

Terms of Reference

EU Twinning Project IL/12 CRIS 2015/370-467

06 – 09 February 2017

Component B: Micro Data services to researchers

Activity B.5: Study visit to NSI's providing remote access to microdata for researcher purpose in two member states Organizational structure, procedures and processes

0. Mandatory results and benchmarks for the component

Mandatory results:

- *Setting up an overall program for providing researchers with access to micro-data, based on the analysis of the current situation and a designated strategic plan* (February 2018)

Benchmarks:

- **IB1:** *Report and analysis of the current situation adopted (and identification of gaps to be bridged)* (August 2016);
- **IB2:** *Strategic Plan elaborated for providing researchers with access to micro-data* (February 2017);
- **IB3:** *Organizational and technological implementation plan, including data security* (August 2017);
- **IB4:** *Formal organizational structure proposed* (August 2017);
- **IB5:** *Training program defined for the staff* (November 2017);
- **IB6:** *Policies and procedures adopted to manage each interface (e.g. data providers, research institutes, researchers, thematic units...)* (October 2017);
- **IB7:** *Proposal for legislation submitted to the ICBS top management* (February 2018);

1. Purpose of the activity

The main objective of the study visit to Statistics Denmark (DST) and Statistics Netherlands (CBS) is to gain knowledge on research services provided in Denmark and the Nederland

2. Expected output of the activity

- Study visit report
- Knowledge on research services provided in Denmark and the Nederland gained
- Possibly elaboration to the recommendations to the program for providing researchers with access to micro-data in Israel identified

SUGGESTIONS FOR ISSUES TO BE COVERED DURING THE STUDY VISIT

- **Legislation, confidentiality and security**
 - Data confidentiality policy
 - Interpretation and implementation of the “*need to know principle*”
 - Methods for statistical disclosure control (aggregation, noise, synthetic data)
 - Confidentiality contracts for researchers
 - Output control of results
 - Sanctions in case of breaches
 - Guidelines and training in confidentiality
 - IT security policy and necessary conditions for implementing a remote access system
- **General**
 - Organizational framework
 - Research data and metadata production and management
 - Internal workflows and processes
 - External workflows and processes - from a researcher's point of view e.g. approval process, access etc.
- **IT – Technical and security setup**
 - Technical setup of a remote access system
 - Technical setup of research rooms
- **IT – Management**
 - Management of the IT system
 - Monitoring of the IT system
 - Administrative system for supporting research services
 - Services provided to researchers by the IT Department
- **Responsibility and cooperation within the NSI**
 - Responsibility, cooperation, task and service agreements within the NSI e.g. with other subject matter units and IT
- **Guidelines, training and other supporting materials**
 - Guidelines (internal and external)
 - Metadata
 - Code lists (format library)
 - Courses for researchers
- **Business plan and Price structure**
 - Business plan
 - Price structure (Administration, consulting on data and confidentiality rules, data extraction, IT support, use of IT tools etc)
 - Monitoring and adjustment of price structure
 - Contract management

