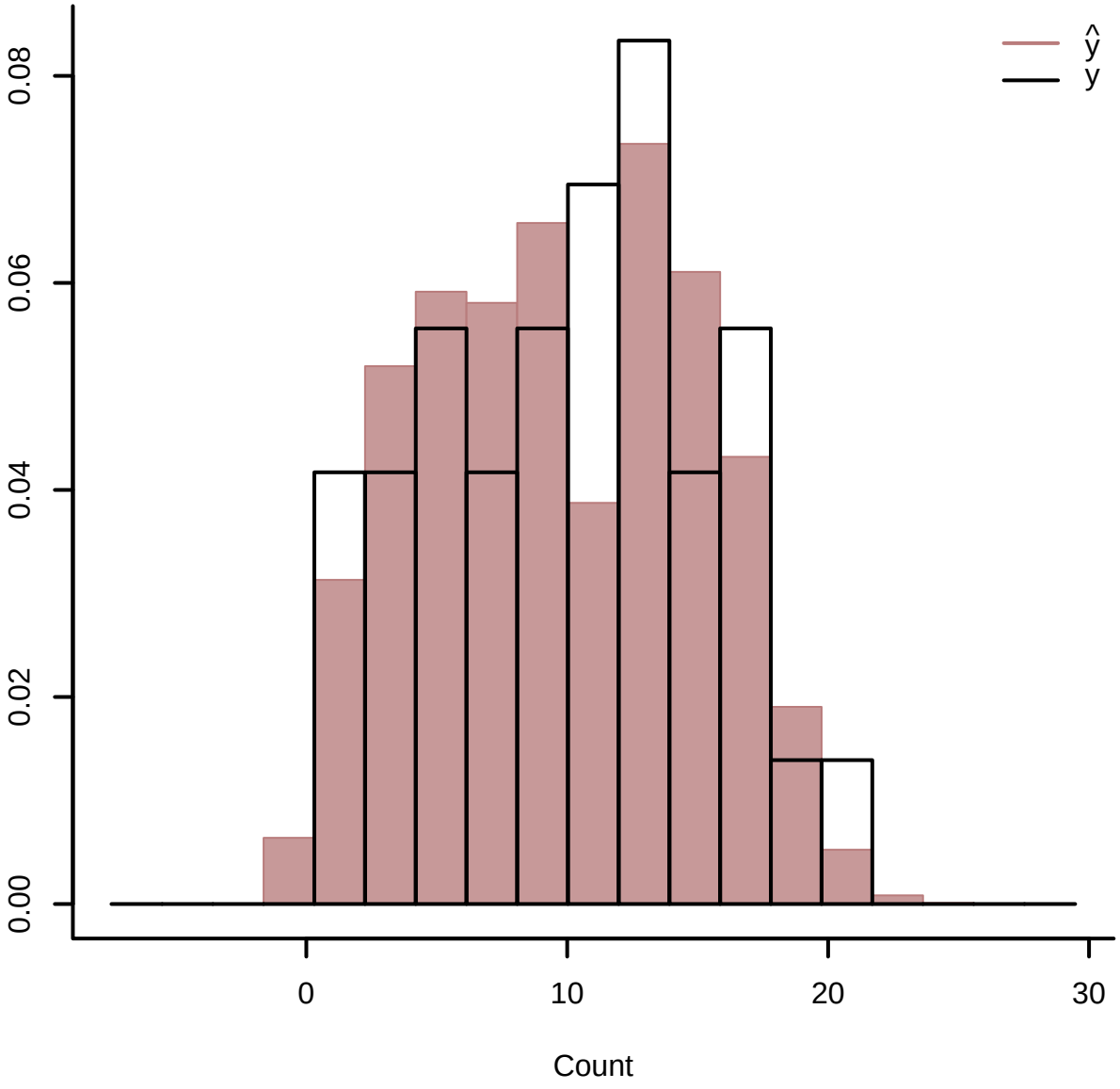
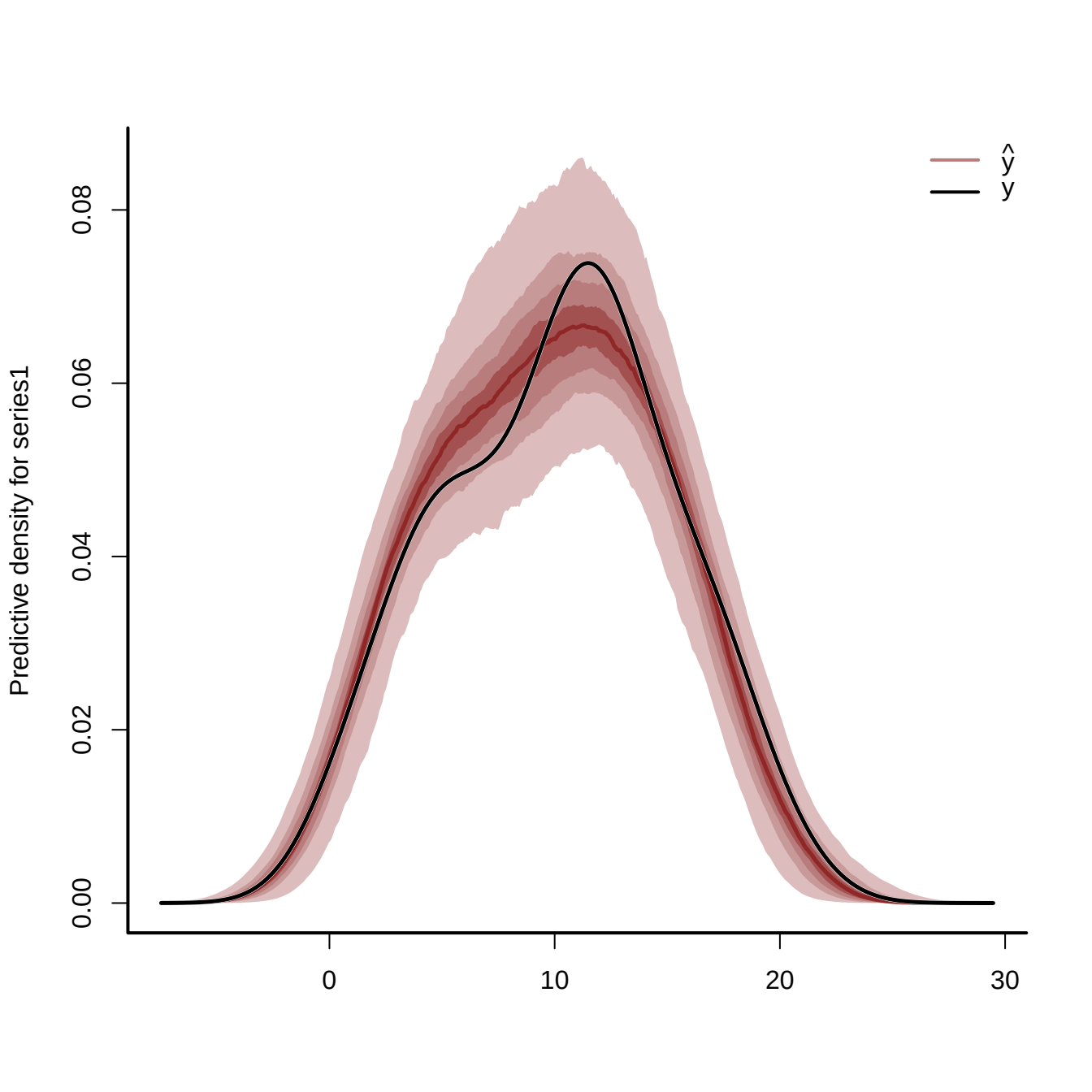
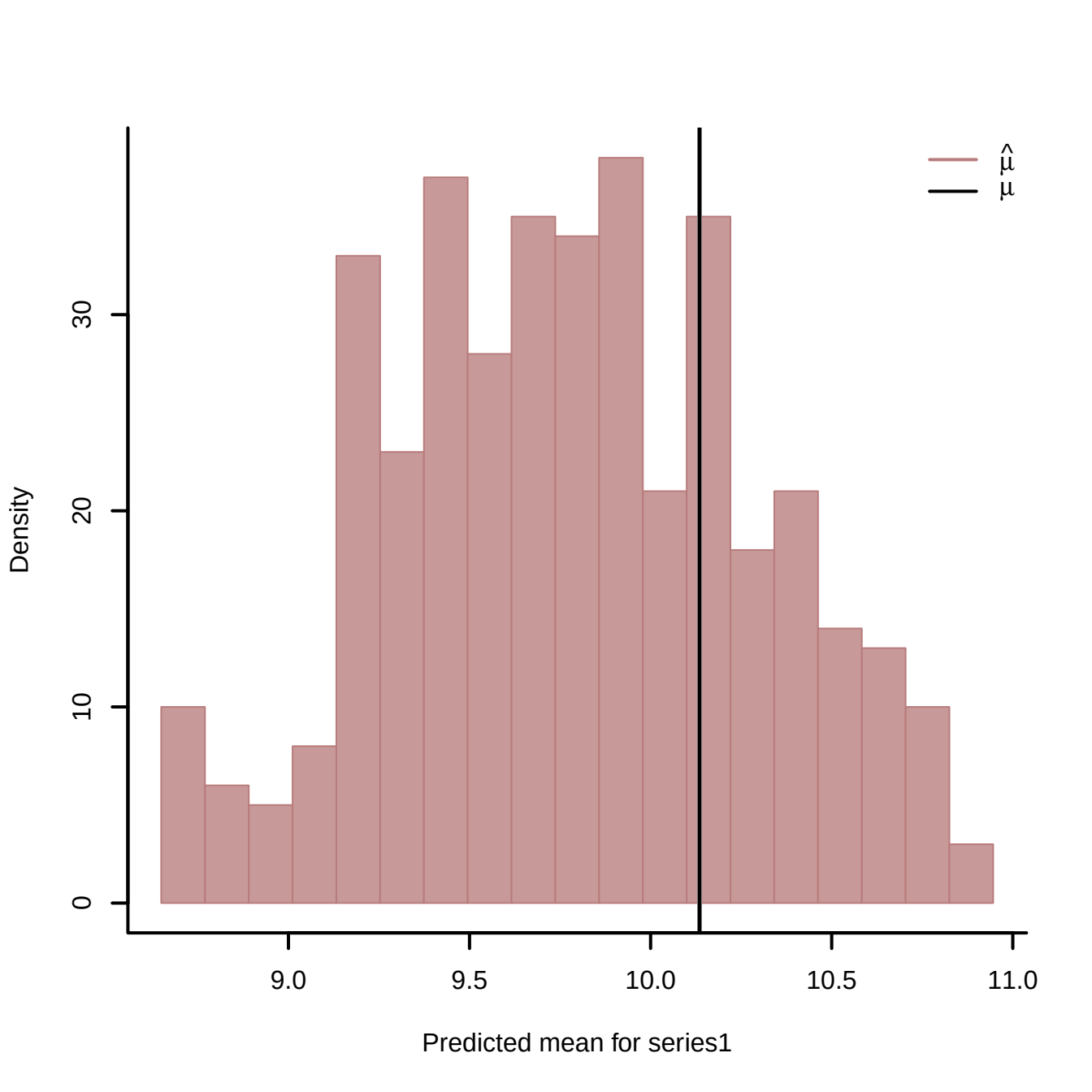
