, Iceland, Kosovo, Montenegro, Serbia and Turkey. The designation of Kosovo is without prejudice to positions on status, and is in line with UNSCR 1244 and the ICJ Opinion on the Kosovo declaration of independence.

² The ENP countries are: Armenia, Azerbaijan, Belarus, Georgia, Moldova, Ukraine, Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Morocco, Palestine, Syria and Tunisia.

1.3. General Legal and Institutional Frame

11. The ICBS was created in 1948 operates as an independent body within the Office of the Prime Minister, under the Statistics Ordinance [New Version], 5732-1972 (SO). Since 1972 the SO has been amended three times: in 1978, 2008 and 2010. All functions of the ICBS are stipulated by this Ordinance.
12. The institutional mandate of ICBS is to “provide updated, high quality and independent statistical information for a wide variety of users in Israel and abroad”. The ICBS prides itself on its independence, with the Government Statistician (GS) having full responsibility on all matters pertaining to the ICBS. High importance is given to transparency in all the ICBS operations, even at the cost of excess bureaucracy and lack of flexibility.
13. ICBS maintains very good relationships with national Organisations and policy makers, including Ministries, Government Departments and the Bank of Israel (BOI). During the past years, ICBS has strengthened its relationships with international organisations, including the International Monetary Fund (IMF), United Nations (UN), International Labour Organisation (ILO), the Organisation for Economic Co-operation and Development (OECD) and Eurostat.
14. The ICBS has joined the Special Data Dissemination Standards (SDDS) thus fulfilling the requirements of the IMF with a view of enhancing the availability of timely and comprehensive statistics in order to support macroeconomic policies³. As a member of the SDDS, the ICBS satisfies a series of criteria (e.g. advanced news release calendar), which are also of interest for this SR.

1.4. General Overview of the Labour Force Survey in Israel

15. The LFS is one of the ‘oldest’, yet most relevant sources of labour market statistics in Israel, having been conducted by the ICBS since 1954.
16. Today, the ICBS publishes twelve monthly statistical reports and four (more detailed) quarterly statistical reports from the LFS. The ICBS also produces an LFS publication every year. Anonymised LFS micro-data is made available to researchers in order to allow for more advanced statistical analysis. The ICBS also compiles seasonally adjusted unemployment and employment rates, using LFS monthly statistics.
17. The sampling design for this survey allows for the production of relatively high quality monthly statistics from the LFS. On average, 21,500 persons aged 15 years and over are interviewed every month. The ICBS compiles a fairly exhaustive set of labour market indicators from the LFS every month, and a more complete set of indicators on a quarterly and on an annual basis.
18. The ICBS follows the methodology and harmonised definitions as stipulated by the International Labour Office (ILO).

³ Please refer to the book “The Special Data Dissemination Standard: Guide for Subscribers and Users” <http://www.imf.org/external/pubs/ft/sdds/guide/2007/eng/sddsguide.pdf>.

19. LFS data collection falls under the direct responsibility of the Survey Department, which collaborates with the ICBS three regional offices in Jerusalem, Haifa and Tel Aviv, which coordinate the fieldwork. The Survey Department also manages data collection by telephone interview (CATI). The ICBS uses one CATI centre for the purpose of LFS which is located in the ICBS central office in Jerusalem.
20. Data collection is carried out in collaboration with the Information Technology Department, which is responsible for maintaining the IT infrastructure required to support the LFS data collection (incl. CAPI/CATI system). This data is then analysed by the Labour Statistics Sector, which also compiles the results. The Labour Statistics Sector is supported by other departments, including (i) the Statistical Methodology Department, responsible for sampling, weighting and computation of sampling errors; (ii) the Publication Department, responsible for preparing the final tables for publication; and (iii) the Information Dissemination and Medial Relations Department, responsible for coordinating requests for information, and dealing with feedback from the media.
21. Israel's LFS has undergone many changes since its first launch in 1954. During its first years, the LFS was designed to cover between 1 and 4 weeks of the reference year. Moreover, the sampling frame used for this survey was not fully exhaustive, leaving a part of Israel's population out of the target population. In 1960, the LFS data collection period was extended to cover the whole year and the population coverage was extended. By 1976, Israel's LFS was covering nearly the entire population, including potential immigrants. In 1978, the ICBS introduced more questions required for national policy as well as for international comparability. In 1998, ICBS implemented further improvements in the sampling and weighting methodology. In 1999, the ICBS also introduced mixed-mode data collection through the introduction of computer assisted telephone interviewing (CATI), in addition to the traditional paper interviewing (PAPI). Another major methodological improvement was made in 2012 when ICBS changed the LFS rotational sampling scheme. This measure allowed for the transition from a quarterly to a monthly LFS
22. The ICBS is also exploring new possibilities to exploit administrative data for the purpose of this survey. In this regard, plans are underway to start merging income tax data with the LFS in order to compile statistics on wages also from the LFS. The same kind of investigation is being made for information related to educational attainment and enrolment.

2. FINDINGS

2.1. Institutional Environment

MANDATE FOR DATA COLLECTION AND STATISTICAL CONFIDENTIALITY

23. All statistical enquiries carried out and published by the ICBS, including the LFS, are governed by SO. The SO defines the role of the ICBS as the main official source of national statistics in Israel⁴, as well as the ICBS mode of operation. The SO defines the ICBS obligations, its mode of operation, as well as its independence. The SO empowers the ICBS to collect data from individuals and businesses, and obliges respondents to provide information in a timely and accurate manner
24. Article 15 of the SO empowers the ICBS to access administrative records which are either maintained by public or private institutions, for the purpose of statistics. Although the SO allows the ICBS to access administrative registers for statistical purposes, it fails to authorise the ICBS to demand changes in existing (or new) registers in order to facilitate statistical production.
25. Statistical confidentiality is guaranteed by the SO, which also imposes severe penalties against persons who misuse or divulge individual information collected by the ICBS under this Ordinance. Israel has already been recognised by the European Commission as compliant with the standards which are currently set for handling confidential information according to the EU Data Protection Directive.
26. The SO also obliges the ICBS to safeguard the data collected from surveys and administrative registers, and allows the ICBS to use identifiable information only for statistical purposes.

ADEQUACY OF RESOURCES

27. In general, the ICBS managerial team feel that the magnitude of staff resources suffices to maintain the existing LFS setup. The quality of staff resources is also deemed as satisfactory in order to meet all technical requirements.
28. In 2013, the ICBS had 49 full-time employees assigned primarily to the LFS. This number was reduced to 44 workers in 2014, based on the improvements in data collection that was carried out during the period 2012 - 2013.
29. On the other hand, the ICBS data collection team is currently facing difficulties in maintaining a strong team of professional interviewers, even though a rather attractive remuneration package is in place. The ICBS personnel also complained of excessive bureaucracy within the public sector, which causes serious delays in recruitment processes.
30. The feedback from the ICBS personnel was relatively positive regarding the quality of computing resources used for LFS. In fact, the ICBS has a relatively strong IT infrastructure which supports multi-mode (CAPI/CATI) data collection and data management systems.

⁴ Article 3 of the SO

31. Although the ICBS has not yet developed its own data warehouse, the existing IT infrastructure allows for efficient data sharing between production and support units involved in the collection and processing of the LFS data. Security of information is taken very seriously, and many measures are already in place in order to avoid any intentional, or incidental, misuse of information.
32. The managerial team is still of the opinion that more investment is required in the LFS' IT infrastructure in the future. The ICBS also plans to enhance its security systems even further.
33. The ICBS personnel feel that the current level of financial resources does not suffice to support the existing LFS framework. In fact, the ICBS is seeking ways in order to access more funds from the Central Government specifically for this survey, also in order to implement improvements in the coming years. The ICBS is also open to opportunities for accessing grants from International Institutions, which could support projects aimed at improving the LFS.
34. The ICBS allocated 17.0 million NIS (approx. €4.09 million) to the LFS in 2013, which was then reduced 15.8 million NIS (approximately € 3.80 million) in 2014. The spending in 2014 is equivalent to 0.0015 per cent of the Israel's gross domestic product, measured for the same year.

Table 1. Israel's LFS - annual budget: 2013 - 2014

Year	Full time staff		Annual budget			
	Total	Thereof: IT	Total (NIS)	Thereof: IT (NIS)	Per 100,000 population (NIS)	Percentage of GDP
2013	49	8	17.0 million	1.5 million	211,000	0.0016
2014	44	6	15.8 million	1.0 million	193,000	0.0015

35. Most of the technical staff working on the LFS are qualified in statistics, or in a related field of study. They also have a long experience working on social surveys and compiling social statistics. Some of the ICBS workers have also studied abroad and even had the opportunity to work abroad.
36. The ICBS appreciates the need for further training for its employees for developing their skills. All personnel are encouraged to attend externally and internally organised training courses, as well as conferences. In particular, all staff members are expected to attend training courses equivalent to 40 hours of learning per year. Measures are in place so as to ensure that training resources are spent fairly and that all personnel are given equal access to training opportunities.
37. In 2015, the ICBS developed an internal course on LFS. This course is currently being offered only to internal staff that is either directly or indirectly involved in this survey. The ICBS also plans to offer similar courses to external users of statistics in the medium term.

QUALITY OF LFS OFFICIAL STATISTICS

38. Israel's LFS has been subject to many changes during the past years to improve both the quality and quantity of official labour market statistics produced.
39. Whenever possible and relevant, LFS statistics are compiled using harmonised methodologies as recommended by internal organisations (incl. Eurostat). This allows for comparability of results derived from the LFS, with labour market statistics produced for other countries.
40. The ICBS seeks guidance from International Organisations, such as ILO and Eurostat, in order to improve the quality of its work. The ICBS also consults with users and policy makers on a regular basis, who provide feedback on the quality of the work carried out by this office. The PCS is also consulted by the ICBS on technical matters and quality issues.
41. ICBS does not yet have a written policy on quality. However, at the time of this review work is underway on the implementation of a new quality control policy, which will also take on board all the recommendations from the Quality Assurance Framework of the European Statistical System (ESS QAF). In addition, the ICBS plans to start using Eurostat's quality report framework as an effective tool for documenting quality and identifying the needs for improvement.
42. The Survey Department is assisted and supported by a Quality Assurance Unit, which contributes towards ensuring the quality of information both at collection and dissemination stage.
43. The quality of the LFS is measured at many levels and using a variety of parameters. On a regular basis, the LFS team compiles and analyses the quality indicators related to data collection done by interviewers. Interviewers are graded for their work; those with low grades receive additional instructions. Quality indicators related to coding are produced and analysed from time to time.
44. There is no specific publication devoted to all measures of quality for the LFS. However, data published on the website are accompanied by tables containing detailed information on non-response rates by reason, vacant dwellings and sampling errors.