Working form

- Presentations
- Workshops/ Meetings
- Discussion

3. Participants

1. **Ms. Sigalit Mazeh (Shmueli)**, BC Project Leader Deputy of the Twinning Project and Director of International Relations and Statistical Coordination Department, ICBS. Since 2009 employed in the International Relations and Statistical Coordination Department as Director of the ICBS Annual Statistical Abstract, and Head of the department since 2015. The department is responsible for micro data access to researchers, coordination with the NSS, international relations and management of international and bi-lateral activities (including Twinning projects). Ms. Sigalit Mazeh (Shmueli) has been employed at ICBS since 1995. In the period 1995 to 2009 she worked in the Census Department - from 2000 as the Head of Sector for Concepts, Questionnaire and Dissemination. Ms. Sigalit Mazeh (Shmueli) has a MA in Demography and Sociology. Email: sigalit@cbs.gov.il
2. **Mr. Brian Negin**, Legal Advisor of Israel's Central Bureau of Statistics (ICBS) since 1990. From 2015 he has also served as ICBS's Freedom of Information Officer. He holds a bachelor degree in Political Science from the University of California, Santa Barbara, California, USA, and a bachelor degree in Law from the Hebrew University of Jerusalem, Israel. From 2001 to 2016 Brian taught Information Policy in MA programs for librarians and information specialists at the Hebrew University of Jerusalem and at the David Yellin Academic College of Education in Jerusalem. From 1996 to 1999 he served, in addition to his position at ICBS, as the Legal Advisor of Israel's Government Internet Committee. From his first days at the ICBS, Brian has been intimately involved in making microdata available for research. His 1997 paper on Providing Microdata Access to Researchers provided the legal basis for The Grunau Committee Report of the same year, which established two levels of microdata the ICBS is authorized to publish under the Statistics Ordinance: Public Use Files (PUF) and Microdata Under Contract (MUC). In 1995, Brian created the guidelines and contract that enable the operation of ICBS's Research Rooms according to the authority of ICBS under the Statistics Ordinance to cooperate with State Agencies in performing statistical acts. From 2011- 2013 Brian served as Israel's representative on the OECD Expert Group for International Collaboration on Microdata Access, whose report was published in 2014: <http://www.oecd.org/std/microdata-access-final-report-OECD-2014.pdf>. Brian wrote Chapter 5 ("Sanctions for Breach of Confidentiality") and Chapter 10 ("Licensing Public Use Files"). And finally, it was Brian's proposal to have a Twinning project on the subject of researcher access to microdata that culminated in this current Twinning program's "Component B - Micro Data services to researchers." Email: briann@cbs.gov.il
3. **Mr. Ahmad Hleihel**, Mr. Ahmad Hleihel is Chairman of the data confidentiality Committee since 2011 where his main responsibilities include classification the risk of disclosure an individual in micro-data files. Work with subject units and the researchers to minimize the discloser risk that the research did not hurt. At the same time, he is responsible for demographic statistics and serves as Deputy Senior Director at Demography and Census Department. Ahmad Hleihel has a Ph.D. in demography, a master degree in Demography and Statistics, and first degree in Statistics and Sociology. Email: ahmad@cbs.gov.il
4. **Ms. Anat Katz-Avram**, International Relations and Statistical Coordination Department. Ms. Anat Katz Avram is responsible for research rooms in the Israeli Central Bureau of Statistics. As part of her role, she handles the daily contact with researchers from the initial request to access data via the research room. She guides the researchers and their assistants throughout the authorization process, assisting them and updating them when needed. Upon approval to access microdata via the research room, Anat continues guiding the researchers and assists them with the ongoing work, coordinating time slots to use the research room, requests for changes and updates of the research and of the research team and more. Anat is also part of the team that is working on writing up the work procedures and developing the monitoring and managing system for researcher's requests. Anat has a BA in Education and Sociology from Hebrew University and an MA in public policy from Bar Ilan University. Email: anatk@cbs.gov.il
5. **Mr. Itzik Goldstein**, Deputy Director of IT Department. Mr Itzik Goldstien has been the deputy director of the IT Department at ICBS since May 2014. Prior to this position, he has been a project manager in ICBS since May 2000. As part of his role, he develops applications for the ICBS. Itzik Goldstien has a MA in Biochemistry. Email: izikg@cbs.gov.il

