Hands-on Exercises for Two-Census Methods

Age-specific death rates, Household deaths

Calculate and plot age-specific death rates from 2006 Census and female deaths in the last 12 months for Lesotho and insert results into cells E2:E20 (yellow background). Data are in <EX_HH deaths.xlsx> Excel file.

Does age schedule of death rates make sense?

Compute life expectancy at birth with LIFTB procedure, Mortpak. Copy results into Task2 worksheet. Does result make sense?

General Growth Balance Method

Apply GGB method to female population of South Africa.

Input dataset: <EX_GGB_Input Dataset.xlsx>. The dataset includes a) female population for 2001 census and 2007 community survey, b) total intercensal deaths (2001-2007) and c) total intercensal migration.

Use EX_GGB.xlsx to apply GGB method.

What is estimate of relative completeness of censuses =
What is estimate of completeness of death registration =
What is estimate of adjustment factor for death rates   =

As estimates of migration are usually unreliable, assume that migration is zero (closed population).

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What can we say about effect of migration on GGB estimates?

Adult age range is usually more reliable than ages below 15 and higher than 64. If we select age range 15-64 only, how estimate of completeness changes?

Cohort survival ratios

Excel file EX_CSR.xlsx includes population from 2000 and 2010 censuses of Brazil. Compute intercensal survival ratios by entering formulas into H7:I24.

What you can see from the Fig. 1? Why census survival ratio 10-15/0-4 is higher than one? Compare intercensal survival ratios with life table survival ratios computed by CELADE. What do you see (Fig.2 & Fig.3)?

Compute ratios of intercensal survival and life table ratio, nRx by entering forumulas into cells L7:M21. Why nRx is higher than one for 10-14 and lower for 75-79?

Cohort Component method using MortPak

Compute projection of Brazilian population for the time of 2010 Census given population by age and sex 2000 Census and compare with the population enumerated in the census.

1) Run Mortpak and open PROJCT procedure;
2) Prepare parameters of the cohort component method. Input data are given EX_CCM.xlsx, worksheet Step1;
3) Run cohort component method and copy projected population by age and sex to cells B3:C19, worksheet Step2;
4) Plots on the right compare projected and enumerated population – discuss results. Why projected population at ages 0-4, 5-9 higher? Was TFR too high?
5) Assuming that the projected population is correct, what is completeness of 2010 Brazilian census? Does completeness depend on age?