DISSEMINATION

45. Every month, an exhaustive set of tables from the LFS is disseminated on the ICBS website. Apart from these tables, the ICBS publishes - on its website - a short commentary highlighting the main findings from this survey as well as methodological notes. The ICBS also publishes estimates of precision (i.e. sampling errors) for the major LFS indicators, and more detailed statistics from the LFS on a quarterly basis. In addition to information on the website, there is a list of 'privileged' users who receive LFS commentaries also by email.
46. All users are given equal and simultaneous access to LFS statistics, except for a number of accredited journalists who, under request, are given access to news release tables under embargo 15 minutes before publication on the website. The list of accredited privileged journalists is held by the Information Relations and Media Dissemination Department.

47. The ICBS has a revision policy⁵ which is available to the general public. This policy provides guiding principles for dealing with major and minor revisions.
48. Major methodological changes, such as the transition from a quarterly LFS to a monthly survey which occurred in 2012, are announced in advance. In this case, the whole project took nearly seven years, during which the ICBS held several consultations with members of the PCS, Government Ministries, Academic Institutions and other users. Methodological details were presented at users' seminars and a formal announcement to the general public was made at least one year before the revised data were published.
49. In cases of major revisions, the ICBS also carries out impact assessments to measure the effects of these revisions on the main statistical indicators. Whenever required (e.g. major change in a classification), the ICBS carries out revisions on past data to avoid breaks in time series.
50. LFS estimates are rarely revised unless some mistake is detected in published data. In particular monthly LFS statistics are never revised, while quarterly estimates are revised only in rare circumstances. Revisions in LFS data were not even deemed as necessary further to the latest (2008) Population and Housing Census.
51. An error procedure sets procedures for dealing with mistakes found in news releases. The policy states that these errors should be immediately corrected and communicated to the users. An errata-corrige, containing details of the mistake and the correction are issued on the website. This statement contains the time and day when the correction was made.

2.2. Statistical Processes

METHODOLOGY

Infrastructure

52. The overall methodological framework used for the compilation Israel's LFS statistics mainly follows international standards and good practice. All concepts, definitions and classifications used for the LFS were designed to follow ILO recommendations, in line with Eurostat's methodological guidelines.
53. The ICBS has adequate expertise and offers continuous vocational training to all staff so that they improve their technical knowledge. Good co-operation exists between all relevant Statistical Sectors and Supporting Units. The ICBS cooperates with the scientific community in order to improve its methodology and statistical tools.
54. Decisions on statistical methods used for sampling, data collection, data editing, imputation, weighting (and calibration) and codification, are taken by the units of the ICBS responsible for production and methodological issues. Methodological changes need to be approved by the top management before being implemented.

⁵ http://www.cbs.gov.il/publications/idkun_e.pdf

55. While the production of LFS results falls under the responsibility of the Labour Statistics Sector, the responsibility for developing methodology and monitoring the quality of this survey falls on the Statistical Methodology Department. This Department also reviews periodical bulletins before publication.
56. Sampling for LFS falls under the responsibility of the Statistical Methodology Department, which establishes the methodology for maximising the LFS's sampling efficiency. This Department is responsible for maintaining and updating the LFS sampling frame. This work is done in collaboration with the Labour Statistics Sector, which also provides regular updates from fieldwork.
57. In addition, the Statistical Methodology Department determines the weighting and imputation frameworks, and prepares statistical procedures for the Labour Force Sector. The Information Technology Department provides the IT infrastructure supporting the LFS process. In particular, this Department is responsible for creating and maintaining data collection and management tools, coding tools, data checking tools and data dissemination tools. LFS coding is managed by the Labour Statistics Sector.

Technical Staff

58. The ICBS follows the same recruitment policies as designed for the wider Public Sector. This guarantees transparency although it hinders flexibility. Despite the difficulties, the ICBS managed to engage and retain a very good team of professionals for the LFS offering a positive 'mix' of long-term experience and academic knowledge.
59. All staff are committed to producing high quality and relevant statistics and a high level of enthusiasm is perceived at all levels. Nevertheless, all staff involved in the production of LFS acknowledges the need for further improvement in certain areas.

Survey Design

60. Israel's LFS is carried out on a continuous basis with a monthly sample, representative of the whole target population and with full geographical coverage. As from 2012, the LFS became a monthly survey. This significant methodological improvement entailed a considerable increase in the monthly sample size in order to allow for the production and dissemination of reliable monthly, quarterly and yearly results.
61. The monthly sample comprises approximately 12,000 dwellings, and consists of 8 complementary rotational groups (panels) of equal size. Every responding household is thus interviewed eight times according to a pattern known as 4-8-4 (four consecutive months of surveys followed by a break of eight months and then another four consecutive months of data collection) such that each responding household is visited 8 times over a period of 16 months.
62. The annual sampling fraction is about 0.7 per cent of the target household population. Each year, a new sample is selected. It is divided into 12 panels in order to ensure new entrants at stage 1 every month (replacing the stage 8 leaving investigation that month). This rotation pattern has a great advantage over other sampling methodologies, because it reduces effectively sampling

errors of estimates of changes between two consecutive months and two consecutive years (the sample overlap in two consecutive months is 6/8, while half of the sample is interviewed again the same month of the following year).

63. The reference weeks are spread throughout the year almost evenly. When transitioning to the monthly survey, the goal was to cover a representative sample of individuals for each month. Every panel is thus spread uniformly across four weeks per month, so that in approximately every quarter there is an “empty week” where data collection from the previous month is completed but collection from the current month has not begun.
64. The empty week is identified well in advance according to precise rules at the planning stage. Data collection begins in a week that includes the 8th of the month. This ensures that in most cases, investigation in the first week covers the beginning of the calendar month (since questions are asked about “last week”).
65. The decision to leave one empty week has been taken for practical reasons and does not have a significant impact on the representativeness of the sample in time and space. In fact, this empty week is normally used by the ICBS to carry out adjustments in the data collection tools, amendments in the internal IT infrastructure (e.g. updates to the computerized questionnaire and general system maintenance), and for training of/feedback to the interviewers, if required.

LFS questionnaire

66. The LFS questionnaire follows many of the ILO recommendations for measuring labour market statistics⁶. In particular, it contains all the questions required for the calculation of the unemployment rate according to the ILO definition. The last major change in the LFS questionnaire was carried out in 2000, during which the ICBS updated the module on education, and added questions on discouraged workers and finding employment from employment agencies.
67. Israel’s LFS questionnaire does not fully comply with the twelve principles stipulated in Annex 2 of Commission Regulation 1897/2000. More details regarding these divergences are provided in the section entitled “Divergences of national concept from European concepts and requirements”.
68. Given that in Israel the weekend is Friday-Saturday, the reference week used in LFS goes from Sunday to Saturday (not Monday to Sunday like in European countries).
69. The ICBS currently uses two versions of the questionnaire, namely (i) a full version for the first wave, documented in the web publications (CAPI) and (ii) a ‘reduced’ version for follow-up telephone surveys (CATI) which also uses dependent interviewing⁷.
70. The use of dependent interviewing allows the ICBS to reduce the burden on respondents because some variables collected in the first wave are not asked again when it is recognised that the situation has not changed from the previous interview. Some of the variables for which dependent interviewing is used are: educational attainment, industry and occupation.

⁶ Although some differences from the recommended ILO-methodology exists, as highlighted below in the paragraph “Divergences of national concept from European concepts and requirements”

⁷ Only the standard questionnaire for the first interview is documented on the website, while the questionnaire for re-interviews is not currently available. A description of the verifications and imputations is presented in the Methods section of the annual publication.

71. Both versions of the questionnaire allow for proxy interviews which in combination with dependent interviewing aims at reducing the burden on respondents and the cost of data collection, whilst improving timeliness. The reviewers believe that the ICBS might be over-using these two modes of data collection at the detriment of quality.
72. Data collected from fieldwork is transferred to a centralised database from which all calculations are made every month. Quarterly or annual estimates are obtained by a simple average of 3 or 12 months (monthly weight divided by 3 for quarterly estimates and monthly weight divided by 12 for annual estimates). Therefore monthly, quarterly and annual estimates are consistent.
73. From the discussions, it appears that under the current LFS infrastructure, the ICBS has difficulties with implementing rapid changes in the LFS questionnaire. Technical difficulties seem to exist with adding new variables and/or ad-hoc modules in order to address new user needs in an effective (i.e. timely and economical) manner⁸. This is also related to the fact that the questionnaire is not completely organised into module and sub-modules, making every change very difficult.

Classifications

74. The ICBS currently uses a custom-made national classification for coding of occupations, namely Standard Classification of Occupations 2011⁹, which can be mapped both on ISCO-88 and the latest ISCO-08. The ICBS is therefore able to code past time series data on occupations using both classifications.
75. The ICBS also uses a national classification for coding industries, referred to as Standard Industrial Classification of All Economic Activities 2011¹⁰. This classification is based on, and therefore can be converted to, ISIC Rev.4. This is also in line with international recommendations. Although many of the codes in ISIC Rev. 4 can be linked to NACE Rev. 2, reviewers have identified a number of cases where one-to-one mapping (at 4-digit level) between these two classifications is not possible. Still, the minimum European requirements for coding of economic activities in the LFS are satisfied since this linking suffices to provide reliable data at NACE division and section level.
76. In order to classify current and highest achieved level of education, the ICBS uses a pre-defined list of education levels, which can be mapped both to ISCED 1997 and ISCED 2011, thus satisfying all European requirements. Harmonised data on education, which is collected from LFS, is submitted to OECD and ILO on a regular basis.
77. Status in Employment is collected and coded according to the International Classification of Status in Employment: ICSE-93.

⁸ Despite these difficulties, the reviewers note that the ICBS still managed to develop a new ad-hoc module on health, which is planned to be included in the LFS in 2016.