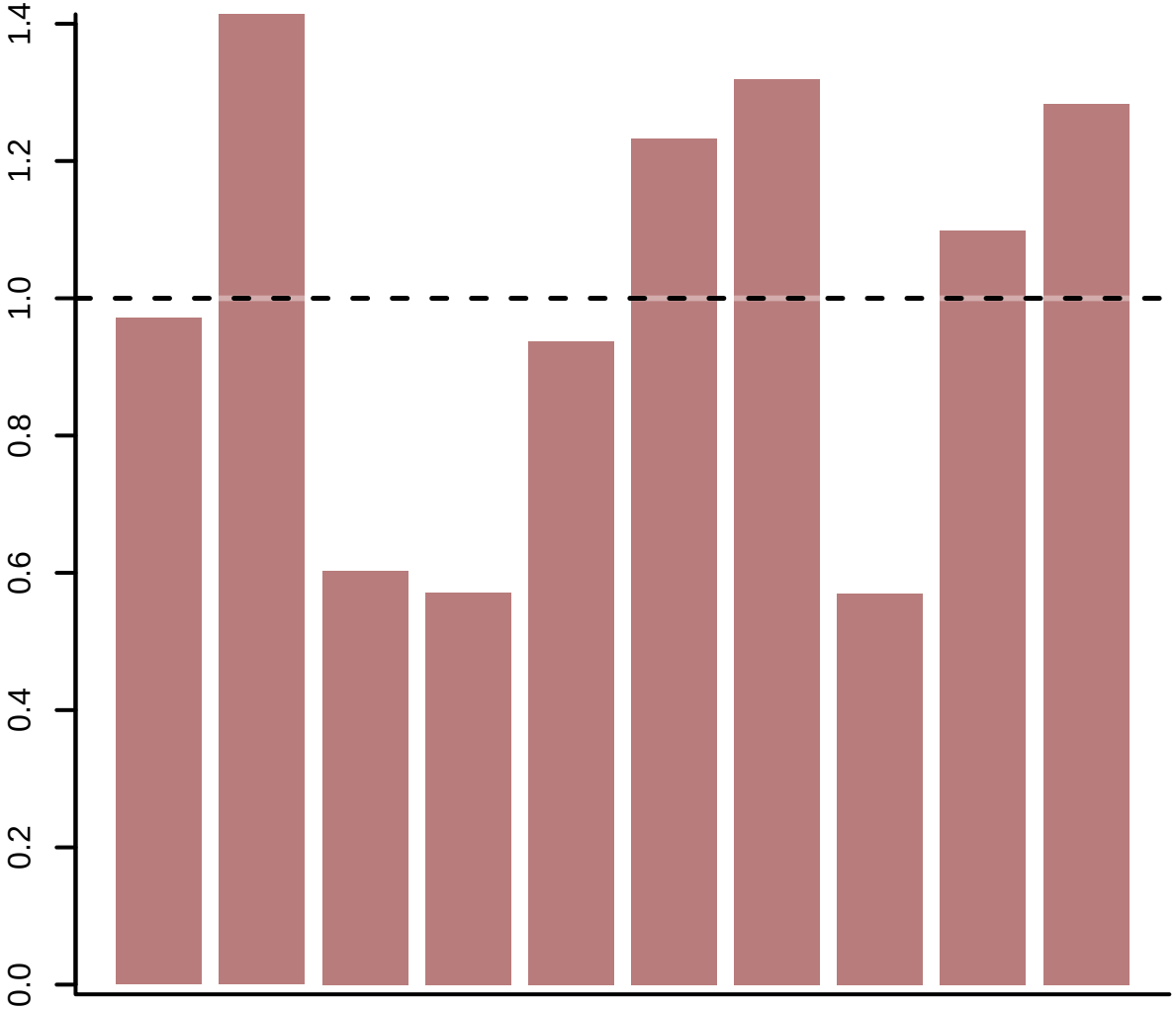
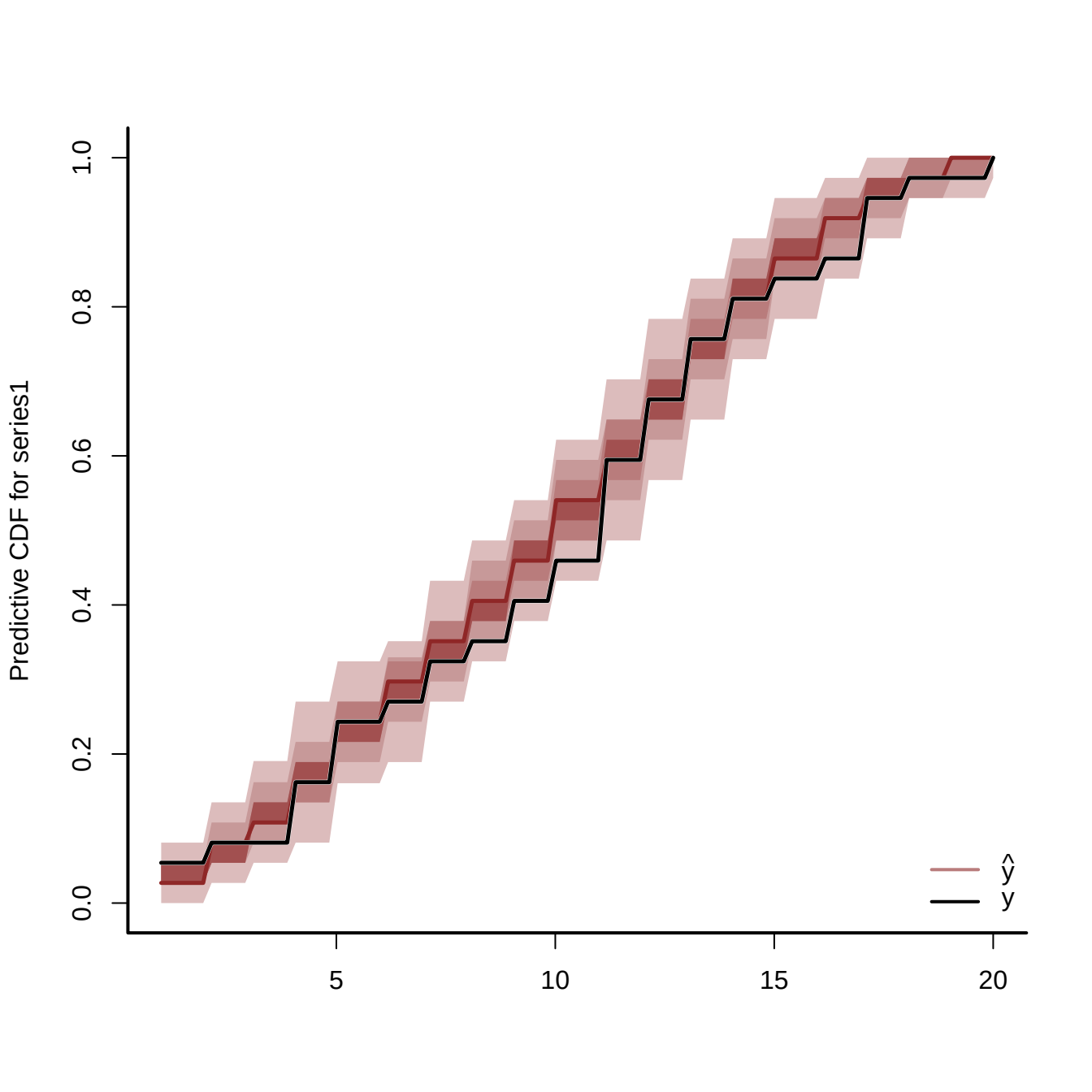
