|  |  |
| --- | --- |
| longley {datasets} | R Documentation |

Longley's Economic Regression Data

**Description**

A macroeconomic data set which provides a well-known example for a highly collinear regression.

**Usage**

longley

**Format**

A data frame with 7 economical variables, observed yearly from 1947 to 1962 (*n=16*).

GNP.deflator

GNP implicit price deflator (*1954=100*)

GNP

Gross National Product.

Unemployed

number of unemployed.

Armed.Forces

number of people in the armed forces.

Population

‘noninstitutionalized’ population *≥* 14 years of age.

Year

the year (time).

Employed

number of people employed.

The regression lm(Employed ~ .) is known to be highly collinear.

**Source**

J. W. Longley (1967) An appraisal of least-squares programs from the point of view of the user. *Journal of the American Statistical Association* **62**, 819–841.

**References**

Becker, R. A., Chambers, J. M. and Wilks, A. R. (1988) *The New S Language*. Wadsworth & Brooks/Cole.

**Examples**

require(stats); require(graphics)

## give the data set in the form it is used in S-PLUS:

longley.x <- data.matrix(longley[, 1:6])

longley.y <- longley[, "Employed"]

pairs(longley, main = "longley data")

summary(fm1 <- lm(Employed ~ ., data = longley))

opar <- par(mfrow = c(2, 2), oma = c(0, 0, 1.1, 0),

mar = c(4.1, 4.1, 2.1, 1.1))

plot(fm1)

par(opar)