[Example10-2] Static Time Series Model

Kei Sakamoto

Static model as a bad example

```
load("~/計量経済学演習/R data sets for 5e/intdef.RData")
intdef<-data
```

Linear regression of static model

```
summary( lm(i3~inf+def,data=intdef)  )

##
## Call:
## lm(formula = i3 ~ inf + def, data = intdef)
##
## Residuals:
##     Min      1Q  Median      3Q     Max
## -3.9948 -1.1694  0.1959  0.9602  4.7224
##
## Coefficients:
##             Estimate Std. Error t value Pr(>|t|)
## (Intercept)  1.73327    0.43197   4.012  0.00019 ***
## inf          0.60587    0.08213   7.376 1.12e-09 ***
## def          0.51306    0.11838   4.334 6.57e-05 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 1.843 on 53 degrees of freedom
## Multiple R-squared:  0.6021, Adjusted R-squared:  0.5871
## F-statistic: 40.09 on 2 and 53 DF,  p-value: 2.483e-11
```

coef of inflation rate must be negative to interest rate but it was reported as positive (and ststistically significant ….)

```
intdef$year

##  [1] 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960
1961
## [15] 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974
1975
## [29] 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988
1989
## [43] 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002
2003
```

親切なことに intdef には year の情報があるのでこれを使うが zoo。自分で作って start なり frequency なりを指定するのが ts。

```
library(zoo, warn.conflicts=F)

zoodata<-zoo(intdef,order.by = intdef$year)
plot(zoodata$i3) #ちゃんと y 軸を指定。x 軸は order.by で指定したものが来る
```