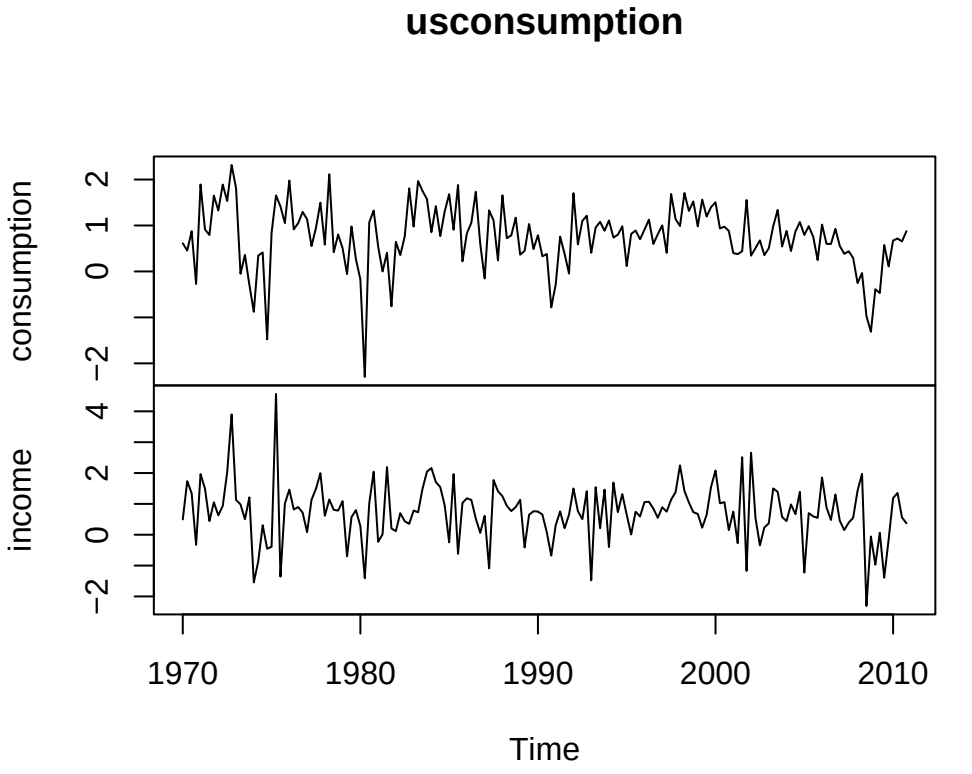