⁹ Technical Publication no. 81, final version to be published by the ICBS in few months

¹⁰ Technical Publication no. 80, http://www.cbs.gov.il/webpub/pub/text_page_eng.html?publ=94&CYear=2011&CMonth=1

LFS target population

78. Israel's LFS target population is made up of all the permanent (*de-jure*) population of Israel aged 15 years and over, who in the majority, are living in households. The concept of 'resident population'¹¹ used for the purpose of this survey is practically in line with international recommendations, with some exceptions. In particular, the LFS's target population includes (i) Permanent residents who are currently living abroad for a year or less, and (ii) temporary residents living in Israel continuously for more than one year.
79. The following persons are excluded from the target population: (i) former residents from Israel, who are now living abroad for a period of more than 12 months, (ii) temporary residents living in Israel continuously for a year or less. (iii) Foreign representatives (ambassadors etc.) are also excluded.
80. Another important concept for the purpose of the LFS is that of a household. The ICBS LFS defines a household as a group of "persons living together in one dwelling on a permanent basis for most of the week and who have a common expense budget for food".
81. The ICBS has established many other different criteria in order to determine whether a person has to be regarded as a household member when he/she is residing in the household for less than four nights per week. These criteria can be found in the ICBS methodological notes, which can also be downloaded from the ICBS website¹². After analysing all these criteria, one can conclude that the definition of 'usual residence' and the household concept used in the LFS is practically in line with international (mainly UNECE/Eurostat) concepts
82. However, there are differences, which might affect comparability of results. For example, persons who are currently living in boarding schools are considered as household members in Israel's LFS, whereas they should not be regarded as household members according to UNECE recommendations.
83. Children living in school dormitories are not considered as part of the household, if the household is interviewed during the scholastic period, whereas they are included if the household is interviewed during holiday period. Although this criterion might be required in order to facilitate the data collection process (mainly in order to reduce the possibility of double counting), it is again not in line with international recommendations.
84. The ICBS definition of household members also includes married persons who are currently not living with their partner for work or study reasons. This is done in order to avoid the possibility that these persons are investigated in more than one dwelling. These persons should be excluded from that household according to UNECE recommendations, even though they have family ties.
85. A family member who has been hospitalised for more than one month is not considered as a household member in Israel's LFS. This criterion goes against the recommended definitions, which state that these persons should still be regarded as household members as long as their

¹¹ UNECE/Eurostat Recommendations for the 2011 round of Census

¹² "Definitions, Classifications and Explanations":

http://www.cbs.gov.il/webpub/pub/text_page_eng.html?publ=68&CYear=2012&CMonth=1

intention is to return to the dwelling where they were living before being hospitalised. There are other differences which need not be highlighted for the scope of this report.

86. Such differences might hinder comparability of results, especially when the statistics being analysed refer to household characteristics (e.g. household size; household type; etc.). Reviewers also believe that the eligibility criteria are rather numerous and can create confusion if not properly administered.
87. The reviewers also note that differences in definitions of households will surely have an impact on comparability of results (e.g. the distribution of households by size may be 'distorted' if children in student dormitories are not taken into account. This might also impact on the distribution of households by household type). The ICBS is encouraged to analyse the impact of these methodological differences on the comparability of results.

Sampling design and sampling frames used in LFS

88. The sampling design that has been implemented by the ICBS for the purpose of the LFS is rather complex and involves extraction of households and individuals from different sampling frames. This approach has been taken in order to ensure full coverage of the LFS target population.
89. Most of the target population is actually covered by the (a) current survey sample, while a small part of the population which is not included in any dwellings or population register, and whose characteristics do not change over time, is covered by (b) permanent samples taken from the 2008 Population and Housing Census.

(a) - Current survey sample

90. The current survey sample depends on three main sampling frames, namely: (i) Main sample of residential dwellings; and two other 'special' sources, namely (ii) "Samples of student dormitories and immigrant absorption centres" and (iii) "New buildings in urban localities".

(i) Main sample of residential dwellings

91. The main sampling frame used for the LFS consists of dwellings, although sometimes (mostly in non-urban localities) frames based on households or persons are used. Final sampling units are sampled in two stages, where localities are sampled in the first stage, and dwellings, households and/or persons are sampled in the second stage.
92. **First stage – sampling of localities:** The sample of localities in the survey is taken from a list of localities (the locality sampling frame) where these are classified into four main groups, according to their size (i.e. number of persons aged 15 and over). The characteristics of these groups are:
 - **Large localities:** includes the 40 largest localities in the country, and covers about 64 per cent of the persons aged 15 years and over. These localities are large enough to remain representative in all the 12 new panels of a given year's sample.

- **Other large localities:** These include about 50 localities which are smaller than the previous group, but still contain relatively large populations. These localities cover about 18 per cent of all persons aged 15 years and over, and are all included in the annual sample. However, their sample sizes allows for their inclusion in only three, four, six, or nine panels in the sample for each year. In practice, this means that every locality is represented in every month in at least one panel, but not in all the panels, as in the previous group.
 - **Smaller localities:** This group includes about 30 smaller localities, with at least 2,000 persons aged 15 years and over and covers about 4 per cent of the reference population. The small sample sizes that can be taken from this group allow for their inclusion in only one or two panels per year. This means that each of these localities is only represented in some of the months in different panels per year.
 - The last group of localities, referred to as “**Other localities**”, contains about 1,000 small urban and rural localities. Together, these localities cover approximately 14 per cent of all the persons aged 15 years and over in Israel. For sampling purposes, these localities are arranged into homogeneous groups according to various characteristics, called sampling strata. Each year, a sample of about 200 units of these localities is drawn with a probability of selection which is proportional to their size.
93. For practical reasons, each of the sampled localities is normally assigned to a single monthly panel. Each year’s sample selection of localities is dependent on the previous year’s sample. This ensures that many different localities are included in the samples of two adjacent years and an almost complete geographical coverage is obtained.
94. **Second Stage – sampling within the sampled localities:** Within each sampled locality (about 320 each year), the final sampling units are selected from a list of residential dwellings, or (for a small part) from lists of households and/or persons, as follows:
- The largest part of the LFS sampling frame is derived from a Dwellings and Buildings Register of municipalities and local councils, which is maintained by the ICBS through updates provided by the tax authorities. Each year, a sample of dwellings is drawn from this register for approximately 180 of the larger localities. Dwellings are sampled so that their final sampling probability is equivalent to the sampling fraction of that year. The dwellings in the frame are then arranged by the internal geographic characteristics of the locality and selection of units is made by systematic random sampling.
 - For most of the villages, communal localities, and *moshavim*, the sample is drawn from lists of households or dwellings, because the ICBS does not possess the municipal tax file. A systematic random sample is drawn close to the time of investigation from a list of households or dwellings obtained annually from the Secretariats of the localities.
 - Given the difficulty to obtain a list of households in *kibbutzim*, a sample is usually drawn from lists of persons aged 15 and over. Thus, for the *kibbutzim* sampled in the survey, a list of persons aged 15 and over residing permanently in the kibbutz is obtained close to the time of the first interview, and a systematic random sample of persons is chosen from this list. A sampled person who is the head of a family (in accordance with definitions established in

advance) is interviewed together with the other members of the family. A person who is sampled but is not the head of the family is not included in the sample.

95. Although the Dwellings and Building Register is relatively exhaustive and covers nearly all localities in Israel, it still does not cover the entire population of dwellings in Israel. In fact, findings suggest that this register suffers from under-coverage among very small localities, especially the Bedouin's localities in the South. In view of this, this register cannot be used for sampling within very small localities.
96. In the future, the ICBS plans to enlarge the coverage of this register to cover also the small localities. At the moment, about 180 larger localities are covered by the centralized register and this makes the sample selection process relatively efficient and straightforward. On the contrary, for about 140 smaller localities (very small rural villages, especially Bedouin localities in the South), sample selection relies on the lists of dwellings/household/persons that must be requested every year from each locality (mainly rural), and this requires a huge effort. By enlarging the coverage of the main dwellings register the ICBS will therefore manage to improve the efficiency of the sampling procedures, and in the process, improve also the quality of results.
97. In the effort to limit the burden on households as much as possible, the ICBS identifies dwellings that already participated in previous household surveys and removes them from the sampling frame for a period of 3 years.

(ii) Samples of student dormitories and immigrant absorption centres

98. Neither persons nor households in student dormitories and immigration absorption centres are covered by the localities' sampling frames. Thus, in order to include these populations in the LFS samples, special sampling frames of dwelling units in student dormitories (in the seven large universities) and immigrant absorption centres, are compiled. A one-stage sample of dwelling units is drawn from these frames once a year, and is allocated evenly to the 12 new panels of that year.

(iii) New buildings in urban localities

99. Another interesting feature of the sample selection is the way of dealing with new dwellings. This is a crucial aspect because investigation of the main sample in urban localities may continue for up to two and-a-half years from the time the sample was drawn.
100. The number of new dwellings formed during this period is significant. Moreover, a recent study carried out by the ICBS showed that households in new buildings in urban localities have relatively very different characteristics from those living in old dwellings. It is therefore deemed very important that these households are adequately represented in the LFS sample, even though they did not exist when the sample was originally extracted.
101. To face this problem, this special group of dwellings is represented by an additional sample for each of the twelve panels participating in the survey in a specific quarter, which is drawn from special sampling frames of new dwellings in the urban localities every quarter. No supplementary sample is drawn in rural localities.

(b) – Permanent sample

102. In addition to the current sample to be interviewed, a small part of the population is covered by permanent samples taken from the 2008 Population Census. Permanent samples are used only for certain groups of the survey population (or institutions) that are not available in registers, or in any other national population register. In fact, this procedure relates to certain groups of the survey population which are difficult to contact and interview on a regular basis, and whose characteristics do not change over time. Most of the population covered in the permanent samples does not participate in the labour force, and data for these persons is updated through statistical procedures, before being included into LFS results. Some of these groups include households living outside of localities; households living in “places”, households living permanently on army bases without other civilian address in Israel, and Bedouin tribes in the South.

Methodological Notes

103. It is the ICBS policy to make available relatively detailed information regarding the methodology used for the compilation of statistics carried out within this Office. The LFS is no exception. In this regard, the ICBS produces metadata files with the methodology and principles used for the compilation of the employment and unemployment rate from the LFS. These metadata files can also be downloaded from the ICBS website. Metadata on employment and unemployment are also provided to IMF for publication in the SDDS.

104. Information on the LFS includes details of the sampling methodology used, mode of data collection, etc. Documents with details of the methodology used for sample selection, weighting and estimation, are made available to users together with the monthly and quarterly press releases and publications. More detailed information for the users is provided in the LFS annual publication.

