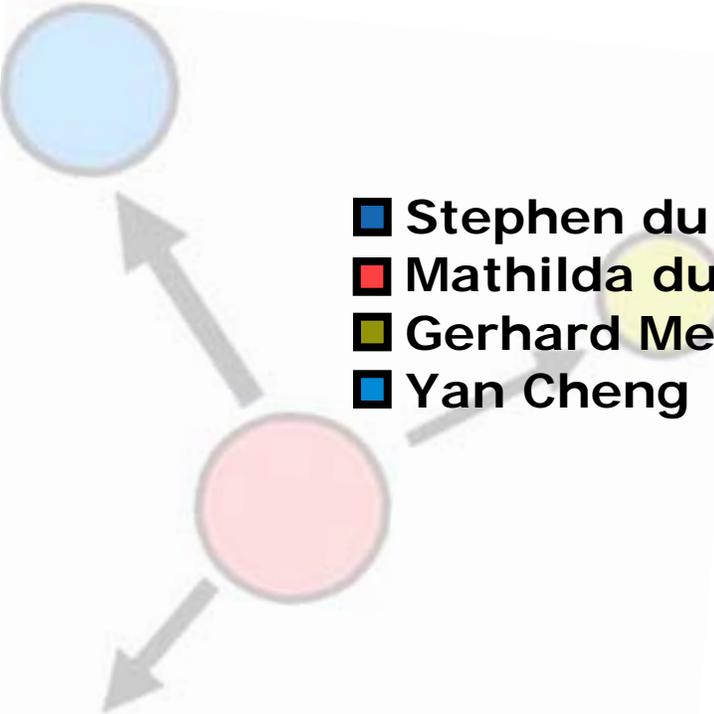
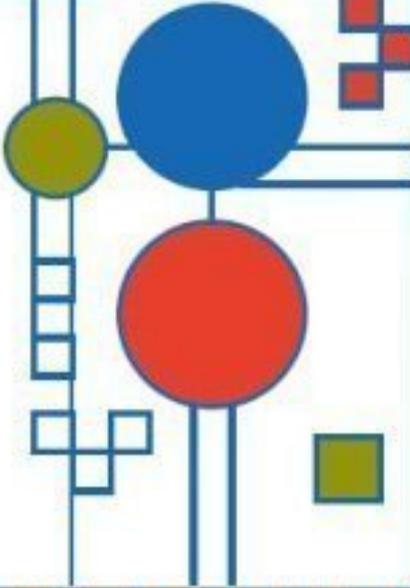


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LISREL for Windows: SIMPLIS Syntax Files

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SIMPLIS syntax files

The structure of the SIMPLIS syntax file

The SIMPLIS syntax file, which is generated by the LISREL GUI, can also be prepared manually by using the LISREL for Windows text editor or any other text editor such as Notepad and WordPad. The general structure of the SIMPLIS syntax file depends on the data to be processed. If the raw data file to be processed is a PSF, the SIMPLIS syntax file has the following structure.

```
TITLE
<string>
RAW DATA FROM FILE <filename>.PSF
MISSING VALUE CODE <value>
STRATUM <label>
CLUSTER <label>
WEIGHT <label>
CASEWEIGHT <label>
$CLUSTER <label>
$PREDICT <labels>
LATENT VARIABLES
<labels>
RELATIONSHIPS
<relationships>
<instructions>
LISREL OUTPUT <options> <specifications>
PATH DIAGRAM
END OF PROBLEM
```

where <string> denotes a character string, <label> denotes a case-sensitive variable name used in the raw data or moment matrix file, <labels> denotes a list of one or more case-sensitive variable names used in the raw data or moment matrix file or for the latent variables of the model, <filename> denotes the complete name (including the drive and folder names) of a PSF, <value> denotes a real number, <relationships> denotes a list of one or more model statements, <instruction> denotes one or more SET and/or LET commands, <options> is one of or more of ALL, AM, EF, FS, FT, MI, MR, NS, PC, PT, RO, RS, SC, SO, SS, WP, XA, XI or XM and <specifications> denotes a list of specifications for the results of the analysis each of which has the syntax:

```
<keyword> = <selection>
```

where <keyword> is one of AD, AL, BE, EP, GA, IT, KA, LX, LY, MA, ME, ND, NP, PH, PS, PV, RC, SI, SL, SV, TD, TE, TH, TM, TV, TX, TY or XO and <selection> denotes a number, a value or a name.