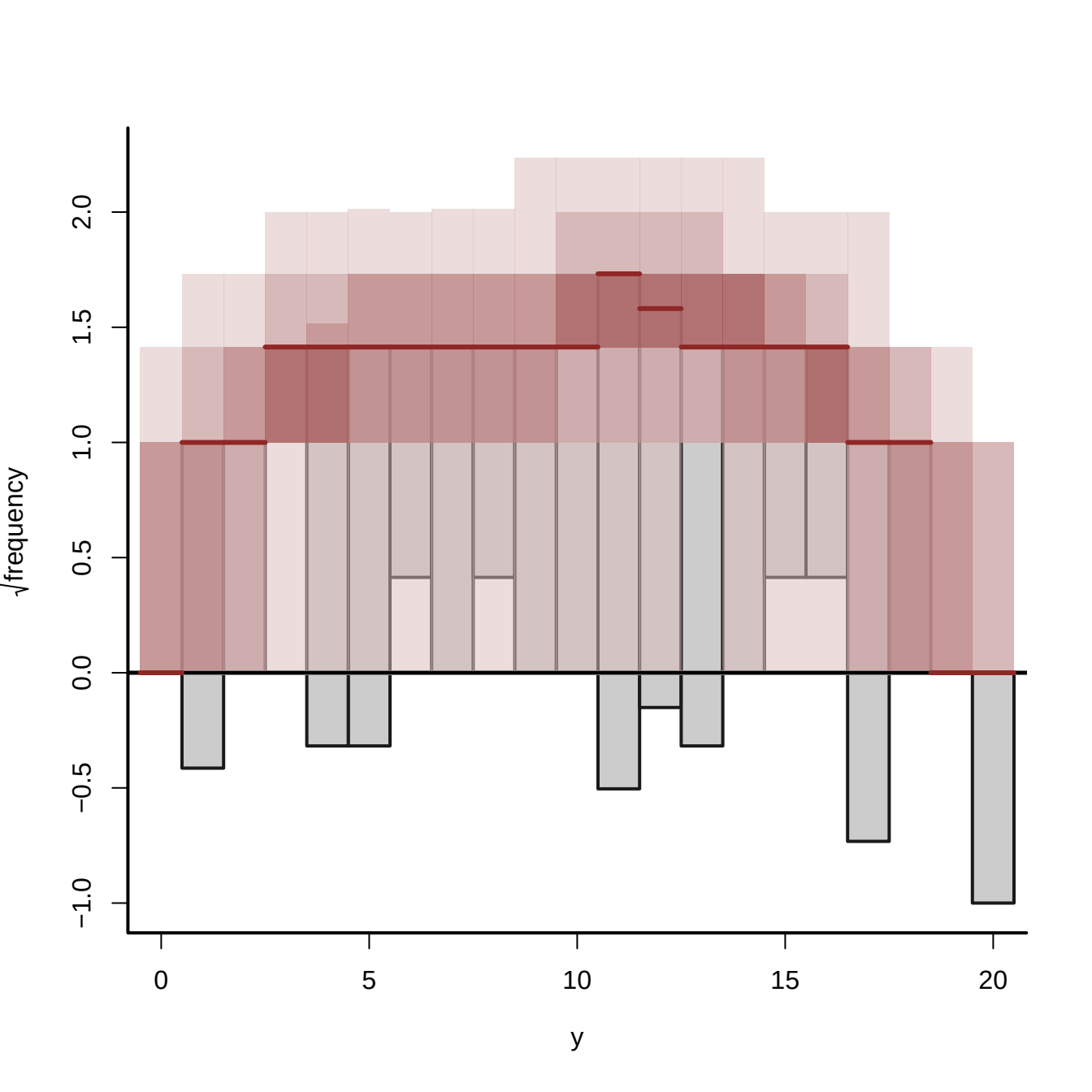

ŷ
y
0.00
0.02
0.04
0.06
0.08
0
10
20
30
Count

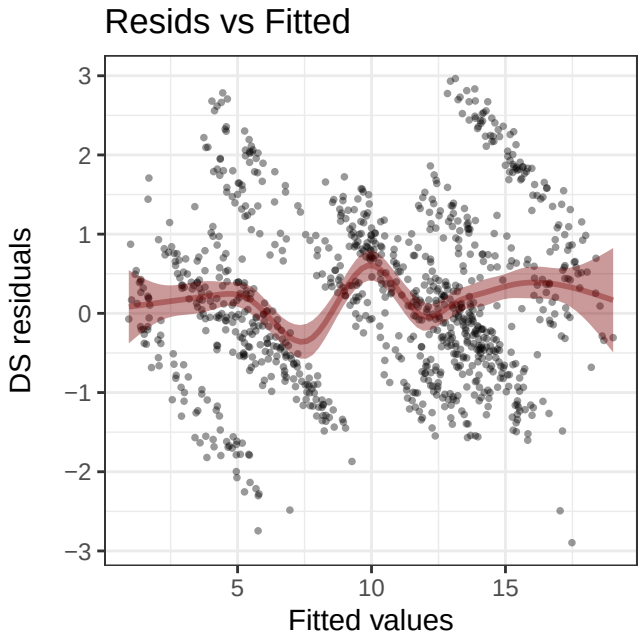

