

A Simulation Approach to Estimate Inclusion Probabilities for PIAAC Germany

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Abstract

In PIAAC (*Programme for the International Assessment of Adult Competencies*) inclusion probabilities have to be known for every respondent at each sampling stage in all participating countries. However, in some cases it is not possible to calculate inclusion probabilities for a sample survey analytically – although the underlying design is probabilistic. In such cases, simulation studies can help to estimate inclusion probabilities and thus ensure that the necessary basis for the calculation of design weights is available. In this section, we present a Monte Carlo simulation using the German sample data. During the selection process for PIAAC Germany an error had occurred. Because of that, it was not possible to determine the inclusion probabilities analytically. Therefore a simulation study with 10,000 runs of the erroneous selection process was set up. As a result it was possible to compute the inclusion probabilities for the sample of PIAAC Germany.

Keywords: Monte Carlo simulation, inclusion probabilities, sampling for PIAAC Germany



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