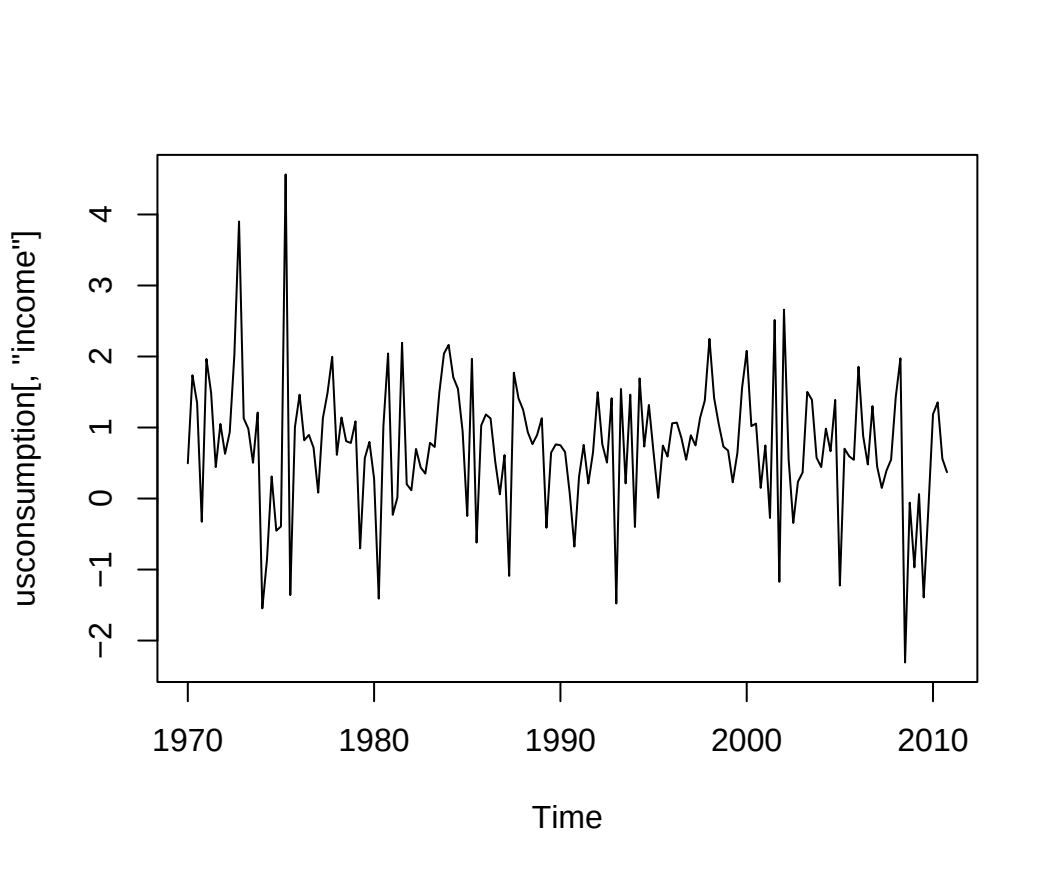
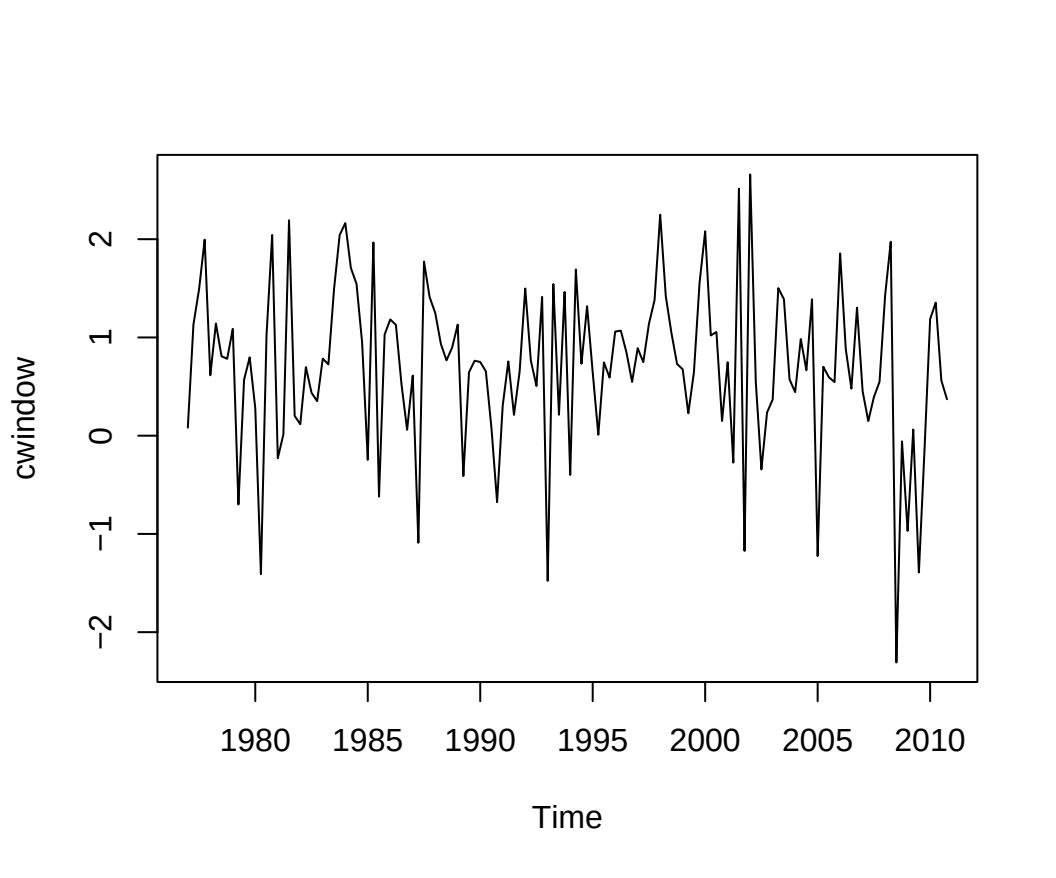