6. **Mr. Genady Etin**, Head of Sector, Technology in the IT Department. A part of Mr. Genady Etin duties is to give support and assists interviewers in the field. Mr. Genady Etin is also part of the team that establishes new research rooms and gives them support. Finally, Mr. Genady Etin is involved in many other projects in the field of technology in the ICBS. Mr. Genady Etin has a MA in mechanical engineering and has graduated a software engineering course and information security management course in the Technion. Email: genadye@cbs.gov.il
7. **Mr. Haim Plachinsky**, Data Security Officer, Information Security Department. In charge of Data Security (CISO) in the Israeli Central Bureau of statistics since 2011. As part of his role, he is in charge of professional guidance and management of all matters related data security. This includes policy formulation in accordance with the organization's activities, dealing with data security threats that are always changing and keeping and implementing all requirements by law in the organization. Between 2008 and 2011 Haim worked as a project manager and a data security consultant in a data security consulting firm. He has a B.A in mathematics and computer science and is a graduate of the data security management course from Tel Aviv University. Email: Haimpl@cbs.gov.il
8. **Ms. Hadas Yaffe**, Demography and Census Department. Ms. Hadas Yaffe, Coordinator in the Census Planning and Developing Sector. Responsible for the entire scope relating to census products: planning stage, dissemination of data, defining and preparing files for researchers, ready-made products and tailor-made products by order. I am also involved in planning the next census. Hadas Yaffe has a BA in Statistics and Education. Email: hadasy@cbs.gov.il
9. **Ms. Orly Furman**, Micro-Economic Statistics Department. Ms. Orly Furman Developed and is responsible for: (i) The Matched Employee-Employer Data Base, that are based on administrative income tax files, the Population Register and the Business Register, (ii) The Data Base of Self-Employed and (iii) The Data Base of Individual Income - A data base that was constructed on the basis of the Matched Employer-Employee and the Self-Employed data bases. Each record in this data base represents one individual, and each individual has one record. The main of Ms. Orly Furman is: Statistical special processing, complete and impute data for surveys as well as to prepare files for researchers.
10. **Mr. Adnan Mansur**, Head of Sector, Education and Teaching Statistics Department. Adnan Mansur hold a BA degree in Statistics, LLB in law and I am about to complete an MA degree in economics. Adnan Mansur has worked at the Israeli Central Bureau of Statistics (ICBS) in 2001 and since 2011 hold a position as Director of the Learning Transition and Follow-up Sector. The sector performs mainly longitudinal follow-up studies in the field of education – tracking entrance of high school and pre-university academies graduates to institutions of higher learning, university students' learning paths and entrance of graduates of institutions of higher learning into the labor market. In addition, the sector develops statistics concerning research and development in higher education. Within this framework, the sector publish data about research and development spending, post-doctorates, and more. The sector also coordinates work with researchers interested in education data for their studies, which they carry out in the ICBS research room.
11. **Ms. Tamar Rand**, Resident Twinning Adviser Assistant since March 2016 where she assist in the co-ordination and liaison with the ICBS, the European Union Delegation, stakeholders and experts from EU member states; Furthermore, Tamar Rand perform interpretation and translation from Hebrew to English and vice versa. Before entering the Twinning project Tamar Rand worked as a Manager of Recruiting and Training in a large educational tourism business. Tamar Rand has a MA in Early Childhood Development. Email: tamarra@cbs.gov.il
12. **Ms. Charlotte Nielsen**, Resident Twinning Adviser since March 2016 where her main responsibilities include planning and co-ordination of Twinning activities with the ICBS, the European Union Delegation, stakeholders and experts from EU member states. Between 2008 and 2016 Ms. Charlotte Nielsen, held a position as Senior Advisor in the Research Services division of Statistics Denmark. Charlotte Nielsen has a Ph.D. in insect pathology and a master degree in agricultural studies. Email: cln@dst.dk

4. Current Situation of researcher's access to microdata at ICBS

Currently 60 active research projects are hosted by the Israeli Central Bureau of Statistics (ICBS). In addition there are about 15 additional research projects in different stages of approval. In total about 100 researchers have access to the current 60 projects distributed among 25 different research institutions.

