



Title:

Choosing a Statistical Package on EMAS 2900

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Category:

See Note 15

Synopsis

This User Note is intended to help users of ERCC 2988 and 2976 computers with little knowledge of statistical computing to choose a package to suit their own data. Further User Notes are available to describe individual packages and how they can be used at ERCC.

It must be stressed that these packages should only be used after suitable statistical guidance has been sought. This document does not include the statistical guidance which is vital to the successful completion of data analysis. However, it is hoped that it will reduce the necessity for users to write individual programs by making them more aware of existing packages.

Keywords

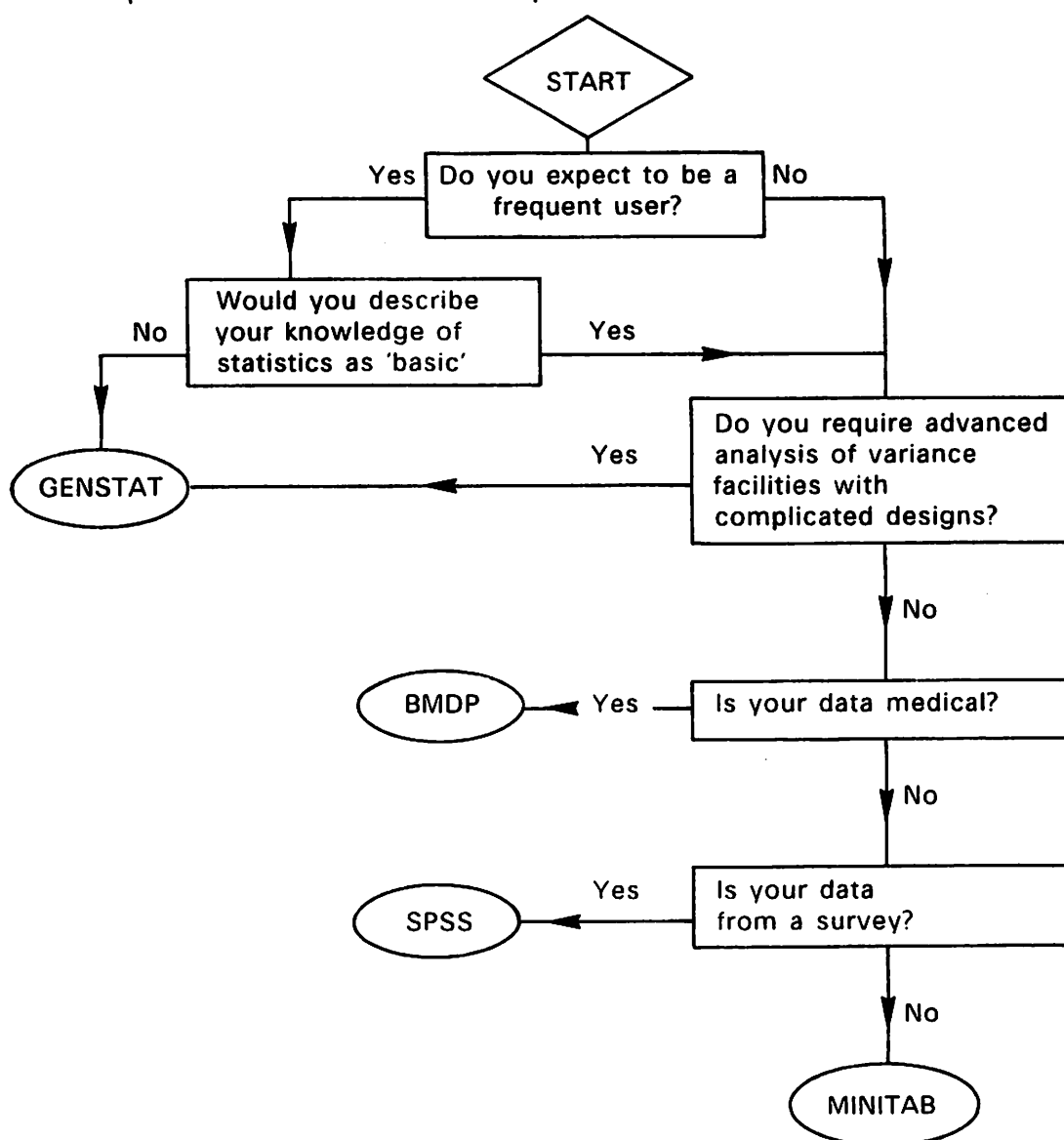
AID2, BLISS, BMDP, CLUSTAN, DSIGNX, EDEX, FAKAD, Genstat, GLIM, HIERF, IDA, LISREL, MAXLIKE, MINISQ, Minitab, MLP, MULTREG, PARLIN, RGSP, SCSS, SPSS, statistical packages, TSA

Packages Available

Some statistical packages mounted by the Centre for Applications Software and Technology (CAST) may be regarded as general in that they cover to a greater or lesser extent the majority of statistical requirements. These are listed in Appendix 1. The Centre for Applications Software and Technology have also made available other more specialized packages which are described in Appendix 2.