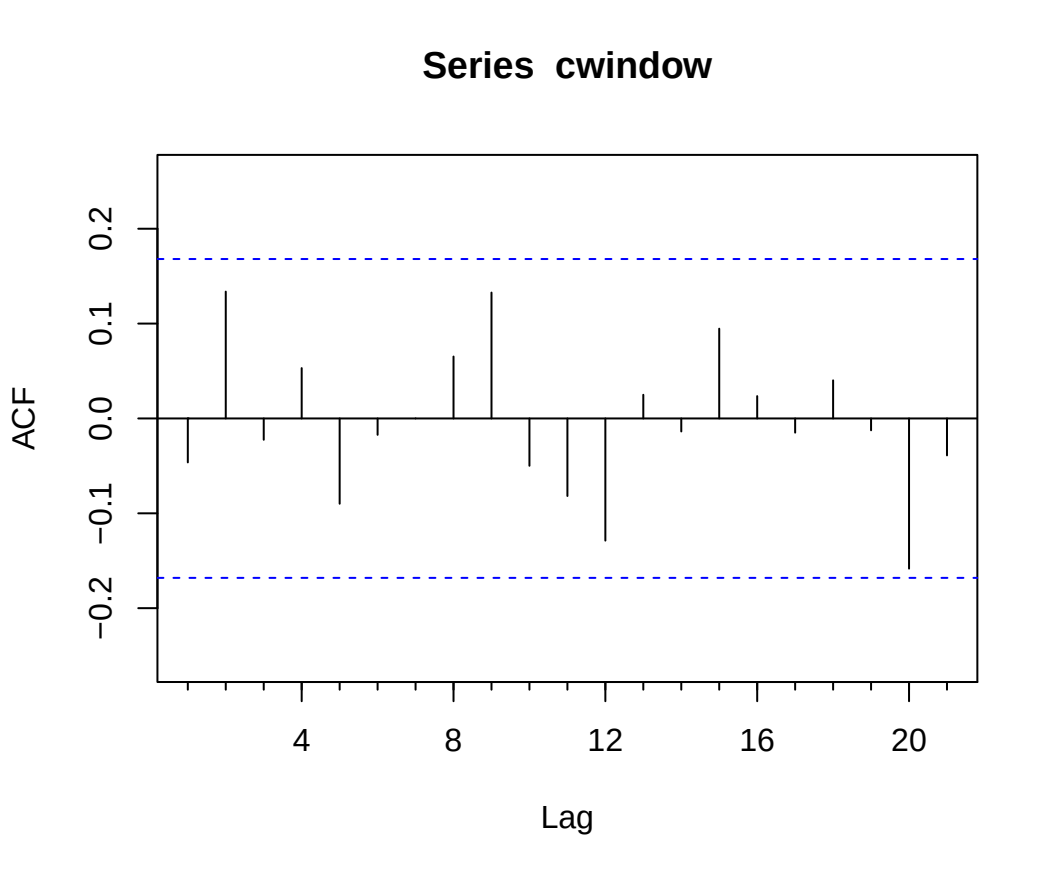