If the data to be analyzed are summarized in a DSF, the structure of the SIMPLIS syntax file is as follows.

```
TITLE
<string>
SYSTEM FILE FROM FILE <filename>.DSF
LATENT VARIABLES
<labels>
RELATIONSHIPS
<relationships>
<instructions>
LISREL OUTPUT <options> <specifications>
PATH DIAGRAM
END OF PROBLEM
```

where <filename> denotes the complete name (including the drive and folder names) of a DSF.

The SIMPLIS syntax file has the following structure if the data file to be processed is in the form of a text file.

```
TITLE
<string>
OBSERVED VARIABLES
<labels>
RAW DATA FROM FILE <filename>
MISSING VALUE CODE <value>
STRATUM <label>
CLUSTER <label>
WEIGHT <label>
CASEWEIGHT <label>
$CLUSTER <label>
$PREDICT <labels>
COVARIANCE MATRIX FROM FILE <filename>
CORRELATION MATRIX FROM FILE <filename>
ASYMPTOTIC COVARIANCE MATRIX FROM FILE
<filename>
MEANS FROM FILE <filename>
STANDARD DEVIATIONS FROM FILE <filename>
SAMPLE SIZE <number>
LATENT VARIABLES
<labels>
RELATIONSHIPS
```

<relationships>
<instructions>
LISREL OUTPUT <options>
PATH DIAGRAM
END OF PROBLEM

where <filename> denotes the complete name (including the drive and folder names) of a text or binary file and <number> denotes a nonnegative integer.

The three general structures of the SIMPLIS syntax file listed here assume a single-group structural equation model. In the case of a multiple group structural equation model, these structures apply to each GROUP command. The only exception is the END OF PROBLEM command, which should be the final command of the SIMPLIS syntax file for the multiple group analysis.

The SYSTEM FILE FROM FILE command is a **required** command only if a DSF is used. If the data to be analyzed are not in the form of a DSF or PSF, the OBSERVED VARIABLES paragraph, the SAMPLE SIZE command and one of the RAW DATA FROM FILE, COVARIANCE MATRIX FROM FILE, or the CORRELATION MATRIX FROM FILE commands are **required**. The LATENT VARIABLES paragraph is **required** only if the model includes latent variables. The RELATIONSHIPS or PATHS paragraph is **required**. The remaining SIMPLIS commands and paragraphs are all **optional**.

One of the SYSTEM FILE FROM FILE or RAW DATA FROM FILE commands or the OBSERVED VARIABLES paragraph should be the first command following the TITLE paragraph. If the END OF PROBLEM command is included, it must be the final command. The other commands and paragraphs can be entered in any order.

In the following sections, the SIMPLIS commands and paragraphs are discussed separately in alphabetical order.

\$CLUSTER command

The \$CLUSTER command is used to specify the variable that contains the cluster information of nested data for which a multilevel structural equation modeling analysis is desired. It is an **optional** command.

Syntax

```
$CLUSTER <label>
```

where <label> denotes a variable name.

Example

```
$CLUSTER FACTYPE
```

Note

The significant length of a variable name is 8 characters.

\$PREDICT command

The \$PREDICT command is used to specify the explanatory variables for the fixed part of a multilevel structural equation model. It is an **optional** command.

Syntax

```
$PREDICT <labels>
```

where <labels> denotes a list of one or more variable names in free format.

Example

```
$PREDICT = AGE GENDER
```

Note

The significant length of a variable name is 8 characters.

ASYMPTOTIC COVARIANCE MATRIX FROM FILE command

The ASYMPTOTIC COVARIANCE MATRIX FROM FILE command is used to specify the name of the binary file that contains the estimated asymptotic covariance matrix of the sample moments. It is an **optional** command.

Syntax

```
ASYMPTOTIC COVARIANCE MATRIX FROM FILE <filename>
```

where <filename> denotes the name of a binary file.

Example

```
ASYMPTOTIC COVARIANCE MATRIX FROM FILE 'E:\Projects\NIH1\NIH1.ACM'
```

Note

If the complete file name contains any blank spaces, it should be specified within single quotes.