105. Reviewers noted that these methodological notes are very readable and clear, and are surely useful for the general public to understand the basic concepts and technical issues behind the LFS. However, the level of detail might not suffice for researchers who need to use LFS for more advanced research.

106. A technical document “Technical Publication No. 78”¹³, which was issued by the ICBS in 2006, is particularly noteworthy because it clearly describes all the methodological changes that have been introduced in the Labour Force Survey during the period 1954–2003.

Documentation of Work Processes

107. All Statistical and Supporting Departments involved in the LFS have developed internal documents of work processes highlighting all operational and methodological issues involved in the LFS. Cross-domain documentation also exists which defines the roles of all the Units involved in this continuous survey, as well as the deadlines.

108. Documents of work processes clearly facilitate collaboration between all Units involved in the LFS, ensure continuity and facilitate transfer of knowledge. It seems however that these

¹³ http://www.cbs.gov.il/publications/saka_change/tch_e.pdf

documents are not sufficiently comprehensive and lack consistency in style and structure. This is mainly attributed to the fact that documents of work processes have so far been compiled by individual Departments in a decentralised way.

109. The ICBS plans to consolidate these documents in a centralised framework in the coming years, as part of its commitment to enhance quality, improve transparency, and minimise the risk of errors.

Methodological Improvements

110. The ICBS follows a strategy to continuously improve the LFS as follows:

- In 2009 the definition of persons who are absent from work was revised. Data for 2009 were calculated according to both definitions and data back to 1995 was re-calculated using the new definition, so as to avoid possible breaks in time series
- In 2012, the ICBS upgraded the LFS from a quarterly survey to a monthly survey, thus making it possible to provide LFS data on a monthly basis.

111. A key attribute to this success has also been the ability of the ICBS team to adapt best practice used abroad to the national context. For example, the Canadian LFS was used as a model for designing the methodology for the production of monthly estimates from the LFS in 2012.

112. During the past years, the ICBS has cooperated with international organisations (incl. World Bank, IMF, ILO, Eurostat) to improve the LFS. The LFS team has also worked closely with the research community and universities on research projects.

113. The ICBS has been very responsive to new user needs, by adapting its surveys to provide timelier, more frequent and more accurate labour market statistics and plans to adapt its LFS to new users' needs in the future.

STATISTICAL PROCEDURES

Data collection and fieldwork

114. LFS uses a mixed-mode data collection, whereby data from respondents are collected for the first wave through computer assisted personal interviewing (CAPI), and then updated during subsequent waves through computer assisted telephone interviewing (CATI). The CATI system was introduced in 1999; on the other hand, the transition from PAPI to CAPI occurred in 2008.

115. For the purpose of LFS data collection, the ICBS employs about 90 trained interviewers, comprising about 45 field interviewers (for CAPI) and 45 telephone interviewers (for CATI).

116. Data collection in the first wave of the LFS is carried out by face-to-face interviewing as explained above. This phase is managed by the ICBS three Regional Offices, which also employ supervisors in order to coordinate, monitor and control the work of the interviewers. The work of the Regional Offices is coordinated by the Survey Department, which also provides training of

interviewers and supervisors. The Survey Department is assisted by a Quality Assurance Unit, which contributes towards ensuring high quality of information collected through this survey.

117. Before being contacted by interviewers, selected households receive a letter from the ICBS informing them that they have been selected to participate in the LFS and that they will shortly be contacted by an interviewer. This letter also highlights the importance of the LFS and explains that all households are obliged to provide the requested information as accurately as possible. The ICBS also highlights the fact that information collected for the purpose of this survey will remain strictly confidential and will be used solely for statistical purposes. Households are informed about the panel structure of the LFS sample and the need for follow-up calls in subsequent months.
118. Follow-up calls for the subsequent waves are carried out in the ICBS CATI centre in the ICBS Central Office in Jerusalem.

Use of proxy and dependent interviewing

119. The ICBS uses dependent interviewing for all the seven follow-up waves of the LFS. Once the respondent confirms that he/she is still living in the household, demographic variables are not verified and are simply copied from the previous wave. On the other hand, LFS variables which are not subject to changes are uploaded in the CATI questionnaires and verified again with the households.
120. For example, persons who are currently working, and who had also been working at the time of the previous interview, are asked whether they are still working at the same place of work in the same locality, and whether they still perform the same activities at that place of work. If the answer is "yes", then the locality of employment, industry and occupation are imputed from the previous interview. Similar procedures are carried out for updating education variables. In cases where persons indicate that they are not pursuing further education or training both in the previous and in the current wave, the number of years of schooling, type of school last attended, and highest diploma received are imputed from the previous interview.
121. In addition, data on education and work are imputed from the previous interviews whenever respondents face difficulties in providing this information, and when it is evident that there are no long-term changes in their data. This population includes elderly persons, aged 70 and over, who did not work during the past year and are not interested in working.
122. Dependent interviewing helps reducing the burden on respondents, improves response rates and mitigates survey costs. This technique might introduce new biases in the survey, if over-used.
123. In order to maximise response, the ICBS allows for proxy interviews in the LFS, even during the first wave. The identity of the proxy respondent is noted and taken into account when auditing, verifying and editing the questionnaires (especially when checking for inconsistencies between different waves of the survey). At the moment, there is no possibility for the ICBS to minimise proxy interviews given the very short fieldwork (2 weeks) and the increased cost for such a step.

Training of interviewers

124. Before enrolment, new LFS interviewers are expected to review standard interviewing material provided by the ICBS, and then pass a series of written tests.
125. Further to this, interviewers have to follow five days of continuous training sessions covering general interviewing skills (e.g. dealing with non-respondents; use of computer software; etc.) and more specific knowledge such as definitions and methodological concepts involved in the LFS (e.g. coding rules; LFS definition of employment/unemployment). Interviewers have to sit for a final exam at the end of the training session.
126. Interviewers are not allowed to engage in fieldwork before they successfully complete all the stages of introductory training. Additional training is also provided on a continuous basis (at least three sessions every year) to all the interviewers, during which the interviewers are provided with refresher courses on different aspects of their work. During these sessions, interviewers share experiences and provide relevant feedback to the Survey Department to improve the data collection process.

Quality checks during data collection

127. Supervisors carry out regular controls and quality checks on the work of the interviewers, in order to ensure that data is collected at high quality standards. A minimum of 10% of each interviewer's respondents are re-contacted by phone specifically for this purpose. Supervisors also accompany interviewers during their work, at least four times a year, as part of the quality audit control and training processes.
128. Phone interviewers (CATI) are observed through listening-in to the phone interview. Each interviewer is observed three times a month. In addition, interviews of unusual duration are reviewed, as are irregular questionnaires discovered during the editing process.
129. Regular checks on the CAPI fieldwork process are implemented by the ICBS Survey Department, through the support of an internal quality audit team. The ICBS LFS team compiles and analyses quality indicators related to data collection on a regular basis. Such indicators include rates of non-response by cause, reports of output/production by interviewer, etc. Observation reports are written for every interviewer whenever required and interviewers are graded for their work. Interviewers with low grades receive additional instruction.

Data Collection Tools

130. Both the CAPI and CATI electronic questionnaires are designed using Blaise software, and developed internally by the ICBS IT Department. Both programs contain a series of in-built validation rules which help to reduce errors during data collection. Telephone interviews are carried out using both landline and mobile telephone calls, in order to maximise response during the CATI follow-up phase. The ICBS receives updated telephone numbers from private landline/mobile service companies, which in turn are used in order to update the register of telephone numbers used for the CATI surveys.

131. Overall, the LFS-IT infrastructure seems to have been developed in such a way as to allow flexibility for inclusion of additional variables and modules in the core LFS questionnaire. However, it seems that this potential has not been exploited so far, and the ICBS faces difficulties to add/substitute new questions in the LFS questionnaire on a regular basis.

Dealing with total non-response

132. It is the ICBS policy to inform households well in advance before the interview (mainly by sending a letter). This facilitates the work of the interviewers considerably during fieldwork and contributes to minimising non-contacts and refusals.

133. Interviewers are constantly given training on dealing with households. For example, interviewers are instructed to accommodate respondents as much as possible by choosing a time for the interview which is acceptable for the households. They are given clear instructions on how to deal with persons who refuse to cooperate or who have difficulties in providing the requested information.

134. Interviewers are supported by supervisors, who contribute to reducing the rates of non-response by sending letters or by carrying out follow-up visits to non-responding households themselves.

135. In order to minimise the rate of non-contacts, interviewers are requested to carry out multiple visits on different days and at different times, before classifying households as non-contacts. The CAPI/CATI system allows for interviewing in different languages (Hebrew, Arabic, Russian).

136. Measures are in place to reduce non-response during the CATI surveys. For example, interviewers are given access to both mobile and fixed lines. This facilitates interviewing of respondents who are rarely found at home. CATI surveys are carried out during different times during the day, and non-contacts are accepted after several failed contact attempts. The use of proxy interviews is also a determining factor for minimising non-response.

137. Despite all these measures, Israel's LFS is still subject to unit non-response. In order to mitigate bias due to different response rates for different sub-groups in different localities, a correction factor is applied in the weighting procedure.

138. Response rates are published regularly on the website. The ICBS recognizes the need to investigate the possible effect of different total non-response on the estimates..

139. When it comes to under-coverage, the categorization of a property as residential or non-residential in municipal tax files is examined each year, and updates in the sampling frames are carried out every year, as explained in previous sections of this report.

Treatment of item non-response

140. The Labour Statistics Sector is responsible for quality control and cleaning procedures on LFS data. Appropriate editing and imputation methods are used during data analysis. These procedures are reviewed regularly and updated on an on-going basis.

141. The data cleaning process involves approximately 250 different logical checks which identify logical errors and missing information. The ICBS does not impute missing data in the first wave, except for the variable on hours worked; however missing information in subsequent waves is imputed from previous waves' data in cases when no changes are recoded in the other variables.
142. The process of editing involves both cross-sectional and longitudinal checks. Dependant interviewing provides a strong basis for longitudinal consistency in demographic and education data, as well as for coding of industry and occupation.
143. Automatic imputation for hours worked in the reference week is done using appropriate statistical techniques based on industry, sex, full-time/part-time work, status at work and population group. Other imputations are done manually by individual editors, based on information from previous interviews and/or from other members of the household, taking into account various demographic variables. All labour force variables are imputed automatically for those who report to serve currently in the army.
144. Missing demographic variables are taken from the national population register using the national ID number, name and other variables to enable linking. Data editing results are published regularly on the website.
145. The ICBS recognizes the importance of the analysis of the effect of editing and imputation and plans to implement new and improved imputation procedures which should improve the quality of cross-sectional data, as well as longitudinal coherence. The ICBS has already the technical staff that will work on this project in the coming years.