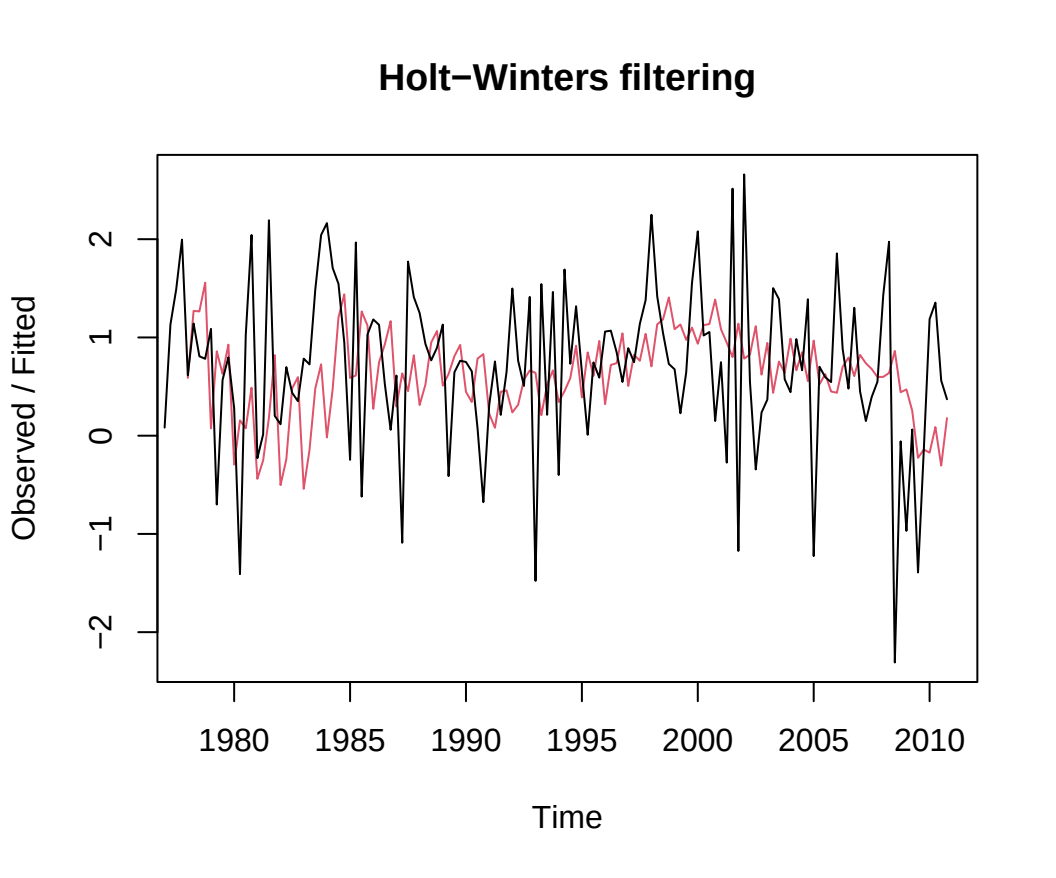

