

Package ‘Mcomp’

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Title Data from the M-competitions

Description The 1001 time series from the M-competition (Makridakis et al. 1982) and the 3003 time series from the IJF-M3 competition (Makridakis and Hibon, 2000).

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Mcomp-package

Data from the M-competitions

Description

The 1001 time series from the M-competition (Makridakis et al. 1982) and the 3003 time series from the IJF-M3 competition (Makridakis and Hibon, 2000).

Author(s)

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Source

<http://forecasters.org/time-series.html>.

Detailed results from M3 competition at http://forecastingprinciples.com/index.php?option=com_content&task=view&id=209.

References

Makridakis, S., A. Andersen, R. Carbone, R. Fildes, M. Hibon, R. Lewandowski, J. Newton, E. Parzen, and R. Winkler (1982) The accuracy of extrapolation (time series) methods: results of a forecasting competition. *Journal of Forecasting*, **1**, 111–153.

Makridakis and Hibon (2000) The M3-competition: results, conclusions and implications. *International Journal of Forecasting*, **16**, 451-476.

M1

M-Competition data

Description

The time series from the M1 and M3 forecasting competitions.

Usage

data(M1)

data(M3)

Format

M1 is a list of 1001 series and M3 is a list of 3003 series. Each list is of class Mcomp. Each series within M1 and M3 is of class Mdata with the following structure:

sn Name of the series

st Series number and period. For example "Y1" denotes first yearly series, "Q20" denotes 20th quarterly series and so on.

n The number of observations in the time series

h The number of required forecasts

period Interval of the time series. Possible values are "YEARLY", "QUARTERLY", "MONTHLY" & "OTHER".

type The type of series. Possible values for M1 are "DEMOGR", "INDUST", "MACRO1", "MACRO2", "MICRO1", "MICRO2" & "MICRO3". Possible values for M3 are "DEMOGRAPHIC", "FINANCE", "INDUSTRY", "MACRO", "MICRO", "OTHER".

description A short description of the time series

x A time series of length n (the historical data)

xx A time series of length h (the future data)

Author(s)

Muhammad Akram and Rob Hyndman

Source

<http://forecasters.org/time-series.html>.

Detailed results from M3 competition at http://forecastingprinciples.com/index.php?option=com_content&task=view&id=209.

References

Makridakis, S., A. Andersen, R. Carbone, R. Fildes, M. Hibon, R. Lewandowski, J. Newton, E. Parzen, and R. Winkler (1982) The accuracy of extrapolation (time series) methods: results of a forecasting competition. *Journal of Forecasting*, **1**, 111–153.

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See Also

[subset.Mcomp](#), [plot.Mdata](#)

Examples

```
M1
plot(M1$YAF2)
subset(M1, "monthly")
```

`plot.Mdata`*Plotting M Competition data*

Description

`plot.Mdata` plots a time series from the M competition data sets.

Usage

```
## S3 method for class 'Mdata'
plot(x, xlim=c(tsp(x$x)[1],tsp(x$xx)[2]), ylim=range(x$x,x$xx),
      main=x$sn, xlab="", ylab="", ...)
```

Arguments

<code>x</code>	A series of M-competition data
<code>xlim</code>	Limits on x-axis
<code>ylim</code>	Limits on y-axis
<code>main</code>	Main title
<code>xlab</code>	Label on x-axis
<code>ylab</code>	Label on y-axis
<code>...</code>	Other plotting arguments

Value

None. The function produces a time series plot of the selected series.

Author(s)

Muhammad Akram and Rob Hyndman

See Also

[M1](#)

Examples

```
plot(M1[[1]])
plot(M1$YAF3)
plot(M3$N0647)
```

subset.Mcomp

Subset of time series from the M Competitions

Description

subset.Mcomp returns a subset of the time series data from the M Competitions. Subsets can be for specific periods, or specific types of data or both.

Usage

```
## S3 method for class 'Mcomp'
subset(x, cond1, cond2, ...)
```

Arguments

x	M-competition data or a subset of M-competition data
cond1	Type or period of the data. Type is a character variable and period could be character or numeric.
cond2	Optional second condition specifying type or period of the data, depending on cond1. If cond1 denotes type then cond2 would denote period, but if cond1 denotes period then cond2 would denote type.
...	Other arguments.

Details

Possible values for cond1 and cond2 denoting period are 1, 4, 12, "yearly", "quarterly", "monthly" and "other".

If cond1 or cond2 equals 111, then the 111 series used in the extended comparisons in the 1982 M-competition are selected.

Possible values for cond1 and cond2 denoting type are "macro", "micro", "industry", "finance", "demographic", "allother", "macro1", "macro2", "micro1", "micro2", "micro3". These correspond to the descriptions used in the competitions. See the references for details.

Partial matching used for both conditions.

Value

An object of class Mcomp consisting of the selected series.

Author(s)

Muhammad Akram and Rob Hyndman

References

Makridakis, S., A. Andersen, R. Carbone, R. Fildes, M. Hibon, R. Lewandowski, J. Newton, E. Parzen, and R. Winkler (1982) The accuracy of extrapolation (time series) methods: results of a forecasting competition. *Journal of Forecasting*, **1**, 111–153.

Makridakis and Hibon (2000) The M3-competition: results, conclusions and implications. *International Journal of Forecasting*, **16**, 451-476.

See Also

[M1](#)

Examples

```
M3.quarterly <- subset(M3,4)
M1.yearly.industry <- subset(M1,1,"industry")
```

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