Use of Administrative Registers

146. At the moment the ICBS does not use administrative data to collect part of the required LFS information. All information pertaining to this survey is, in fact, collected entirely from households. Administrative data is used only for checking purposes and for imputing demographic information on households and household members that is not completed during the interview. In the future, the ICBS plans to use register data on income provided by the tax authorities so as to enable the computation of statistics on wages directly from the LFS. ICBS already collects the national ID card numbers of all the household members during the first wave of data collection, which will allow linking of the LFS with administrative data, for this purpose.

Classifications and Coding

147. The ICBS uses its internal classifications for coding occupations and industry. These classifications are consistent with ISCO-08 and ISIC Rev 4.0 respectively, as already described above.
148. Coding of occupations and economic activity is mainly carried out internally using an automatic coding tool designed specifically for this purpose. The process depends on descriptions (free text) of occupations and main economic activity as reported by the interviewers. The process of coding is relatively efficient and approximately 70% of the codes are allocated without the need for manual intervention. The remaining 30% of coding is done manually by a group of experts.

149. The automated coding tool has already been subject to various quality tests and results were always positive. Still, quality checks on the performance of this tool are carried out on a regular basis and quality indicators related to the coding process are produced and analysed from time to time. Reports for each interviewer are prepared on mistakes in the coding process and appropriate corrective measures/instructions made whenever necessary.
150. Errors in the automated coding system identified during the checking are reviewed and corrections are made if deemed necessary. The ICBS is currently carrying out a series of upgrades on the automated coding system to render the process more efficient and less prone to errors. The new version of this program will also include some validation processes.

Calculation of weights for LFS

151. The weighing system of the LFS takes advantage of the integrated design of the LFS, which is also taken on board for the computation of the final set of cross-sectional weights. In practice, this means that all members of the same household receive the same weight, and that high quality and coherent estimates can be produced at individual and household level from the same dataset (e.g. number of reference persons who are unemployed is equal to the number of households whose reference person is unemployed).
152. The monthly weighting process consists of different steps:
- a) Base weights are computed as the inverse of the sampling probability (uniform for all units in the survey)
 - b) Regression Composite Estimation technique¹⁴ is used for calculating the final weights. It uses a calibration to the totals of 36 Geographic areas (defined by District, sub-district and natural region) by gender and age-groups (0-14, 15-17, 18-21, 22-24, 25-34, 35-44, 45-59, 60-66, 67+) and in addition also calibration of the basic labour force characteristics based on estimates from the previous month.
153. The method used for the compilation of weights is intended to reduce both sampling errors and bias associated with unequal response rates among households of different characteristics. The ICBS also compiles adjustments for unit non-response of individuals and/or households measured for each of the 36 geographical groups. Non-response adjustments are made for all the 7 age-groups and by sex.
154. Population totals used as constraints in the final calibration are estimated by the Demographic Unit of the ICBS, using data from the Population Register maintained by Population Authority.
155. The Regression Composite Estimation provides more precise estimates of labour force characteristics than those obtained with standard calibration estimator, both for the current month and for estimates of changes between different periods (months, quarters, years). It also provides the desired accuracy with a smaller sample size.
156. Once the monthly estimates are obtained, the quarterly and annual figures are calculated as the arithmetical averages of the monthly estimates.

¹⁴ Fuller and Rao, 2001 – Survey Methodology Vol. 27 No.1

157. The selection of age groups used for weighting purposes takes into account the age limit for pensions, which in Israel is of 67 years for men and 62 for women. However, these limits are different from those commonly used for international comparison such as 15-64 and 15-74.
158. In this respect, reviewers note that the ICBS is not taking the full advantage of the use of regression/calibration estimators. These would allow the application of contemporary constraints on different variables/categories at different geographical levels and for different sub-groups. For example, it would be possible to put constraints on smaller age groups (usual 5 year age groups) at national level and larger age groups, even with different thresholds, at district or sub-district level.

Burden on respondents

159. Israel's LFS is still mainly dependent on households for the collection of data. The rotational sample used in this survey requires that a household is contacted eight times over a period of 16 months and this imposes a serious burden on the respondents. The ICBS is aware of the burden, which is why the LFS team carefully selects the questions in the LFS questionnaire in order to ensure that only the most relevant questions for policy making purposes are asked.
160. It is ICBS policy to publish very comprehensive sets of statistical tables from the LFS on a regular basis, so as to ensure that all information collected in the LFS is available for users. This ensures that no information gathered in the LFS is collected in vain.
161. During the past years, the ICBS LFS has started to rely more on dependent interviewing, which has been very effective in minimising the response burden. Unless specifically requested by the respondents, all follow-up surveys are carried out by telephone interviews, and some questions which are not subject to change are not re-asked. Proxy interviews are also allowed, especially in the follow-up CATI surveys. The ICBS LFS team believes that the reduction in quality attributed to these measures can be justified (and probably counter-acted) by the need to reduce the burden on households as well as the need to limit costs, given the high number of respondents which are surveyed every month.
162. As a further measure to reduce response burden, households that are selected for the LFS are flagged so that they cannot be contacted for another survey during the 16 month period covering the LFS data collection. In addition, the Sampling Department flags all households that participate in the LFS, to ensure that these are not burdened again with other surveys for at least another three years after completing the LFS. The reduction in overall quality of social statistics caused by these measures is deemed to be insignificant.
163. The length of the interview is regularly measured in order to assess the response burden on households both during the first (CAPI) and subsequent waves (CATI). The following tables provide the average number of dwellings per year (2013-4) and the average interviewing times, in minutes per dwelling, in the LFS.

Table 2. Average number of dwellings interviewed per year in LFS: 2013 - 2014

	<i>Total</i>	<i>First Interview CAPI</i>	<i>First Interview CATI</i>	<i>Subsequent Interview CAPI</i>	<i>First Interview CATI</i>
Average	100,828	11,393	3,742	579	85,115
By number of persons in dwelling					
1	16,856	1,748	829	116	14,164
2	25,793	2,903	1,012	100	21,779
3	15,219	1,734	523	93	12,870
4	16,297	1,850	556	82	13,810
5	13,778	1,548	463	73	11,694
6	6,499	808	188	60	5,443
7+	6,388	803	173	57	5,356
By number of persons aged 15+ in dwelling					
1	18,928	1,996	916	138	15,879
2	48,491	5,549	1,782	210	40,951
3	15,325	1,681	508	86	13,052
4	10,808	1,232	328	67	9,182
5	4,872	597	143	45	4,087
6	1,646	223	48	22	1,354
7+	759	117	19	13	612

Table 3. Average interviewing time per dwelling in the LFS: 2013 -2014

	<i>Total mins.</i>	<i>First interview (mainly CAPI) mins.</i>	<i>Subsequent interviews (mainly CATI) mins</i>
Average	8.22	14.06	7.15
By number of persons in dwelling			
1	5.45	8.50	4.81
2	7.07	11.90	6.14
3	8.84	14.68	7.73
4	9.18	15.98	7.94
5	9.55	16.68	8.30
6	10.28	17.87	8.83
7+	11.24	19.34	9.71
By number of persons aged 15+ in dwelling			
1	5.54	8.73	4.88
2	7.55	13.29	6.48
3	9.43	15.85	8.28
4	10.90	18.43	9.56
5	12.30	19.94	10.86
6	13.88	22.34	12.14
7+	16.11	23.92	14.33

164. So far, the ICBS has not carried out user surveys to measure the level of satisfaction of users with the data produced from the LFS. Moreover, very little information is collected to measure the use of LFS-generated data. Still ICBS believes that within the national context, it is sufficient to consult major users of data and policy makers in order to determine the relevance of its statistical products.

COST EFFECTIVENESS

165. The ICBS has invested considerably in the LFS in the past, especially since the improvements implemented in 2012. Spending patterns on the LFS are expected to increase further in the coming years, due to planned methodological and infrastructural enhancements, aimed at improving this survey even further.

166. At ICBS, monitoring the use of financial and human resources for the production of LFS is the responsibility of the Director of Labour Statistics Sector, who is also responsible for budgeting the costs of all LFS-related activities. The Labour Statistics Sector's activities are regularly audited by an internal auditor who also reports to the Minister of Finance, highlighting all relevant issues regarding the ICBS spending. The ICBS accounts are also audited once a year by the Government's State Controller.

167. Recent methodological and operational developments have helped the ICBS improve its efficiency, making the LFS more cost effective. For example, through in-built validations in the CAPI systems, the LFS team is able to reduce many logical errors during the interview itself, thus reducing work during data analysis. Moreover, automated tools used for validating the datasets have helped reducing the checking time considerably, and hence minimising the costs of the entire checking process. The ICBS also has automated tools for compiling weights, coding of occupations and economic sectors, and for imputing missing information.

168. The ICBS has designed an automated tool to generate main output tables from the LFS, and calculate sampling errors. Apart from reducing costs, this initiative has also improved timeliness considerably: through this tool, the ICBS is able to produce monthly publication tables within two days of calculating final weights and the quarterly publication within one week. In the coming years, the ICBS will also be able to produce an annual publication within six months¹⁵.

169. The following tables provide a summary of the human resources which are currently being dedicated to the LFS, as well as the average cost per interview.

¹⁵ This will be fully implemented in 2015. So far, rapid production of LFS publication has not been possible, since the ICBS was focussing its resources on quality reviews, further to the major methodological changes which occurred in 2012.

Table 4. Average number of employees assigned on the LFS: 2014

	<i>Number of employees in full-time equivalent</i>
Total	44
- of which statisticians	19
- of which other professional and managerial staff	25

	<i>Total</i>	<i>CAPI</i>	<i>CATI</i>
Interviewers*	91	45	46
Number of interviews per interviewer (weekly average)	49	7	42
Approximate cost of each interview*	€ 37	Not available	

* This value stood at approximately €38 in 2013

2.3. Statistical Outputs

RELEVANCE

170. As a subscriber to the SDDS, the ICBS is required to disseminate a news release calendar, at least three months before the dissemination date¹⁶. The ICBS is committed to giving equal and simultaneous access to all its users. SDDS requirements specify specific time schedules for the publication of LFS quarterly results. This commitment is fully respected by the ICBS.