usconsumption
consumption
income
−2
0
2
4
1970
1980
1990
2000
2010
Time

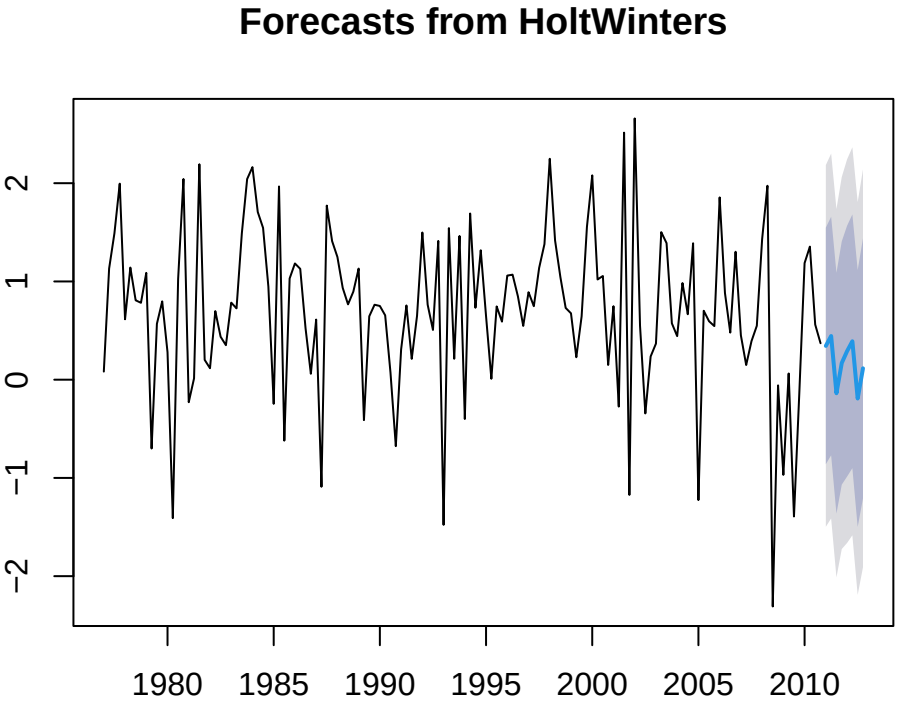

usconsumption[, "income"]
−2
−1
0
1
2
3
4
1970
1980
1990
2000
2010
Time

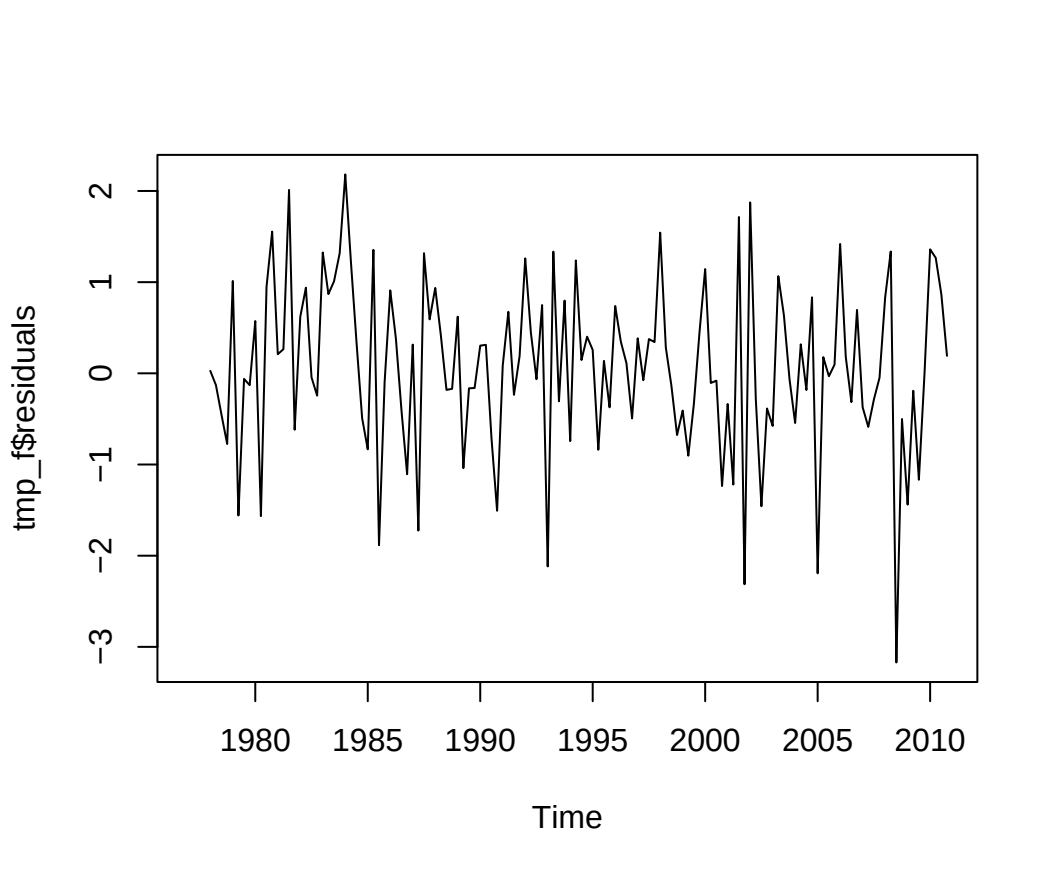

cwindow
2
1
0
−1
−2
1980
1985
1990
1995
2000
2005
2010
Time

data
seasonal
trend
remainder
2
0
−2
0.0
−1.0
1.5
0.5
−0.5
1.0
0.0
−1.0
1980
1985
1990
1995
2000
2005
2010
time