CASEWEIGHT command

The purpose of the CASEWEIGHT command is to allow the user to specify the variable containing the weights of the individual observations to be used to compute weighted means, sample variances and covariances (correlations) and asymptotic covariance matrices of the sample variances and covariances (correlations). It is assumed that these weights are normalized in the sense that they add up to the sample size. The CASEWEIGHT command is an **optional** command.

Syntax

```
CASEWEIGHT <label>
```

where <label> denotes a variable name.

Example

```
CASEWEIGHT NEWWGT
```

Note

The significant length of a variable name is 8 characters.

CLUSTER command

The CLUSTER command is used to specify the variable for the primary sampling units of the complex survey. It is an **optional** command.

Syntax

```
CLUSTER <label>
```

where <label> denotes a variable name.

Example

```
CLUSTER FACTYPE
```

Note

The significant length of a variable name is 8 characters.

CORRELATION MATRIX paragraph

The correlation matrix to be processed can be specified as a part of the SIMPLIS syntax file by using the CORRELATION MATRIX paragraph. It is an **optional** paragraph.

Syntax

```
CORRELATION MATRIX  
<format>  
<matrix>
```

where <format> denotes an optional Fortran format statement and <matrix> denotes a symmetric matrix of real numbers.

Examples

```
CORRELATION MATRIX  
1.000  
0.257 1.000  
0.521 0.245 1.000
```

0.533 0.346 0.218 1.000

CORRELATION MATRIX
(4F6.3)
1.000
0.257 1.000
0.521 0.245 1.000
0.533 0.346 0.218 1.000

CORRELATION MATRIX FROM FILE command

If the correlation matrix of the observed variables of the model is in the form of a text file, the CORRELATION MATRIX FROM FILE command is used to specify the name of the text file. It is an **optional** command

Syntax

CORRELATION MATRIX FROM FILE <filename>

where <filename> denotes the name of a text file.

Example

CORRELATION MATRIX FROM FILE 'D:\My Projects\SELECT\SELECT.COR'

Note

If the complete file name contains any blank spaces, it should be specified within single quotes.

COVARIANCE MATRIX paragraph

The COVARIANCE MATRIX paragraph is used to provide the sample covariance matrix as part of the SIMPLIS syntax file. It is an **optional** paragraph.

Syntax

COVARIANCE MATRIX
<format>
<matrix>

where <format> denotes an optional Fortran format statement and <matrix> denotes a symmetric

matrix of real numbers.

Examples

```
COVARIANCE MATRIX
25.001
33.257 57.251
26.385 32.674 61.323
39.533 38.552 44.227 72.052
```

```
COVARIANCE MATRIX
(4F6.3)
25.001
33.25757.251
26.38532.67461.323
39.53338.55244.22772.052
```

COVARIANCE MATRIX FROM FILE command

The COVARIANCE MATRIX FROM FILE command is used to specify the name of the text file that contains the sample covariance matrix of the observed variables of the model. It is an **optional** command.

Syntax

```
COVARIANCE MATRIX FROM FILE <filename>
```

where <filename> denotes the name of a text file.

Example

```
COVARIANCE MATRIX FROM FILE 'E:\Projects\NIH1\NIH1.COV'
```

Note

If the complete file name contains any blank spaces, it should be specified within single quotes.

END OF PROBLEM command

The END OF PROBLEM command is usually the final command of a SIMPLIS syntax file and it indicates that no more commands or paragraphs are to be processed. It is an **optional** command.

Syntax

END OF PROBLEM

GROUP command

The GROUP command is used to specify a model for each of the groups in a multiple-group structural equation model. A GROUP command is specified for each group to be included in the multiple group analysis. If no RELATIONSHIPS or PATHS paragraph and no SET or LET command are specified for any group after the very first group, the structural equation model for the group is assumed to be identical (including equal parameters) to that of the previous group. In other words, if you want the parameters to be different from that of the previous group for a specific group, each parameter has to be specified explicitly in the RELATIONSHIPS or PATHS paragraph or SET or LET commands for that specific group.

Syntax

GROUP <string>

where <string> denotes a character string.

Examples

GROUP Freshmen

GROUP 1

LATENT VARIABLES paragraph

The LATENT VARIABLES paragraph is used to provide descriptive names to the latent variables of the model as part of the SIMPLIS syntax file. It is an **optional** command.

Syntax

```
LATENT VARIABLES  
<labels>
```

where <labels> denotes a list of one or more variable names.