Choosing a General Package

The chart below is an attempt to guide users to one of the general statistical packages available at ERCC. It does not cover all considerations. In particular it takes no account of user contact; the personal or departmental contacts users have with existing users of packages. Such considerations may play an important part in choosing a package. The decision chart is included here to help the many users who have effectively no idea which package to choose. Users with particular problems not covered here may contact the Advisory service when they will be put in contact with a suitable person.



Choosing a Statistical Package

APPENDIX 1
GENERAL PACKAGES

Table 1
General Statistical Packages
Available at ERCC June 1985

Name	User Note Number	Special Details
BMDP	19	Biomedical package, widely available providing general statistical facilities as well as cluster, multivariate and survival analysis.
Genstat	20	Intended primarily for agricultural data with good input- output and excellent analysis of variance facilities. Not suitable for non-orthogonal designs.
Minitab	24	Not suitable for large quantities of data but this is an easy to use package for low level users.
SPSS	25	A widely used package but more suited to social science and survey type data.

APPENDIX 2
SPECIALIZED PACKAGES

Many specialized statistical packages exist throughout the ERCC environment. Those mounted and maintained by the Centre for Applications Software and Technology are given in Table 2. Documentation for the packages may be obtained from

Centre for Applications Software and Technology,
1 Roxburgh Street,
Edinburgh.
Tel. No. 031-667 1011 ext. 4423

Note 1: The Help information on EMAS 2900 provides only a brief summary of the appropriate package and users will have to consult the documentation in order to use the package.

Note 2: Before using any of the packages for the first time, users must issue the following EMAS 2900 command

OPTION SEARCHDIR=PLULIB.PACKDIR

Table 2
Specialized Statistical Packages
Available at ERCC June 1985

Name	Documentation obtainable from	Notes
AID2	PLULB2.AID2DOC	Used to detect interaction in regression analysis. It operates by splitting groups into subgroups.
BLISS	CAST	Provides maximum likelihood parameter estimation to quantal bioassay.
CLUSTAN	CAST	A cluster analysis package which requires the user to have some knowledge of the theory involved. CLUSCOM, a related package, may be used to set up a file of control statements for CLUSTAN.
DSIGNX	CAST	Generates randomised incomplete block designs from a user defined experimental structure.
EDEX	CAST	Analyses experiments with factorially structured designs.
FAKAD	SSRC Survey Archive Univ of Essex Wivenhoe Park Colchester CO4 3SQ	An interactive statistical data analysis program. It has facilities for regression, principal components, cross tabulation, scattergrams and simulation.
GLIM	Nag Ltd 7 Banbury Road Oxford OX2 6NN	Fits generalized linear interactive models.
HIERF	CAST	Analyses data with a hierarchical structure to provide analysis of variance and covariance.
IDA	SPSS Inc. Suite 3300 444 N. Michigan Av Chicago Illinois 60611 USA	A conversational program for data analysis and forecasting offering a wide range of statistical capabilities.
LISREL	Int. Educ Services 1525 East 53 St Suite 829 Chicago Illinois 60615 USA	Estimates coefficients in a set of linear structural equations.

MAXLIKE MINISQ	CAST	Estimates the parameters of a model using maximum likelihood and least squares techniques. A simple knowledge of Fortran is required.
MLP	Rothamsted Experimental Stn Harpenden Herts AL5 2JQ	A widely available package which may be used to find maximum likelihood parameter estimates.
MULTREG		Performs multiple linear regression. It is not mounted by CAST and users are advised to consult the Advisory service if they require access to it.
PARLIN	CAST	Provides statistical analysis of data such that the regression of a quantitative response on a log dose is linear with a constant variance per response.
RGSP	CAST	A general survey program. The output may be used as input to Genstat.
SCSS	CAST	An interactive tabulation and statistical tool suitable for the user with little knowledge of both computing and statistics.
TSA	Nag Ltd 7 Banbury Road Oxford OX2 6NN	A versatile time series package with facilities for filtering data.