171. ICBS believes that all information collected in the LFS can be relevant to all types of policy makers, and does not distinguish between different user needs when assessing the relevance of the survey.

172. In recent years, the ICBS has added new questions to the questionnaire addressing new needs. Many of the added questions are also included in the EU-LFS questionnaire, thus making Israel's survey more relevant for European policy makers. However, there are still indicators covered by the EU-LFS which are not covered by the ICBS. These include duration of working life, previous work experience and temporary employment. There are also divergences between national and European definitions, which impact on comparability and therefore, relevance to European users.

Table 5. Periodicity of LFS-results published by the ICBS

	<i>monthly</i>	<i>quarterly</i>	<i>annual</i>
<i>Periodicity of the LFS statistics at national level</i>	X	X	X
<i>Periodicity of the LFS statistics at governorates level</i>		X	X
<i>Periodicity of the LFS statistics at governorates*urban/rural level</i>			X

¹⁶ The news release calendar can be accessed freely on the ICBS website on http://www.cbs.gov.il/reader/buletin/buletin_e.html

173. Procedures are in place to answer to specific requests for customised reports from the LFS. Such requests for data might be subject to cost recovery charges. Despite the existence of this service, the ICBS reserves the right not to answer to a request for data for which the provision of information would require an unreasonable spending of resources.

174. The ICBS has three research rooms in the Central Office of Jerusalem, in the regional office of Haifa, and in the Bank of Israel, where qualified researchers can be given access to micro-data (under contract) in a highly secure environment, for research purposes. The ICBS produces public use files (PUF) containing LFS data in fully anonymised form, which can be accessed by researchers outside the ICBS premises, under contract.

175. The ICBS is in the process of upgrading its website and once the process is complete, the rules of publication will be updated. The update will include publishing tables as they are completed (and checked) without waiting for a full publication to be prepared. The new website will contain an online dissemination tool to enable users to extract customised tables.

ACCURACY AND RELIABILITY

Data analysis

176. Several quality checks are made during the analysis stage to identify misleading information remaining after the preliminary checks carried out during the data collection phase. For this purpose, the ICBS has created a series of programs validating the LFS micro-data in a very efficient way. Apart from logical checks, the ICBS carries out a series of consistency checks on its data, also through comparisons with data provided for previous waves.

177. Whenever possible, misleading data is corrected automatically. On the other hand, whenever automatic correction of errors is not possible, misleading information is flagged and corrected manually. In this regard, reviewers note that the ICBS still does not have written procedures on how these checking procedures should be implemented. This leaves room for possible inconsistencies between different approaches, which may also impact the results.

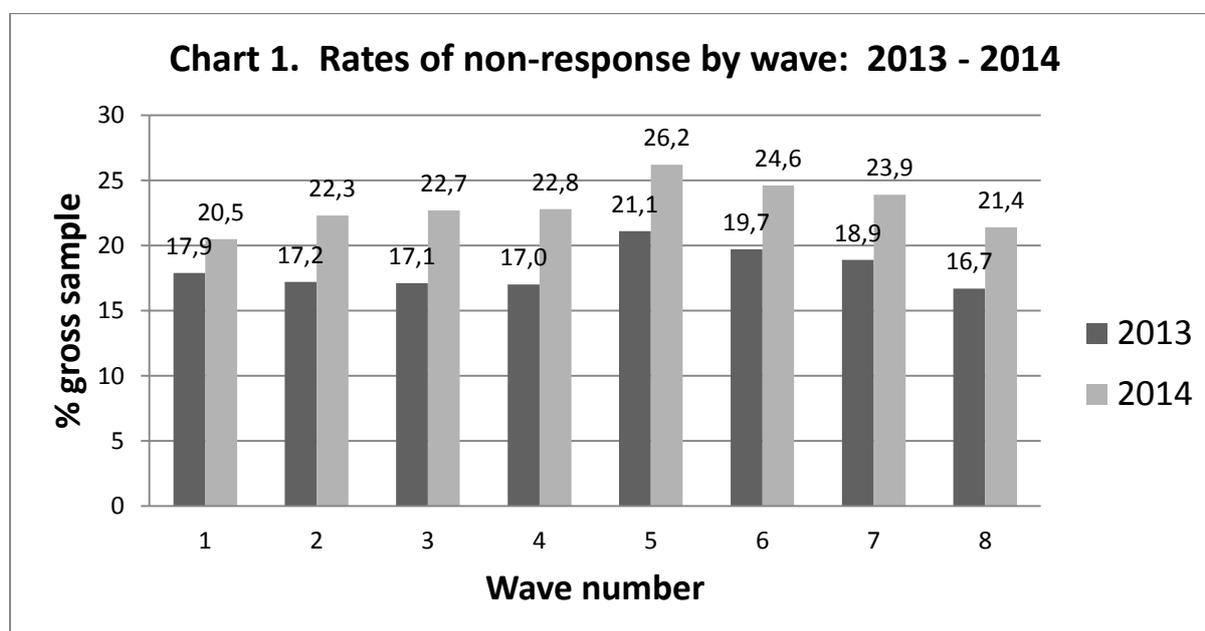
Response in the LFS

178. The following statistics provide an overview of the rates of unit non-response in Israel's LFS. From table 6, it can be clearly seen that the rate of refusals is rather low. On the other hand, the share of non-contacts is rather significant. The latter might be caused by over-coverage in the sampling frame. The reviewers also note that the rate of refusals due to 'Other reasons' is relatively high, and recommend that this category is studied further in order to determine the main reason for such a high non-response rate.

Table 6. Household non-response rates in LFS: 2009 – 2014

		Non response rate (%)	% gross sample		
			Refusals	Non-contacts	Other reasons
Survey year	2014	17.9	4.5	5.8	7.6
	2013	18.2	4.5	5.6	8.1
	2012	17.9	4.9	5.8	7.2
	2011	12.9	3.0	4.8	5.1
	2010	10.8	2.6	4.4	3.8
	2009	10.9	2.9	Not available	Not available
Quarter 2014	Quarter 1	19.0	4.1	7.4	7.5
	Quarter 2	23.8	4.2	10.2	9.4
	Quarter 3	24.7	4.6	9.9	10.2
	Quarter 4	24.8	4.3	9.7	10.8

179. When analysing the response rates by wave, one notices a relatively stable rate of non-response ranging between 15.1 per cent to 21.1 per cent. The rate of non-response is lowest in wave 1 when most of the data collection is carried out by face-to-face interviewing. The highest non-response rate is, on the other hand, reached in wave 5, and may be explained due to the relatively long (eight month) time lag between the fourth and fifth wave.



180. Relatively high response rates are achieved during follow-up waves also because the ICBS allows for proxy interviews and use of dependent interviewing.

Item non-response

181. The ICBS invests considerable resources in the data collection process (incl. training of interviewers) in order to minimise the rate of item non-response. In fact, the ICBS confirms that the rate of item non-response is minimal, to the point that no imputation is required for many variables. In this regard, the ICBS confirmed that imputation of item non-response is done only on number of hours worked, while the remaining missing values are reported as such. Other data missing after the data collection is not imputed during data analysis, and is reported as missing data.

COHERENCE AND COMPARABILITY

Inconsistencies in time-series data

182. The ICBS has been compiling LFS statistics since 1954. A long time series on labour market data is therefore expected. Although this data is available, it might not be fully suitable for time series analysis due to inconsistencies caused by changes that occurred during the past years, which affect comparability across years¹⁷.

183. The ICBS has a general revision policy requiring all revisions to follow standard guidelines and principles. This policy states that revisions should be transparent to users and accompanied by necessary explanations. The policy obliges the ICBS to carry out impact analysis of major revisions, which in turn should be published. As a subscriber to the SDDS, the ICBS is expected to inform users about major revisions well in advance.

184. The ICBS does not carry out regular revisions on past LFS data, further to publication. Monthly data is considered as final and is generally not subject to revisions. Revisions on quarterly or yearly data are carried out only under specific circumstances. For example, in 2009 the definition of persons who are absent from work was revised. Data from 2009 was calculated twice and time series going back to 1995 were affected but recalculated according to the new definition.

185. As a general rule, data for periods with methodological revisions are calculated twice, using both the new and old methodology. Explanations for differences in estimates are listed and clearly explained to users. Chaining coefficients are also compiled and provided to users in web publications to allow comparisons over time¹⁸. These coefficients are used to adjust the original data series in order to enhance consistency in time series needed for seasonal adjustments.

186. In 2012 the definition of labour force characteristics changed from civilian labour force to total labour force (those serving in the army went from non-participants in the labour force to full time employees). Other major changes that were implemented entailed: (i) a significant increase in the monthly samples, (ii) an expansion of the geographic distribution, and (iii) use of more advanced statistical methods in sampling and estimation. In order to permit seasonal adjustments, past data was recalculated by month, while adjustments were made from civilian labour force characteristics to total labour force characteristics.

¹⁷ A comprehensive publication on this subject is available – Labour Force Surveys: Changes in Methodology, Definitions and Questionnaire 1954-2003, Technical Publication 78, http://www.cbs.gov.il/publications/saka_change/tch_e.pdf

¹⁸ See "Changes in the Labour Force Survey 2012" in the Introduction to the 2012 annual publication: http://www.cbs.gov.il/webpub/pub/text_page_eng.html?publ=68&CYear=2012&CMonth=1#5

187. Revised time series were not published in order not to disclose information regarding the magnitude of the Armed Forces, for national security reasons. However, the ICBS warned the users that the transition to the new system led to a “break in the series” and as a result, extreme care must be taken when comparing post 2012 data with the data that was published prior to this revision.

Consistencies created by weighting methodology

188. The weighting procedures used by the ICBS allow for consistencies between household and individual estimates, since they take into account integrated sampling design of the LFS, as explained above. Moreover, LFS estimates are coherent with population statistics because LFS data are calibrated using monthly population estimates produced by the Demographic Sector in the ICBS.

Consistency with National Accounts data

189. Differences exist between LFS and National Accounts data due to differences in concepts and measurement. This is mainly because National Accounts data include employed persons who are not usually included in the LFS (e.g. documented and undocumented foreign workers regardless of length of time continuously spent in Israel, Palestinian day workers, and border infiltrators from Africa).

190. In particular, National Accounts data show a significant discrepancy between the average employment as calculated over 5 consecutive years from National Accounts data, with the corresponding figure estimated from the LFS, which is 9% lower. Similarly, the average total number of hours worked estimated over 5 years from National Accounts, is 11 per cent higher than that compiled from the LFS.