Presently ICBS provides micro-data files for researchers solely in research rooms located and managed by ICBS in Tel Aviv, Haifa and Jerusalem. The micro-data files provided to researchers are of two types:

- **'Research room' files (secure-use files)** – defined as confidential data for research purposes to which only limited methods of statistical disclosure control have been applied.
- **MUC files (Microdata Under Contract/scientific-use files)** – defined as anonymized confidential microdata for research purposes that has been subject to statistical disclosure control by aggregation, that together with an administrative, legal and logistical framework minimize risk of identification to a low level.

Data can only be accessed by approved researchers from accredited research institutions. All researchers are subject to legal and administrative restrictions, including making the researcher a special sworn employee of the ICBS.

The research rooms are equipped with standalone computers. A researcher is assigned to one of the computers, and the data are copied on the computer and placed in a designated folder. The computers are backed up once a week. Researchers can receive output from their analysis by placing the files in a specified folder on the computer, and request ICBS to send the data.

On each standalone computer one or more of the following statistical programs are installed: SPSS, STATA, R, the Microsoft Office package and other programs requested by the researchers. The researcher books time slots for access to a specific research computer where their data are stored on an access restricted part of the hard disk. Access can only be granted within normal office hours.

At the initial request for a research project, one staff member from an ICBS subject matter unit is appointed to be the person in charge for that specific research project. It is the responsibility of the appointed ICBS staff member to collect and prepare data, construct the associated documentation and vet the outputs from the research project.

For each project one customized research dataset is created according to the *need to know principle*. The dataset most often integrates multiple datasets delivered by multiple units and may also include external data. Since no data catalog and no complete documentation or guidelines are presently available for internal or external use, the selection and preparation of datasets and variables to be integrated in the research dataset need to be done in close cooperation with staff members from several subject matter units, the researchers, the Confidentiality Committee and the Data Transfers Committee. On request all output from analysis will be mailed to the researchers after they have been vetted by ICBS.

The organization and workflow both internally within ICBS as well as for the researcher is rather complex because it involves several departments, units, committees and managers from ICBS. The workflow includes several steps of approval and thus over 20 forms need to be filled out and signed before a researcher will be granted access to microdata. Therefore it may take up to one year from the initial request for data access until the data is available for the researcher.

The cost of using the service provided by ICBS is calculated before the construction of the dataset is initiated and is based on the expected number of working days by each of the subject matter units involved in the specific project. In addition there is a yearly fee for using a research room.

5. Vision and initiatives for the future research services at ICBS

The vision for the future services for researcher services provided by ICBS is (i) to provide microdata and services in a secure, professional, user-friendly and competent manner and (ii) to increase effectiveness in order to reduce the time spent from when a request is placed and until access to data can be obtained.

Over the course of the Twinning project the following operative tasks have been initiated or planned in order to improve the services and processes:

Mode of access to microdata

In the future researchers should be offered the following two modes of access to microdata centrally hosted ICBS facilities:

- (i) access to MUC files from work/home via secured internet connection (remote access)
- (ii) access to research room files from secure research centers

Technological infrastructures (IT)

In order to optimize management, data security and flexibility, *one* technological infrastructures solution for researcher access to microdata should be developed. The solution should support both access modes. Applications and data will be physically located on a server at ICBS in Jerusalem. Hardware in research rooms will be ‘thin clients’ acting as ‘terminals’ connecting to a research network physically placed at ICBS in Jerusalem.

Organization

Establishment of a central research service unit that will provide all services to researchers based on service level agreements with the subject matter units and the IT Department.

Processes

Leaning all work processes for researcher’s access to microdata both internally and externally. Option for automated processes will be analyzed.

Data and documentation

Building a data catalog of available files and variables for researchers, including standardization of names and formats.

Furthermore, policy and procedures for quality check of data as well as documentation (metadata) should be initiated.

Guidelines

To update and complete a set for internal and external guidelines for processes, confidentiality rules etc.

Business plan

Development of a more transparent and accurate price structure for access to data by researchers.

Administration

Building an administrative management system that keeps track of all institutions, researchers and research projects.

Legislation

Initiate steps to change the legal framework by which access to data is provided to researchers.