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USE OF BUSINESS INTELLIGENCE TOOLS FOR STATISTICAL DATA DISSEMINATION – ISRAEL 2008 CENSUS

Submitted by the Central Bureau of Statistics Israel[1]

I. BACKGROUND

Important features in census data dissemination are; the need to respond to a wide spectrum of clients, timely outputs and advanced technology which enable a diversity in data outputs. Previous Censuses in Israel suffered from a prolonged lag time between census operation and publication of results. In the upcoming census data collection is fully computerized and the census file will be finalized within less than a year from the census date. One of the incentives for the computerized census was to disseminate data as early as possible. A strategic decision that followed was that the census publication will be part of the general planning and testing process of the 2008 census. As a result, publication were produced from all census pilots;   2002, 2004 and 2006.

The challenges were:
- To determine the routes, tools and technology for data production and data dissemination about 5 years prior to the full scale application.
- Produce a wide variety of products to a wide spectrum of clients, ranging from laymen to professionals and academics sophisticated users.
- An end-user friendly tool that would require reasonable hardware resources.
- To Reduce the load on the in-house technology staff that was busy developing the census data collection systems.
- A fully automatic option for mass production of and editing.
- Census data disseminated within one year after data collection completed.

II. CHOOSING A TOOL

The main perception was that use of shelf product would ease the pressure on the technology staff and would probably be more user friendly than a fully customized tool. Several options were tested for their compliance with the above main requirements. One of the option that were proposed was, use of a Business Intelligence (BI) software as the central tool for statistical data production and dissemination.

SAS is the main statistical software currently used in the CBS Israel. SAS was therefore a primary candidate. MIA Computers Ltd., the local formal SAS distributor was contacted to check, if their BI tool will comply with the census requirements.

III. SAS BI

SAS BI – the SAS business intelligence tool features most of the defined requirements, although some modifications are needed.

The SAS BI was developed under the basic principal of "single version of the truth", meaning that for each selected interface in every place, the tool will present identical and true results. The software enables this

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[1] Prepared by Sigalit Shmueli[1] Hadas Yaffe[1], Michal Salansky[1], Sharon Haroz[2] and Mikil Orlovski [2]
[1]Central Bureau of Statistics Israel [2] MIA Computers Ltd, Israel

feature by creating a unique accessible metadata environment, which allows fast and efficient central management of: data, products, access rights etc. The SAS BI also features a variety of web technology based reports.

The SAS **web report studio** was used for the Israel census. This feature contains a dynamic and static query options which use an explorer without the need to for local installation on the end-users equipment. The interface allows for subpopulation screening and surfaces outliers in the data set. It also features designing and editing of reports by the end-user.

IV. TESTING SAS BI WITH 2006 PILOT CENSUS
The tool was tested in the production of statistical reports of the 2006 pilot census. Currently the publication that were produced are "Geographical area profile"; profiles for each locality that took part in the pilot census in 2006, as well as profiles for sub areas within the locality(statistical areas). The main advantage of the SAS BI software is that there is no need of SAS expertise to design and produce the static outputs.

The testing process included:
Defining population subgroups and the variables
Designing 106 templates for tables and charts
Producing all tables and charts ready planned for the Localities profile publication.

The complete testing phase (including training time of three staff members) was completed in less than 6 months (4 months to design the products and 2 months ro for the actual run). The profiles for the pilot census localities were on the WEB site two months after the file was ready for use. The work was conducted by two and half staff members with no previous knowledge of BI tools. MIA computers Ltd. provided on going consultancy services during the testing phase. Consultancy was also provided by an in-house SAS expert who accompanied the testing process.

V. CONCLUSIONS

The SAS BI fulfilled the expected criteria, and we plan to use it for the 2008 census statistical publication production. It will be used for dynamic and static queries on the web and for the tables and charts which will be disseminated as hard copies and digital media. We plan to produce about 3000 locality and sub-locality profiles, a total of over 30,000 tables and charts within 6 months with a staff of 6 persons. Furthermore we currently plan the static and dynamic queries as well as an on line table generator using the SAS BI tool.

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