191. National Accounts data are compiled from various sources, including:

- LFS for data on Israelis;
- Department of National Insurance for statistics on foreign workers for whom benefits were paid;
- The Population and Immigration Authority that provides estimates on the net number of irregular workers;
- The Palestinian Central Bureau of Statistics provides figures on Palestinians who work in Israel.

192. The National Accounts Section estimates the number of employed persons in Manufacturing, Mining and Quarrying using an enterprise Survey of Manufacturing and not the LFS. There are also differences in the classification of several economic branches. These differences are for the most part, insignificant. National Accounts uses the ISIC classification (and not NACE)¹⁹, which is also in line with the classification used in LFS.

¹⁹ See Introduction to Chapter 18 Business in the Statistical Abstract of Israel 2014: http://www.cbs.gov.il/shnaton65/st_eng18.pdf and National Accounts 1995-2013: http://www.cbs.gov.il/webpub/pub/text_page_eng.html?publ=27&CYear=2013&CMonth=1

Consistency with Business Statistics data

193. Main differences between Business Statistics²⁰ data and LFS data are:

- Business statistics data relate to jobs appearing on the payrolls of establishments or institutions. On the other hand, LFS data relates to employed persons. This means that persons holding more than one job with different employers will be counted only once in the LFS, whilst in the business data, their jobs would be counted more than once, according to the number of different employers.
- The source of business statistics data is mainly the National Insurance Institute (NII). Counts of Military Personnel are not included in this list, while this sector is taken into account in the LFS.
- Workers from abroad are included in the LFS if they meet the ‘usual residence’ criterion. The usual residence concept is not necessarily abided to in business statistics data.
- Certain industries are classified differently in the business registers than in the LFS.

Consistency with Registered Unemployment data

194. Many differences exist between counts of unemployed derived from the LFS and counts of persons registering as unemployed mainly due to differences in definitions and methodological concepts used to measure both figures.

Divergences of national concept from European concepts and requirements

195. Most of the definitions and methodological concepts comply with Eurostat’s and ILO’s methodological guidelines. However minor differences could be observed in the LFS questionnaire especially with reference to the current implementing rules used at European level. The following is a list of major divergences in the questionnaires:

- a) The ILO questions on employment refer to the week prior to the survey, not to a pre-selected fixed reference week. The ICBS prefers to keep this definition in order to facilitate the data collection process. No major impact on LFS estimates is expected because of this methodological inconsistency given that data collection lasts only two weeks.
- b) The first ILO question on employment does not include the term “for pay or profit” and does not specify that unpaid family workers (in a household business or farm) have to be considered as part of the employed population. Although the questionnaire contains questions on unpaid family workers, there is still room for misclassification of these persons as inactive persons at the beginning of the questionnaire. This could potentially lead to under-coverage of this particular group, and consequent under-estimation of activity and employment rates.
- c) Unpaid family members are classified as part of the labour force in Israel’s LFS questionnaire, only if they have been working for at least 15 hours during the reference week. This means that the one-hour criterion recommended by ILO is not applied in this case. Again, this could lead to considerable under-coverage of this category of workers, and hence under-reporting of employment and activity rates.
- d) There is not always a clear distinction between main and secondary jobs. Questions concerning place of work, industry, occupation and employment status focus solely on the main job. On the other hand, working time is collected for main and second jobs in one single

²⁰ See Introduction to Chapter 12 – Labour and Wages in the Statistical Abstract of Israel 2014: http://www.cbs.gov.il/shnaton65/st_eng12.pdf

question, making it very hard to extract the number of hours worked in the main job. In this regard, reviewers recommend that working time for main and secondary jobs are collected separately.

- e) The unemployment rate is worked out for all persons aged 15 years and over. This is different from Eurostat's methodology which establishes an upper threshold of 74 years. The absence of a threshold should not affect negatively the count of unemployed in Israel, but it can surely affect comparability with European main indicators of employment, especially when it comes to measurement of activity, employment and unemployment rates.
- f) The reference period used for the "availability of work" of those who search for a job, covers only the reference week. This implementation is in line with both the new 19th ICLS Resolution and the previous one. However it is not in line with EU-LFS, which considers for that purpose "the reference week and the two following weeks".
- g) The same kind of inconsistency, as for the previous point, applies when considering the reference period which is applied to the group of people who will start a job in the near future in order to classify them as unemployed. The Israeli questionnaire considers unemployed those who will start a job in 30 days. Also in this case, the implementation is in line the ICLS Resolutions, but not in line with Eurostat implementation which suggests a longer period of three months. However, the ICBS strongly believes that a 30 days' reference period is more suitable for national specificities of its labour market.
- h) A lot of relevant information which is currently being collected in the EU-LFS is not investigated in Israel's LFS (e.g. employed with temporary/permanent contract, commencement of the current job, etc.). Reviewers suggest that the ICBS seeks ways in order to start collecting this information in the coming years to increase the relevance of the survey.
- i) The main (ILO) questions on employment/unemployment are not placed at the beginning of the questionnaire. These questions are in fact preceded by questions on educational attainment and current education. While it is generally accepted that questions on educational attainment are put at the beginning of the questionnaire, it is also generally recommended at European level that the questions on current education are placed after those needed for ILO status classification.
- j) The number of hours worked is being used as the main variable in order to distinguish between part-time and full-time work. Part-time is a flexible form of work and therefore cannot be determined solely using working time. According to Eurostat recommendations, "the distinction between full-time and part-time work should be made on the basis of a spontaneous answer given by the respondent", i.e. by self-declaration. The ICBS intend to implement this change in the coming years.
- k) Non-workers are asked whether they have been "Actively seeking" for a job in order to determine whether they can be classified as unemployed. This could lead to mistakes since respondents might think that their methods used to find work cannot be actually classified as "active". Thus, in order to reduce confusion and possible under-estimation of unemployment, reviewers suggest removing the term "active" from the LFS questionnaire, and determine active search for employment through a pre-defined (recommended) list of specific actions of job search.
- l) A clearer distinction needs to be made between active and passive job search when it comes to using employment services. In particular, it should be made clearer in the questionnaire that renewal in the unemployment register should not be considered as an active measure as long as there is no active contact between the agency and the applicant. However it was explained to the reviewers that every contact by the employment office with its clients would

always involve an exchange of information on possible job vacancies. In practice this means that the majority of renewals are generally active search.

- m) Questions on previous work experience and other questions on the last job (e.g. occupation, industry, employment status, etc.) are asked only with reference to the last 12 months. Reviewers suggest that the ICBS extends this coverage to a longer period, so as to make this question more relevant for statistical analysis. In particular, it would allow the ICBS to gather more information on the characteristics of ‘potential’ labour suppliers. This information is also useful from a longitudinal perspective since it allows to analyse the determinants of labour market transitions²¹.

ACCESSIBILITY AND CLARITY

196. LFS data are disseminated using modern web technology. A specific web page containing detailed information on many aspects of Israel’s LFS exists in both Hebrew and English languages. Documents can be downloaded directly from the ICBS website.
197. Monthly, quarterly and annual press releases and publications are made available to the public in different electronic formats (PDF, Excel, etc.) on the ICBS website. The ICBS also publishes a comprehensive list of estimates of precision with these reports. All these publications contain a wide set of tables and useful metadata that facilitate proper interpretation of results to the users. A full publication can be printed from a single file if needed, but no paper publication is prepared for cost reasons.
198. The Public Affairs Unit acts as first level help desk for any user request. Simple requests for data are dealt directly by this Unit, while more complex computations/requests for data are passed to the competent sector. Cost recovery charges may apply whenever the data requested is not readily available. The ICBS reserves the right to refuse providing customised reports whenever the work involved would be too resource-demanding or when technical difficulties exist to access the source data.
199. The ICBS is currently working on a new website which should provide a more user friendly environment. This site will also contain an online application allowing users to create customised tables directly on the website, for the LFS as well as all other social surveys.
200. The Public Affairs Unit also responds to external critics or incorrect statements about the figures published by the ICBS. The ICBS also offers assistance by telephone or email to assist users to interpret the results or gain more insights about the surveys.
201. The Public Affairs Unit also coordinates requests made by International Organisations. In this regard, the ICBS has estimated that requests from the International Organizations require the use of the equivalent of about ten annual full-time jobs. In this respect the ICBS is investigating ways to better organize this kind of activity.

²¹ As an example, it is possible compare the characteristics of those who find a new jobs, after a given period of inactivity/unemployment, and of those who remain unemployed during the same period.

202. When it comes to dissemination of micro-data, the ICBS already provides LFS anonymised micro-data in the form of Public Use Files²². Moreover, more detailed micro-data for more advanced research purposes are made available in three research rooms located at the ICBS premises in Jerusalem, in the Regional Office of Haifa, and at the Bank of Israel. Access to these kinds of services is open to all researchers which comply with a set of defined criteria.

²² PUF are standard anonymised micro-data products made available to the public at large subject to a standard CBS license. PUF files contain information that is detailed enough for basic research, under confidentiality constraints.

3. RECOMMENDATIONS

3.1. Recommendations on Part 1 – Institutionnel Environnement

Rec.1. Changes are required in the Statistics Ordinance in order to cater for emerging statistical needs, as follows:

- a) A new provision to cover micro-data access by researchers. The ICBS currently provides LFS micro-data access to researchers and is working towards improving such access. Legislation is required in order to support, and regularise, such level of access to micro-data by researchers.
- b) A new provision which allows ICBS to carry out proxy interviews in household surveys like the LFS.

Rec.2. The ICBS should be empowered to determine changes in existing administrative registers in order to allow for efficient extraction of labour market data for statistical purposes.

The ICBS should be consulted when Government Institutions implement changes in existing administrative registers, or else are designing new registers which can be used for statistical purposes in the national labour market information system.

Rec.3. The ICBS should investigate the possibility of using more administrative sources for statistical purposes, for the purpose of LFS.

Rec.4. The SO should allow ICBS for more flexibility and autonomy when it comes to recruiting new staff. The level of bureaucracy is, at the moment, too high and burdensome for the ICBS (e.g. enrolment of LFS interviewers).

Rec.5. The ICBS should encourage more ‘informal’ training to all staff categories involved in the conduct of the LFS, also via job rotations.

Rec.6. In the future, more investment in existing IT systems will be required in order to cater for more ambitious demands of labour market statistics.

Rec.7. Set up a framework for managing workflow processes at an institutional level.