Examples

```
LATENT VARIABLES  
JobSat OrgCom Perform
```

```
LATENT VARIABLES  
FACTOR1 - FACTOR4
```

Notes

- Variable names are provided in free or abbreviated format.
- The significant length of a variable name is 8 characters.

LATENT VARIABLES FROM FILE command

If the labels of the latent variables are in the form of a text file, the LATENT VARIABLES FROM FILE command is used to specify the name of the text file. It is an **optional** command.

Syntax

```
LATENT VARIABLES FROM FILE <filename>
```

where <filename> denotes the name of a text file.

Example

```
LATENT VARIABLES FROM FILE 'D:\Projects\SELECT\SELECT.LAB'
```

Note

If the complete file name contains any blank spaces, it should be specified within single quotes.

LET command

The purpose of the LET command is to specify the status and/or the value(s) of a parameter(s) of the model. It is an **optional** command.

Syntax

```
LET the <parameter> be <value>
LET the <parameter1> and <parameter2> be Equal
LET the <parameter> be Free
LET the <parameter> Correlate
```

where <parameter> is one of

```
Path <label1> -> <label2>
Variance of <label>
Covariance of <label1> and <label2>
Errors Variance of <label>
Errors between <label1> and <label2>
```

where <label>, <label1> and <label2> denote variable names and <value> denotes a real number.

Examples

```
LET the Path Ses ->Alien67 and the Path Ses ->Alien71 be Equal
LET the Variance of Ses be 1.0
LET the Errors between ANOMIA67 and ANOMIA71 Correlate
```

LISREL OUTPUT command

The LISREL OUTPUT command is used to request the results to be printed in terms of the LISREL model used in the analysis, to specify special analyses and to request additional results. It is an **optional** command. If the results in terms of the LISREL model are not desired, the OPTIONS command may be used to specify special analyses and to request additional results.

Syntax

LISREL OUTPUT <specifications> <options>

where <specifications> denotes a list of optional specifications for the analysis each of which has the syntax:

<keyword> = <selection>

where <keyword> is one of AD, AL, BE, DW, EP, GA, IT, KA, LX, LY, MA, ME, ND, NP, PH, PS, PV, RC, SI, SL, SV, TD, TE, TH, TM, TV, TX, TY or XO and <selection> denotes a number, a value or a name. <options> is one or more of ALL, AM, EF, FS, FT, MI, MR, NS, PC, PT, RO, RS, SC, SO, SS, WP, XA, XI or XM.

AD keyword

The AD keyword is used to specify the iteration number at which the admissibility of the solution should be checked. If this check fails, the iterative algorithm will terminate.

Syntax

AD=<number>

where <number> denotes a nonnegative integer.

Default

AD=20

Note

This check may be turned off with the specification AD=OFF.

AL keyword

The AL keyword is used to specify the name of the text file for the estimated Alpha vector.

Syntax

AL=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Alpha vector refers to the intercepts of the structural model for the ETA (dependent latent) variables.
- The folder and drive names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

BE keyword

The BE keyword is used to specify the name of the text file for the estimated Beta matrix.

Syntax

BE=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Beta matrix refers to the regression weights of the linear relationships among the ETA (dependent latent) variables.
- The folder and drive names the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

EP keyword

The EP keyword is used to specify the convergence criterion for the iterative algorithm.

Syntax

EP=<value>

where <value> denotes a positive real number.

Default

EP=0.000001

GA keyword

The purpose of the GA keyword is to specify the name of the text file for the estimated Gamma matrix.

Syntax

GA=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Gamma matrix refers to the regression weights of the linear relationships between the ETA (dependent latent) and the KSI (independent latent) variables.
- The drive and folder names of the text file may be omitted if the text file and the LISREL text file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

IT keyword

The IT keyword is used to specify the maximum number of iterations for the iterative algorithm.

Syntax

IT=<number>

where <number> denotes a nonnegative integer.

Default

IT=<5q>

where q denotes the number of unknown parameters of the LISREL model.

KA keyword

The KA keyword is used to specify the name of the text file for the estimated Kappa vector.

Syntax

KA=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Kappa vector refers to the means of the KSI (independent latent) variables.
- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

LX keyword

The LX keyword is used to specify the name of the text file for the estimated Lambda_X matrix.

