Getting started: Making the MDM file

The first task in using HLM is to construct the Multivariate Data Matrix (MDM) from raw data or from a statistical package.

Data file(s) must be sorted by the level-2 and, if using HLM3 or HMLM2, the level-3 ID. When creating an MDM file for HCM2, row and column IDs are needed. While it is possible to build the MDM file from a single data file, this option is not suggested when the data file is very large. Information on the rules ID variables have conform to, and the construction of format statements when ASCII files are used as input are given elsewhere.

After identifying the type of model required as described in Step 1, the appropriate option should be selected on the **Select MDM type** dialog box accessed via the **Make new MDM file** option on the **File** menu.

The procedure to create a MDM file consists of three major steps. The user needs to

> Inform HLM of the input and MDM file type.
> Supply HLM with the appropriate information for the data, the command and the MDM files.
> Check if the data have been properly read into HLM.

Once the MDM file is constructed, all subsequent analyses will be computed using the MDM file as input. It will therefore be unnecessary to read the larger (level-1) data file in computing these analyses. The efficient summary of data in the MDM file leads to faster computation. The MDM file is like a "system file" in a standard computing package in that it contains not only the summarized data but also the names of all of the variables.

Users of previous versions of HLM should note that the MDM file format replaces the previously used SSM file format entirely. As such, HLM6 is not downward compatible - to use previously analyzed data in HLM6, a new MDM file has to be created to replace the previously used SSM file.

For examples of the construction of the MDM files for some combinations of data type and HLM module, see the overview of constructing MDM files. Note that MDM files should preferably be given a name with a *.MDM file extension to facilitate easy retrieval at a later date. Specifications of the data used, missing data (if any), etc. are saved in a MDM template file (*.MDMT) file. The MDMT file can be retrieved later to remake or change the contents of the MDM file. Descriptive statistics on all variables included in an MDM file are saved to a file automatically placed in the same folder as the MDM file, with a *.STS file extension. This file can be opened in Notepad, Wordpad, etc. Inspection of this file prior to model specification is imperative.