ASHGATE

# INDEPTH Model Life Tables for Sub-Saharan Africa

INDEPTH Network

# Foreword

The production of model life tables based on the INDEPTH data demonstrates the tremendous importance of these data for the future of African demography. All previous attempts to develop model life tables were hampered by the shortage of reliable data from Africa. For example, the United Nations model life tables published in 1982 used data from Niakhar as the basis for an African pattern while admitting that there was little evidence that this pattern extended beyond a part of West Africa. The INDEPTH collection of life tables from 17 research projects in ten countries in Eastern, Western, and Southern Africa provides demographers with ammunition to solve problems that have plagued the field for fifty years.

There is no widely accepted approach for developing standard patterns from a group of life tables. This is quickly apparent from a comparison of the methods chosen by Coale and Demeny, Brass, Ledermann, and the United Nations. Each approach has advantages and disadvantages. For example, the Coale and Demeny tables played a central role in numerous demographic studies of both historical European populations and present day high mortality populations. However, their approach cannot be summarized in a series of equations that are useful for programming. Ledermann's approach has the advantage that it provides estimates based on child mortality alone or on data for both children and adults. However, it has been under-appreciated since the mortality rates used as entries into the various models do not match those available from the Brass method for estimating adult mortality.

The models presented here are based on an application of Brass's relational life table system. This is a wise choice. The use of the logit transformation makes for easy programming and it can be readily adopted to use revised standard values. It also allows for transparent methods for sorting life tables into 'families' or 'systems' with similar patterns. In addition, there are several ways in which the simple two-parameter logit model can be reduced to a single parameter or extended to three or four parameters depending on the quality of the available data to be fitted.

The models presented here demonstrate the tremendous value gained by pulling together life tables from so many research areas. For example, the clear division between areas with high and low HIV-prevalence rates is only possible because numerous life tables are available for comparison. This finding is certain to lead to further research relating age patterns to estimates

of HIV prevalence in different areas. Research on the effect of other disease might reveal similar differences attributable to malaria or tuberculosis.

It is almost certain that other researchers will use the INDEPT collection of life tables to find model life table systems designed f different applications. In the future, these data will be combined wi additional data from new sources to produce new models. The publication this first model life table system based on the INDEPTH data is auspicious event that portends a central role for the INDEPTH data in future of African demography.

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