ŷ
y
Predictive density for series1
0.00
0.02
0.04
0.06
0.08
0
10
20
30

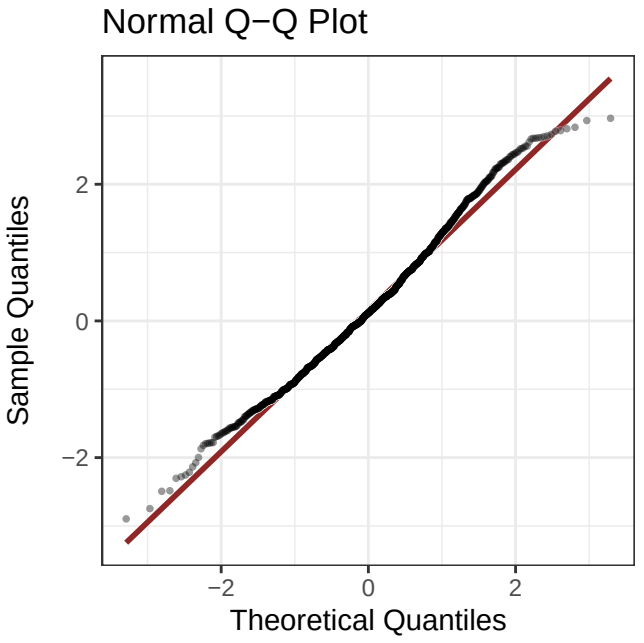