Syntax

LX=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Lambda_X matrix refers to the regression weights of the linear relationships between the KSI (independent latent) variables and their indicators (X variables).
- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

LY keyword

The LY keyword is used to specify the name of the text file for the estimated Lambda_Y matrix.

Syntax

LY=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- Lambda_Y refers to the regression weights of the linear relationships between the ETA (dependent latent) variables and their indicators (Y variables).
- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

MA keyword

The MA keyword is used to specify the name of the text file for the moment matrix that was analyzed.

Syntax

MA=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

ME keyword

The ME keyword is used to specify the method to be used to fit the LISREL model to the data.

Syntax

ME=<method>

where <method> is one of DW for diagonally weighted least squares, GL for generalized least squares, IV for instrumental variables, ML for maximum likelihood, TS for two-stage least squares, UL for unweighted least squares or WL for weighted least squares

Default

ME=ML

ND keyword

The ND keyword is used to specify the number of decimals for the results in the LISREL output file.

Syntax

ND=<number>

where <number> denotes a nonnegative integer.

Default

ND=2

NP keyword

The NP keyword is used to specify the number of decimals for external text files to be produced.

Syntax

NP=<number>

where <number> denotes a nonnegative integer.

Default

NP=3

PH keyword

The PH keyword is used to specify the name of the text file for the estimated Phi matrix.

Syntax

PH=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Phi matrix refers to the variances and covariances of the KSI (independent latent) variables.

- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

PS keyword

The PS keyword is used to specify the name of the text file for the estimated Psi matrix.

Syntax

PS=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Psi matrix refers to the variances and covariances of the error terms for the ETA (dependent latent) variables.
- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

PV keyword

The PV keyword is used to specify the name of the PSF or text file for the parameter estimates.

Syntax

PV=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a PSF or text file.

Notes

- The drive and folder names of the PSF or text file may be omitted if the PSF or text file and the LISREL syntax file are in the same folder.
- If the file extension .PSF is used, a PSF is produced. Otherwise, the estimates are written to a text file.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

RC keyword

The RC keyword is used to specify the ridge constant to be used if the matrix to be analyzed is not positive definite.

Syntax

RC=<value>

where <value> denotes a positive real number.

Default

RC=0.001

Note

This constant will be multiplied repeatedly by 10 until the matrix becomes positive-definite.

SI keyword

The SI keyword is used to specify the name of the text file for the moment matrix reproduced by the LISREL model.

Syntax

SI=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

SV keyword

The SV keyword is used to specify the name of the PSF or text file for the standard error estimates.

Syntax

SV=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a PSF or text file.

Notes

- The drive and folder names of the PSF or text file may be omitted if the PSF or text file and the LISREL syntax file are in the same folder.
- If the file extension .PSF is used, a PSF file is produced. Otherwise, the standard error estimates are written to a text file.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

SL keyword

The SL keyword is used to specify the significance level of the model automated modification procedure expressed as a percentage.

Syntax

SL=<number>

where <number> denotes a positive integer.

Default

SL=1

TD keyword

The TD keyword is used to specify the name of the text file for the estimated Theta_Delta matrix.

Syntax

TD=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Theta_Delta matrix refers to the variances and covariances of the measurement errors of the indicators (X variables) of the KSI (independent latent) variables.
- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

TE keyword

The TE keyword is used to specify the name of the text file for the estimated Theta_Epsilon matrix.

Syntax

TE=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Theta_Epsilon matrix refers to the variances and covariances of the measurement errors of the indicators (Y variables) of the ETA (dependent latent) variables.
- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

TH keyword

The TH keyword is used to specify the name of the text file for the estimated Theta_Epsilon_Delta matrix.

Syntax

TH=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Theta_Delta_Epsilon matrix refers to the covariances between the measurement errors of the indicators (Y variables) of the ETA (dependent latent) variables and those of the indicators (X variables) of the KSI (independent latent) variables.
- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

TM keyword

The TM keyword is used to specify the maximum number of CPU seconds allowed for the current analysis.

Syntax

TM=<number>

where <number> denotes a positive integer.

Default

TM=172800

TV keyword

The TV keyword is used to specify the name of the PSF or text file for the t values of the parameters.

Syntax

TV=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a PSF or text file.