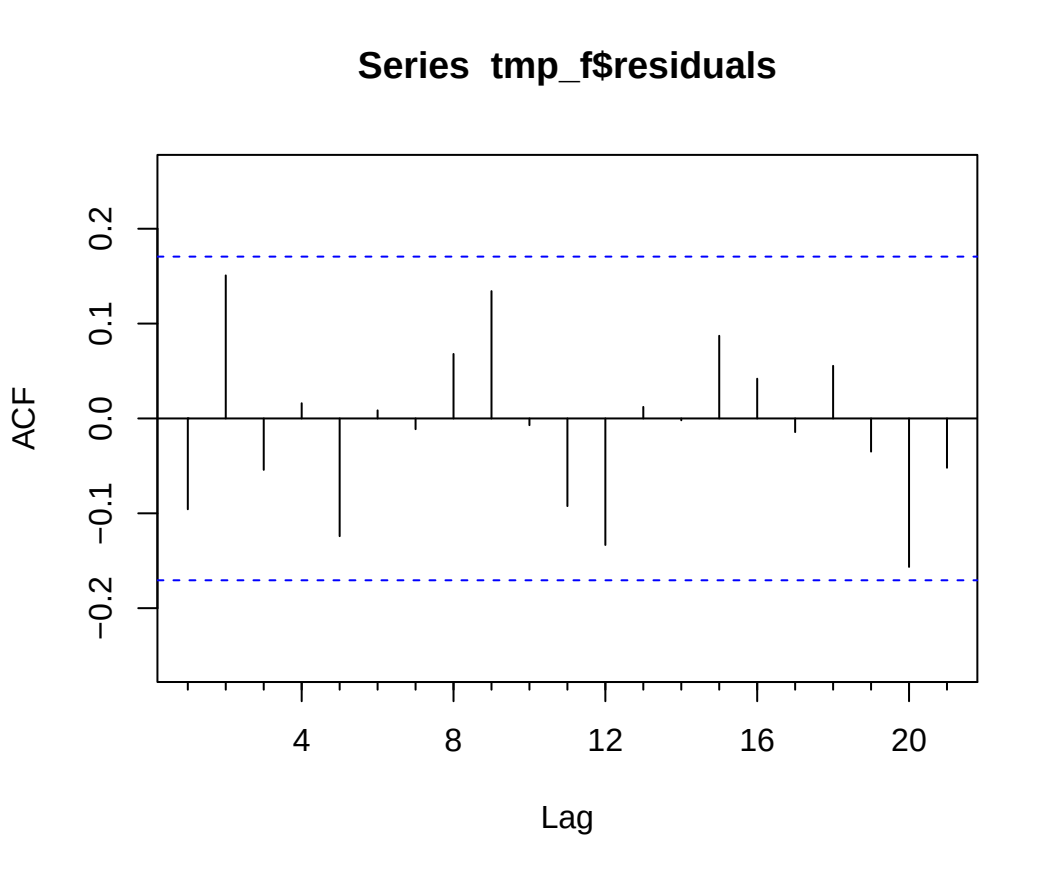

Series cwindow
ACF
0.2
0.1
0.0
−0.1
−0.2
4
8
12
16
20
Lag


Holt−Winters filtering
Observed / Fitted
2
1
0
−1
−2
1980
1985
1990
1995
2000
2005
2010
Time


Forecasts from HoltWinters
2
1
0
−1
−2
1980
1985
1990
1995
2000
2005
2010


tmp_f$residuals
2
1
0
−1
−2
−3
1980
1985
1990
1995
2000
2005
2010
Time

Histogram of tmp_f$residuals
Frequency
0
5
10
15
20
25
30
35
−3
−2
−1
0
1
2
tmp_f$residuals


Series tmp_f$residuals
ACF
0.2
0.1
0.0
−0.1
−0.2
4
8
12
16
20
Lag