

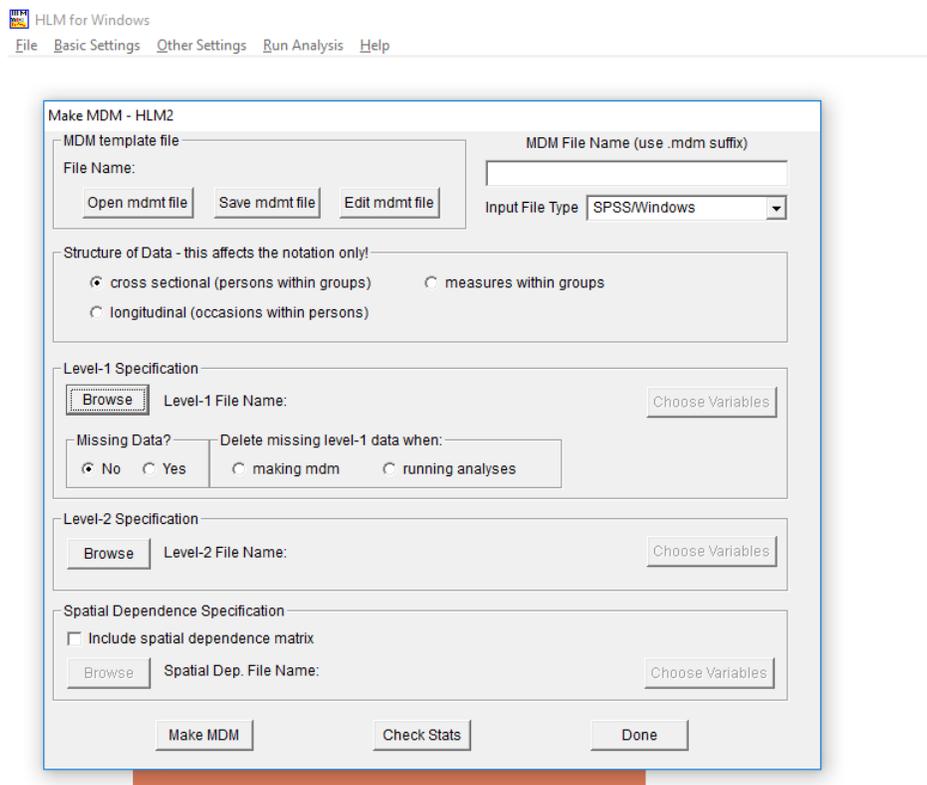
Creating MDM Files in the HLM Package¹

The HLM package has its own proprietary data file format. The file must be created through a series of menu steps, described below. Traditionally, one creates two separate files in the original statistics package (I am working with SPSS files, but HLM accepts SAS and Stata files too), a file with all level-1 variables and a file with all level-2 variables. The level-2 file ideally has one record for each group, but I think you can get away with having the same values repeated within-each group for each case within each group (e.g., classroom size is the same for each student within a particular class). The HLM manual (accessible under the Help menu in the program) walks through the process of constructing a data file at the beginning of Chapter 2 (version 7 of HLM).

File -> Make new MDM file -> Stat package input

Keep the buttons checked by default in the **Select MDM type** box.

In the Make MDM dialog box, you will have several steps



1. Provide a file name for the .mdm file in the upper right hand corner. I will call mine hsbtemp.mdm—make sure you type the .mdm extension.
2. Choose the **Input File Type** just underneath where you added the .mdm file. I am using SPSS files, which was indicated as the default.
3. For **Structure of the data**, leave the **cross sectional (persons within groups)** box checked (I often do this for longitudinal data too, which I can explain why later).
4. Under **Level-1 Specification**, click on **Browse** and find your level-1 data file. Mine is hsb1.sav. (A trick is to save time in our usual stat package by not creating two separate files, but using the same file

¹ These instructions were used for HLM version 8.01.

for the level-1 and level-2 files, where you choose only the appropriate variables for each level.) I don't have any missing data so, I left **Missing Data? No** checked. If you have missing data, I recommend choosing **Missing Data? Yes**, and **making mdm**. Click on **Choose Variables**, and then check schoolid in the **ID column** and all of the other (level-1) variables in the **In MDM column**.

5. Under **Level-2 Specification**, click on **Browse** and find your level-2 data file. Mine is hsb2.sav. (Note: I don't think you can have any missing data in your file for level-2 variables). Click on **Choose Variables**, and then check schoolid in the **ID column** and all of the other (level-2) variables in the **In MDM column**.

6. Then click on **Save mdmt file** and save with a new file name. I called mine hsbtemp.mdmt. This .mdmt file is not the data file. It is a file that keeps track of all of the steps you will go through in this process, so if there are problems or you want to modify it for some reason, you can open this .mdmt file again.

7. Now you are ready to make the .mdm file, so click on the **Make MDM** button at the bottom. You will get a DOS window that pops up with all of the descriptive statistics for the variables.

LEVEL-1 DESCRIPTIVE STATISTICS

VARIABLE NAME	N	MEAN	SD	MINIMUM	MAXIMUM
MINORITY	7185	0.27	0.45	0.00	1.00
FEMALE	7185	0.53	0.50	0.00	1.00
SES	7185	0.00	0.78	-3.76	2.69
MATHACH	7185	12.75	6.88	-2.83	24.99

LEVEL-2 DESCRIPTIVE STATISTICS

VARIABLE NAME	N	MEAN	SD	MINIMUM	MAXIMUM
SIZE	160	1097.83	629.51	100.00	2713.00
SECTOR	160	0.44	0.50	0.00	1.00
PRACAD	160	0.51	0.26	0.00	1.00
DISCLIM	160	-0.02	0.98	-2.42	2.76
HIMNTY	160	0.28	0.45	0.00	1.00
MEANSES	160	-0.00	0.41	-1.19	0.83

MDM template: C:\Jason\SPSSWIN\mlrclass\hsbtemp.mdmt
MDM file name: hsbtemp.mdm

You can then check **Done** and exit and HLM will start a command file for you (the command files are saved with the .hlm extension).