Notes

- The drive and folder names of the PSF or text file may be omitted if the PSF or text file and the LISREL syntax file are in the same folder.
- If the file extension .PSF is used, a PSF is produced. Otherwise, the t values are written to a text file.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

TX keyword

The TX keyword is used to specify the name of the text file for the estimated Tau_X vector.

Syntax

TX=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Tau_X vector refers to the intercepts of the measurement model for the X variables (indicators) and the KSI (independent latent) variables.
- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

TY keyword

The TY keyword is used to specify the name of the text file for the estimated Tau_Y vector.

Syntax

TY=<filename>

where <filename> denotes the complete file name (including drive and folder names) of a text file.

Notes

- The Tau_Y vector refers to the intercepts of the measurement model for the Y variables (indicators) and the ETA (dependent latent) variables.
- The drive and folder names of the text file may be omitted if the text file and the LISREL syntax file are in the same folder.
- If the complete file name includes any blank spaces, it should be specified within single quotes.

XO keyword

The XO keyword is used to specify the number of repetitions for which results should be written to the output file.

Syntax

XO=<number>

where <number> denotes a positive integer.

Default

XO=<r>

where <r> denotes the number of repetitions specified in the RP keyword of the DA command.

ALL option

The ALL option is used to invoke the printing of all the results in the output file.

AM option

The AM option is used to invoke the automatic model modification procedure.

Notes

- If this option is present, the program will modify the model sequentially by freeing at each step the fixed or constrained parameter that has the largest modification index. It will continue the modification for as long as any index is statistically significant at the significance level specified in the SL keyword.
- The NF command is used to exclude specific parameters from the automatic modification procedure.

EF option

The EF option is used to invoke the printing of the estimated total, direct and indirect effects in the output file.

MI option

The MI option is used to invoke the printing of the model modification indices in the output file.

NS option

The NS option is used to suppress the computation of starting values.

Note

The user must supply starting values by using the ST or VA commands if the NS option is specified.

RO option

The RO option is used to invoke the use of the ridge constant for the moment matrix to be analyzed.

Note

The RO option will be invoked automatically if the matrix is not positive definite.

RS option

The RS option is used to invoke the printing of the residuals, standardized residuals, QQ-plot, and fitted covariance (or correlation, or moment) matrix in the output file.

SC option

The SC option is used to invoke the printing of the completely standardized solution in the output file.

SO option

The SO option is used to suppress the automated checking of the scale setting for each latent variable.

Note

The SO option is needed for very special models where scales for latent variables are defined in a different way.

SS option

The SS option is used to invoke the printing of the standardized solution in the output file.

WP option

The WP option is used to specify a column width of 132 for the output file.

XA option

The XA option is used to suppress the computation and printing of the additional Chi-square test statistic values.

Notes

- Only C1 (Minimum Fit Function Chi-Square value) will be computed.
- Standard error estimates are not affected.
- C1 is still an asymptotically correct chi-square for the GLS, ML, and WLS methods, but not for the ULS and DWLS methods.
- It is only intended for those who have very large models and cannot afford (or do not want) to let the computer run for an hour or so.

XM option

The XM option is used to suppress the computation and printing of the modification indices.

Note

When a path diagram is requested, only the printing of modification indices is suppressed.

Examples

LISREL OUTPUT ND = 3 SC ME = DW

LISREL OUTPUT BE = BETA.TXT GA = GAMMA.TXT PV = PV.TXT SV = SV.TXT ND = 6

MEANS paragraph

The MEANS paragraph is used to provide the sample means of the observed variables of the model as part of the SIMPLIS syntax file. It is an **optional** command.

Syntax

```
MEANS  
<format>  
<vector>
```

where <format> is an optional Fortran format statement and <vector> denotes vector of real numbers.

Examples

```
MEANS  
12.225 16.752 18.239 20.003 15.395
```

```
MEANS  
(5F6.3)  
12.22516.75218.23920.00315.395
```

MEANS FROM FILE command

The MEANS FROM FILE command is used to specify the name of the text file that contains the sample means of the observed variables of the model. It is an **optional** command.

Syntax

```
MEANS FROM FILE <filename>
```

where <filename> denotes the name of a text file.

Example

```
MEANS FROM FILE 'D:\Projects\SELECT\SELECT.MNS'
```

Note

If the complete file name includes any blank spaces, it should be specified within single quotes.

MISSING VALUE CODE command

If the raw data to be processed include missing values, the MISSING VALUE CODE command is used to specify the global missing value. It is an **optional** command.