There is already a strong collaboration between different units and divisions for the conduct of the LFS. However, such collaboration requires more detailed and organised documentation of all the internal work processes related to the LFS, and their changes in time (methodology, organisation, actors involved, phases, timing, necessary inputs, expected outputs, methods, software, etc.).

3.2. Recommendations on Part 2 – Statistical Processes

Rec.8. Future modifications in the LFS infrastructure should take on board the need for LFS to be more timely and flexible when addressing new users’ needs. More specifically the ICBS should:

- a) Develop a modernised infrastructure which allows for a flexible approach able to quickly respond to new needs from users (e.g. collect information on new topics

which are high on the political agenda, like in the event of big crisis, huge increase of immigrants, increased presence of international companies in the countries, monitoring new labour policies initiated by the government, etc.). This aspect is important for increasing the relevance of statistical data.

- b) Improve the existing data sharing environment, possibly through the introduction of a data warehouse.
- c) Fully exploit the potential of the CAPI-CATI system for improving efficiency of data collection and relevance of the survey.
- d) Consider introducing a wave approach which allows widening the relevance of the survey. In this way it is possible to collect many new questions and/or entire new modules on first wave sample only (or other waves) without excessive burden on the follow-up waves. This can be done by including additional modules/questions in the questionnaire in the first wave, such that estimates at annual level can be obtained from them taking all the first-waves of the twelve monthly samples of the reference year, and computing specific annual weights for this sub-sample.
- e) Consider dividing the electronic questionnaire into core modules and ad-hoc sub-modules, some of which might be interchangeable from time to time. This would greatly enhance efficiency.
- f) Fully exploit the potential of the electronic questionnaires CAPI-CATI, to allow for different adaptations of wording of questions for different categories of respondents (e.g. don't know answers should be allowed only for proxy interviews; question on hours worked could be asked in different ways to employees and to self-employed).
- g) Analyse the feasibility and possible advantages associated with the introduction of web interviewing.
- h) Analyse the feasibility and possible advantages associated with the use of more administrative data (if recognised to be of good quality) in the LFS.

These initiatives will need the ICBS to invest more human and financial resources in the improvement of LFS. A higher budget will also be required in order to maintain these systems, once they are improved.

Rec.9. The ICBS should verify whether the procedures that are currently in place for updating LFS data from Permanent Samples give the expected results.

In particular, it should be ensured that the labour market characteristics of the population covered in permanent samples do not change over time.

Rec.10. The ICBS should implement a number of important changes in the questionnaire in order to comply with the international resolutions and best practice, which include the 19th ICLS Resolution and Eurostat's implementing rules in order to measure ILO labour status.

Rec.11. The ICBS should evaluate the impact of differences between the national concept of 'usual residence' and 'households' on the comparability of results, and determine whether adjustments should be made in the future.

The ICBS is also encouraged to simplify its inclusion/exclusion criteria in order to determine the household members.

Rec.12. The ICBS should assess the feasibility and relevance (within the national context) of including all questions in EU-LFS in the national questionnaire.

During this process, it is important that the ICBS carries out an assessment of the relevance and feasibility of including questions in the EU-LFS, which are currently not covered in the national questionnaire. Questions from EU-LFS should be excluded from the national questionnaire only if they are deemed as not relevant for national purposes. In order to best implement this measure, it is recommended that the ICBS LFS representatives participate regularly in Eurostat and ILO fora dealing with LFS questionnaire development.

Rec.13. Compute a new derived variable of EU labour status, which is more coherent with the ESS definition (e.g. upper limit for unemployed set to 74 years).

Rec.14. The ICBS should exploit the possibility given by the calibration estimator (within the current weighting procedure) in order to enhance the quality of the estimates, by imposing more constraints at the calibration stage:

- i) Introduce finer age-groups in the weighting procedure, such as 5-years age-groups at national level and wider age-groups at district, sub-district and natural region level.
- j) Assess performances of the non-response adjustment procedure to verify whether panel attrition is correlated to individual characteristics only or any household characteristics.
- k) Include additional new constraints in the weighting procedure for the age group 15-74 and possibly 15-64 in order to allow the production of indicators fully comparable at international level.

Rec.15. The ICBS is strongly encouraged to find ways by which it could reduce the rate of proxy interviews, at least during the first wave of the LFS. The ICBS should also carry out an assessment of the effect of proxy interviews on the quality of the estimators.

In particular, the ICBS should introduce new measures to quantify the magnitude of non-sampling errors caused by proxy answers.

Rec.16. The ICBS should investigate the effect of proxy answers on the cross-sectional estimates and the longitudinal consistency.

Rec.17. The use of dependent interviewing is not very well documented in the methodological manual provided to users. Only the questionnaire used for the first wave is documented. It is therefore suggested to:

- a) Carry out more analysis to assess whether dependent interviewing is being over-used in the LFS, at the detriment of quality.
- b) The questionnaire used for re-interview should be documented in the publications.
- c) Rules used to assess the stability of situations, which determine whether information can be copied from past waves should be well documented.

Rec.18. The ICBS should carry out a thorough assessment of the quality of results produced by the automated coding system used for the classifications of occupation and economic activity.

Rec.19. Documentation of the methods used on imputation of item non-response should be improved.

Rec.20. The ICBS should carry out a thorough assessment of the impact of existing imputation procedures on the main estimates.

Special focus should be given to variables used for ILO status classification, as well as variables on education, occupation, unemployment duration and absence from work

Rec.21. The ICBS could consider the use of probabilistic models for imputation against item non-response for all LFS variables.

3.3. Recommendations on Part 3 – Statistical Processes

Rec.22. The ICBS should carry out user satisfaction surveys on a regular basis in order to assess the relevance of the main statistical outputs of the ICBS, including the LFS.

Rec.23. The ICBS should organise more frequent meetings between users and producers of statistics, in order to obtain feedback on relevance of new topics which potentially could be included in the LFS questionnaire.

Rec.24. The ICBS policy on dissemination of LFS data, and related policies/guidelines, should be made available to the general public.

Rec.25. The ICBS should make arrangements to publish revised past data when major breaks in time series occur.

At the moment this work is carried out only for internal purposes, for the purpose of seasonal adjustments.

Rec.26. The ICBS should provide more detailed methodological notes to advanced users of LFS statistics and researchers.

Rec.27. The ICBS should make sure that when introducing new methodological changes, it would be possible to estimate the effect of these changes on the consistency of results.

Rec.28. The ICBS should carry out more regular coherence tests between estimates of LFS and other national sources (e.g. National Accounts and Business Statistics) so as to identify possible limitations in the survey, and explain differences to the users.

Reviewers recommend regular production of bridge tables highlighting differences between LFS and other statistical sources.

4. ANNEX – SR AGENDA

Sector Review of The implementation of the Labour Force Survey in Israel

CBS
Central Bureau of Statistics
Jerusalem - Israel

Agenda

Date and place of the SR

Date	July 6-9, 2015
Place	CBS premises - Jerusalem - Israel

Assessment team

GOPA-experts:	Mr Antonio R. Discenza (<i>leading expert</i>) Mr Etienne Caruana
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Day 1: (Introductory meeting and SAQ part 1 – Institutional Environment)		
09:30 – 10:00	Welcome and introductory meeting with the top management of the CBS	Assessment Team Top Management LFS Management
10:00 – 11:00	Meeting with managers of official LFS statistics Review of principles 2, 3 and 6 for LFS.	Assessment Team LFS Management
11:00 – 11:15	<i>Coffee Break</i>	
11:15 – 13:00	Meeting with managers of official LFS statistics Cont.: Review of principles 2, 3 and 6 for LFS	Assessment Team LFS Management
13:00 – 14:00	<i>Lunch Break</i>	
14:00 – 15:30	Presentation of Israel LFS by the LFS team Overview of organization, processes and outputs	Assessment Team LFS Team
15:30 – 15:45	<i>Coffee Break</i>	
15:45 – 17:00	Cont: Presentation of Israel LFS Overview of organization, processes and outputs	Assessment Team LFS Team

Day 2: (SAQ part 2 - Statistical Processes)		
09:00 – 10:15	Meeting with producers of official LFS statistics Principle 7 - Sound methodology	Assessment Team LFS Team and Methodology Unit
10:15 – 10:30	<i>Coffee Break</i>	
10:30 – 12:00	Meeting with producers of official LFS statistics Principle 8 - Appropriate Statistical Procedures	Assessment Team LFS Team and Methodology Unit
12:00 – 13:00	<i>Lunch Break</i>	
13:00 – 14:30	Meeting with producers of official LFS statistics Principle 9 - Non-excessive burden on respondents	Assessment Team LFS Team and Methodology Unit
14:30 – 14:45	<i>Coffee Break</i>	
14:45 – 16:30	Meeting with producers of official LFS statistics Principle 10 - Cost-effectiveness	Assessment Team LFS Team

Day 3: (SAQ part 3 - Statistical Outputs)		
09:00 – 10:15	Meeting with producers of official LFS statistics and Communications Unit Principle 11 – Relevance Principle 12 – Accuracy and Reliability	Assessment Team LFS Team
10:15 – 10:30	<i>Coffee Break</i>	
10:30 – 12:00	Meeting with producers of official LFS statistics Principle 12 – Accuracy and Reliability	Assessment Team LFS Team
12:00 – 13:00	<i>Lunch Break</i>	
13:00 – 14:30	Meeting with producers of official LFS statistics Principle 13 – Timeliness and Punctuality Principle 14 - Coherence and Comparability	Assessment Team LFS Team
14:30 – 14:45	<i>Coffee Break</i>	
14:45 – 16:30	Meeting with producers of official LFS statistics Principle 14 - Coherence and Comparability Principle 15 – Accessibility and clarity	Assessment Team LFS Team

Day 4: (SAQ part 4 - Statistical Outputs and Final meeting)		
09:00 – 10:15	Meeting with management and producers of official LFS statistics. Action Plan of future actions	Assessment Team LFS Management LFS Team
10:15 – 10:30	<i>Coffee Break</i>	
10:30 – 12:00	Meeting with management and producers of official LFS statistics. Cont. Action Plan of future actions	Assessment Team LFS Management LFS Team
12:00 – 13:00	<i>Lunch Break</i>	
13:00 – 14:30	Meeting with Management and Senior Staff about a) medium and long-term planning within the sector; b) proposal of a list of actions to be undertaken in order to improve (if needed) the data delivery and functioning of the sector.	Assessment Team LFS Management Top Management