

Cross-Census Assessment of Age-Sex Ratios:

An application of newly updated UN assessment guidelines to microdata census samples from the IPUMS International

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Data about social phenomena are essential to researching patterns of social life, and census data are among the most meticulously collected social data. However, even these data cannot perfectly represent the social characteristics of the populations they are meant to describe. It is, therefore, essential that researchers using such data be as familiar with their source data as possible. Although census data samples are becoming increasingly available through the IPUMS International project, information about data structure and quality can be quite limited. The more researchers understand patterns of error, omission and bias that stem from complex data collection, manipulation, dissemination and estimation processes, the more accurately they can describe the populations they analyze. The IPUMS International data collection is comprised of 211 census microdata samples from 68 countries of the world and adds new samples each year. In addition to providing the data itself to researchers at no cost, the IPUMS provides a wealth of documentation about the enumeration procedures used to collect the data. Recently, IPUMS International has undertaken efforts to provide users with additional information about design and structural characteristics of the microdata samples in the collection. This paper reports on data assessment results comparing age and sex ratios across years for a number of national census samples within countries in the IPUMS International collection. We base our assessment procedures on the newly updated United Nations recommendations detailed in the “Tools for demographic estimation,” or Manual XI, a preliminary version of which is available at demographicestimation.iussp. Compared to age heaping assessments such as the Whipple Index or Myers Blended approach, the graphing techniques recommended in the guidelines provide superior means of isolating potential structural issues in the census samples.

Key words: Data quality, age-sex ratios, demographic estimation, census microdata