Syntax

```
MISSING VALUE CODE <value>
```

where <value> denotes a real number.

Example

```
MISSING VALUE CODE -100
```

OBSERVED VARIABLES paragraph

The OBSERVED VARIABLES paragraph is used to provide descriptive names to the observed variables of the model as part of the SIMPLIS syntax file. It is an **optional** paragraph.

Syntax

```
OBSERVED VARIABLES  
<labels>
```

where <labels> denotes a list of one or more variable names.

Examples

```
OBSERVED VARIABLES  
Age Gender MSCORE SSCORE ESCORE
```

```
OBSERVED VARIABLES  
JS1 – JS6 OC1 – OC10
```

Notes

- Variable names are provided in free or abbreviated format.
- The significant length of a variable name is 8 characters.

OBSERVED VARIABLES FROM FILE command

If the labels of the observed variables of the model are in the form of a text file, the OBSERVED VARIABLES FROM FILE command is used to specify the name of the text file. It is an **optional** command.

Syntax

```
OBSERVED VARIABLES FROM FILE <filename>
```

where <filename> denotes the name of a text file.

Example

```
OBSERVED VARIABLES FROM FILE 'C:\Projects\ABUSE\ ABUSE.LAB'
```

Note

If the complete file name includes any blank spaces, it should be specified within single quotes.

OPTIONS command

The OPTIONS command is used to specify special analyses and to request additional results. It is an **optional** command.

Syntax

```
OPTIONS <options> <specifications>
```

where <options> is one or more of ALL, AM, DW, EF, FS, FT, MI, MR, NS, PC, PT, RO, RS, SC, SO, SS, WP, XA, XI or XM and <specifications> denotes a list of specifications for the results of the analysis each of which has the syntax:

```
<keyword> = <selection>
```

where <keyword> is one of AD, AL, BE, DW, EP, GA, IT, KA, LX, LY, MA, ME, ND, NP, PH, PS, PV, RC,

SI, SL, SV, TD, TE, TH, TM, TV, TX, TY or XO and <selection> denotes a number, a value or a name. For a description of these options and specifications, see the LISREL Output command.

Example

```
OPTIONS ND = 3 SC ME = DW AD = OFF
```

PATH DIAGRAM command

The PATH DIAGRAM command is used to request a PTH file in which the results of the analysis are summarized in the form of a path diagram. It is an **optional** command.

Syntax

```
PATH DIAGRAM
```

PATHS paragraph

The PATHS paragraph may be used to specify the regression relationships of the structural equation model to be fitted to the data. It is an **optional** command.

Syntax

```
PATHS  
<paths>
```

where <paths> denotes a list of regression relationships each of which has the following syntax

```
<x> -> <y>
```

where <x> and <y> denotes lists of one or more variable names.

Example

```
PATHS  
JS -> JS1 - JS7  
OC -> OC1 OC3 OC7  
OC -> JS
```

Notes

- The variable names can be in free format or in abbreviated format.
- The variable names specified on the left hand side are independent (exogenous) variables and those on the right hand side are dependent (endogenous) variables.

RAW DATA paragraph

The RAW DATA paragraph is used to provide the raw data to be analyzed as part of the SIMPLIS syntax file. It is a **optional** command.

Syntax

```
RAW DATA  
<format>  
<matrix>
```

where <format> denotes an optional Fortran format statement and <matrix> denotes a rectangular matrix of real numbers.

Examples

```
RAW DATA  
1 7 5  
2 1 7  
5 5 5  
2 2 4  
3 3 1  
5 6 6  
7 7 7  
1 1 1  
1 2 1  
6 6 7
```

```
RAW DATA  
(2F6.3)  
12.34514.417  
16.24519.205  
10.33411.276  
15.11416.267  
13.24715.589
```

RAW DATA FROM FILE command

The RAW DATA FROM FILE command is used to specify the name of the PSF or the text file containing the raw data. It is an **optional** command.

Syntax

```
RAW DATA FROM FILE <filename>
```

where <filename> denotes the name of a PSF or text file.

Example

```
RAW DATA FROM FILE 'E:\Projects\SELECT\SELECT.PSF'
```

Note

If the complete file name includes any blank spaces, it should be specified within single quotes.

