

## **Rolling Integrated Census in Israel**

Dan Ben Hur\* and Luisa Burck\*

Central Bureau of Statistics, Jerusalem, Israel [louiza@cbs.gov.il](mailto:louiza@cbs.gov.il)

The 2008 Census of Population was the first Integrated Census (IC) conducted in Israel. The IC was designed to provide population counts and estimates of population characteristics by combining information from the Population Registry (PR) with data obtained from two interlaced sample surveys in the field. Israel's PR cannot substitute for a census as it is not coterminous with the list of persons defined as comprising the de jure census population. It includes persons who no longer live in Israel (overcoverage) and does not include persons lacking PR ID numbers who are residents in Israel continuously for a year or longer, legally or illegally (undercoverage). In addition, the geographical information and in particular, the addresses in the PR, is of poor quality. The IC coverage estimates at statistical area level are based on the methodology of Dual System Estimation (capture-recapture models), and represent an extension of the classical model for estimating undercoverage in census data; the extension accommodates overcoverage or "false captures" in the administrative data. The undercoverage sample (the U-sample) of approximately 17 percent of the population, serves to estimate the undercoverage parameter as well as obtain detailed demographic, social and economic information. The overcoverage sample (the O-sample), a list of people drawn from the PR, enables to evaluate the validity of the addresses and thus estimate the overcoverage parameter. Based on these two parameters' estimators, we assigned a census weight for each record (person) in PR; a weight which reflects the number of persons it represents in the population. Thus, the population estimate for any population group is the sum of the census weights assigned to its members. The conception behind the Rolling Integrated Census is to establish a multi-year work program that will provide ongoing detailed geographical population counts and estimates of population characteristics. Although the basic methodology of the Rolling Census is based on 2008 Census methodology, some modifications and enhancements concerning to sample design, locality level estimates and the coherency of the estimates have been introduced.

**Key Words:** Register-based census, homogeneous estimation groups, dual system estimation.