Density
0
10
20
30
9.0
9.5
10.0
10.5
11.0
Predicted mean for series1
μ̂
μ

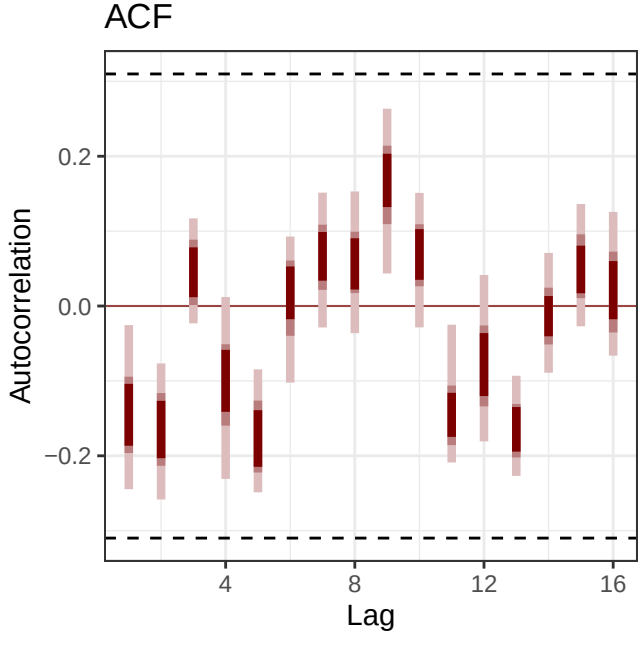

0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
Predictive PIT for series1