RELATIONSHIPS paragraph

The RELATIONSHIPS paragraph may be used to specify the regression relationships of the structural equation model. It is an **optional** paragraph.

Syntax

```
RELATIONSHIPS  
<relationships>
```

where <relationships> denotes a list of regression relationships each of which has the following syntax

```
<y> = <x>
```

where <x> and <y> denotes lists of one or more variable names.

Example

```
PATHS
JS1 – JS7 = JS
OC1 OC3 OC7 = OC
JS = OC
```

Notes

- The variable names can be in free format or in abbreviated format.
- The variable names specified on the left hand side are dependent (endogenous) variables and those on the right hand side are independent (exogenous) variables.

SAMPLE SIZE command

The SAMPLE SIZE command is used to specify number of cases of the data to be processed. It is an **optional** command.

Syntax

```
SAMPLE SIZE <number>
```

where <number> denotes a nonnegative integer.

Example

```
SAMPLE SIZE 388
```

SET command

The SET command is used to specify the status and/or the value(s) of a parameter(s) of the model. It is an **optional** command.

Syntax

```
SET the <parameter> equal to <value>
SET the <parameter> Free
SET the <parameter1> and the <parameter2> Equal
```

where <parameter> is one of

Path <label1> -> <label2>
Variance of <label>
Covariance of <label1> and <label2>
Error Variance of <label>
Error Covariance of <label1> and <label2>

where <label>, <label1> and <label2> denote variable names and <value> denotes a real number.

Examples

SET the Path Ses ->Alien67 and the Path Ses ->Alien71 Equal
SET the Variance of Ses equal to 1.0
SET the Error Covariance of ANOMIA67 and ANOMIA71 Free

STANDARD DEVIATIONS paragraph

The STANDARD DEVIATIONS paragraph is used to provide the sample standard deviations of the observed variables of the model as part of the SIMPLIS syntax file. It is an **optional** command.

Syntax

STANDARD DEVIATIONS
<format>
<vector>

where <format> denotes an optional Fortran format statement and <vector> denotes a vector of real numbers.

Examples

STANDARD DEVIATIONS
13.61 14.76 14.13 14.90 10.90 3.749

STANDARD DEVIATIONS
(5F6.3)
12.22516.75218.23920.00315.395

STANDARD DEVIATIONS FROM FILE command

The STANDARD DEVIATIONS FROM FILE command is used to specify the name of the text file that contains the standard deviations of the observed variables of the model. It is an **optional** command.

Syntax

```
STANDARD DEVIATIONS FROM FILE <filename>
```

where <filename> denotes the name of a text file.

Example

```
STANDARD DEVIATIONS FROM FILE 'E:\Projects\DEPRESSION\Depresion.std'
```

Note

If the complete file name includes any blank spaces, it should be specified within single quotes.

STRATUM command

Complex surveys are typically obtained by stratifying the target population into subpopulations (strata). The STRATUM command allows the user to specify the stratification variable. It is an **optional** command.

Syntax

```
STRATUM <label>
```

where <label> denotes a variable name.

Example

```
STRATUM CENREG
```

Note

The significant length for a variable name is 8 characters.

SYSTEM FILE FROM FILE command

The SYSTEM FILE FROM FILE command is used to specify the DSF to be processed. It is an **optional** command.

Syntax

```
SYSTEM FILE FROM FILE <filename>.DSF
```

where <filename> denotes the name of a DSF.

Example

```
SYSTEM FILE FROM FILE 'F:\Projects\DEPRESSION\DEPRESSION.DSF'
```

Note

If the complete file name includes any blank spaces, it should be specified within single quotes.

TITLE paragraph

The TITLE paragraph is used to specify a descriptive heading for the analysis. It is an **optional** command.

Syntax

```
TITLE  
<string>
```

where <string> denotes a character string.

Example

```
TITLE  
A SIMPLIS syntax file for Example 6
```

Note

If the TITLE paragraph is used, avoid using any words that correspond to other SIMPLIS commands or paragraphs in the string field.

WEIGHT command

Design weights are constructed for the ultimate sampling units of complex surveys. The purpose of the WEIGHT command is to allow the user to specify the design weight variable. The WEIGHT command is an **optional** command.

Syntax

```
WEIGHT <label>
```

where <label> denotes a variable name.

Example

```
WEIGHT USUWGT
```

Note

The significant length for a variable name is 8 characters.