



MORTPAK for Windows
The United Nations Software Package for Demographic Measurement

Developed by the
United Nations Population Division
Department of Economic and Social Affairs

The United Nations Population Division is pleased to announce the release of MORTPAK for Windows, version 4.0 of its popular software package for demographic measurement. The MORTPAK software package for demographic measurement has been widely used throughout research institutions in developing and developed countries since its introduction in 1988.

MORTPAK for Windows requires a personal computer with Windows 95 operating system or above and Internet Explorer 4.0 or above. *An order form for MORTPAK is in Section B below.*

A. The Demographic Procedures

MORTPAK for Windows provides a set of 17 computer programs for undertaking demographic analyses in developing countries, including empirical and model life-table construction, graduation of mortality data, mortality and fertility estimation, evaluation of census coverage and age distributions and population projections. The 17 demographic procedures included have been selected by the Population Division as useful for evaluating demographic data from censuses and surveys and preparing reliable estimates of demographic parameters. These procedures incorporate techniques for evaluation and estimation of demographic data, particularly those techniques that incorporate the United Nations model life-table system (United Nations, 1982) and generalized stable population equations (Preston and Coale, 1982).

When selecting a new application from the menu, a window in table form presents a brief description of the procedures, categorized according to their major functions: life-table and stable population construction, model life table construction, graduation of mortality data, indirect mortality estimation, indirect fertility estimation, other estimation procedures and population projections. The package emphasizes mortality estimation, reflecting the larger number of techniques available and the further advanced mortality estimation is, compared to that of other demographic components. (Of the nine chapters in the United Nations manual on Indirect Techniques for Demographic Estimation (United Nations, 1983), five are dedicated solely. and two partially, to mortality analysis.)

The LIFTB and STABLE programs calculate empirical life tables and stable populations respectively based on age-specific mortality rates, plus, in the latter case, an intrinsic growth rate. The life-table method used is based on the approach of Greville (1943), which permits calculation of age-specific separation factors based on the age pattern of the mortality rates themselves. It is, hence, potentially more accurate than methods which assume constant separation factors, and more robust, under developing country circumstances, than methods which estimate separation factors based on population age distributions. Although fertility decline is rendering calculation of stable populations less applicable for many countries, for others fertility has changed little and stable population analysis remains useful for evaluation of age distributions and rough approximation of birth and death rates. However, for countries whose fertility decline is recent and mortality change has not greatly altered the adult age distribution, STABLE could be useful for evaluating age distributions and studying population dynamics among adults. In addition, the STABLE program is useful for static simulation of the effects of changed growth rates and/or mortality rates on age distribution.

The applications MATCH, COMPAR and BESTFT construct model life tables and compare or graduate empirical data with respect to a model life table. The procedure MATCH not only generates any United Nations or Coale and Demeny model life table but also enables the entering of a user-designated mortality pattern which then can be adjusted to correspond to any desired level. This user-designated model may be a pattern from a third model life-table system such as the Brass standard (Brass and others. 1968) but, perhaps, most importantly can be an age pattern of mortality for a particular country. In the latter case a demographer can generate a model life-table system specific for a country of interest by using MATCH to construct a series of life tables at different levels of life expectancy, all consistent with the country's average pattern. Comparison of an empirical set of age-specific mortality rates to model life-table patterns, through COMPAR, aids the demographer in the choice of a model life table. However, as data quality improves, the demographer will wish to retain as many characteristics of the original data as possible. COMPAR is then very useful for examining deviations of empirical mortality patterns from the models due to either true differences in age patterns or to data errors. Similarly, BESTFT offers the opportunity to graduate observed age-specific mortality rates with respect to a model life table (standard), either to smooth a series of observed rates or to estimate consistent rates for age groups in which data are lacking.

The procedures UNABR and ICM graduate mortality rates in traditional age grouping into single year values; UNABR considers the entire age range and ICM under age 10 only. The procedures are of immediate use when undertaking single-year population projections or special studies of specific age groups such as the school-age population or the elderly.

The next group of programs all relate to indirect estimation of demographic parameters. The five procedures of CEBCS, ORPHAN, WIDOW, COMBIN and BENHR are mortality-specific. CEBCS provides estimates of infant and child mortality based on data of children ever born and children surviving tabulated either by age of mother or

duration of her marriage. ORPHAN and WIDOW carry out variations of the maternal orphanhood or widowhood techniques to estimate levels of adult mortality. The procedure COMBIN "combines" early age mortality estimates (perhaps produced by CEBCS) with adult mortality estimates (perhaps produced by ORPHAN and WIDOW) and produces a full, consistent life table. The technique BENHR is an application of the Bennett-Horiuchi (1981) technique; it exploits the generalized stable population equation to estimate the completeness of death registration using population age distributions from two censuses and intercensal registered deaths.

Two fertility estimation techniques are included. FERTCB estimates age-specific fertility rates based on tabulations of average number of children ever born by age of woman. The essential methodology was developed by G. Mortara (1949). The variation included here was proposed by Arriaga (1983); it has the advantage of providing estimates of fertility change over time. In the same 1983 article, Arriaga presented an extension of the P/F technique originally developed by Brass (Brass and others, 1968). The Arriaga extension, presented in FERTPF, allows the demographer to estimate fertility at two points in time under conditions of fertility change. Children ever born data and the pattern of age-specific fertility is necessary from two enumerations when fertility has not been constant.

CENCT and PRESTO provide techniques for evaluating relative coverage and age recording in censuses, as well as estimates of intercensal mortality and fertility. CENCT provides an estimate of the coverage of one census relative to another and hence is an important first step before applying other estimation techniques which assume consistency in coverage between two censuses (such as BENHR and PRESTO). Based on two populations, tabulated by age, and the appropriate model life table, PRESTO enacts the "integrated method" developed by Preston (1983), providing consistent estimates of the birth rate, life expectancy and intercensal age distributions. Finally a simple and easy-to-use population projection program is included.

PROJCT carries out a single-year projection of a population by age and sex, based on initial male and female populations in five-year age groups and assumed levels and changes in fertility, mortality and migration.

B. Ordering MORTPAK for Windows

To order MORTPAK for Windows, please complete the following order form and return to the Population Division as indicated.

UNITED NATIONS



NATIONS UNIES

POPULATION DIVISION
Department of Economic and Social Affairs

MORTPAK for Windows

The United Nations Software Package for Demographic Measurement

Copyright © United Nations, 2003
All rights reserved

Date: _____

Order Form

<i>Item</i>	<i>Unit price (in US \$)</i>	<i>Quantity</i>	<i>Total price (in US \$)</i>
MORTPAK for Windows, CD-ROM (Requires Windows 95 or higher and Internet Explorer 4.0 or higher)	\$300.-		

SHIP TO:

Name:

Institution:

Address:

.....

Telephone: Fax No:

e-mail address

For overnight or express mail delivery, please provide a billing account number:

Notes

1. Data contained in the above datasets are copyrighted by the United Nations. No portion of this CD-ROM can be reproduced, distributed or used to prepare derivative works or for any other purpose without the express permission of the United Nations, to be obtained from the Secretary of the United Nations Publications Board. For further information, please contact the Director, Population Division/DESA, United Nations (Room DC2-1950), New York, NY 10017, U.S.A. Telephone No. 1-212-963-3179; Fax No. 1-212-963-2147.
2. The order form should be accompanied by a cheque or an international money order in **US dollars drawn on a United States Bank** for the correct amount, payable to the UNITED NATIONS POPULATION DIVISION and mailed to: The Director, Population Division/DESA, United Nations, DC2-1950, New York, NY 10017, U.S.A. **Credit cards are not accepted.**