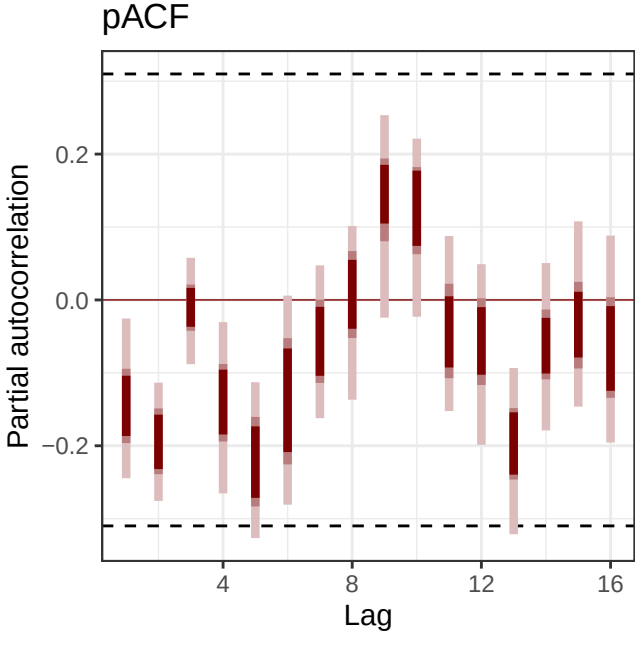

Predictive CDF for series1
0.0
0.2
0.4
0.6
0.8
1.0
5
10
15
20
ŷ
y

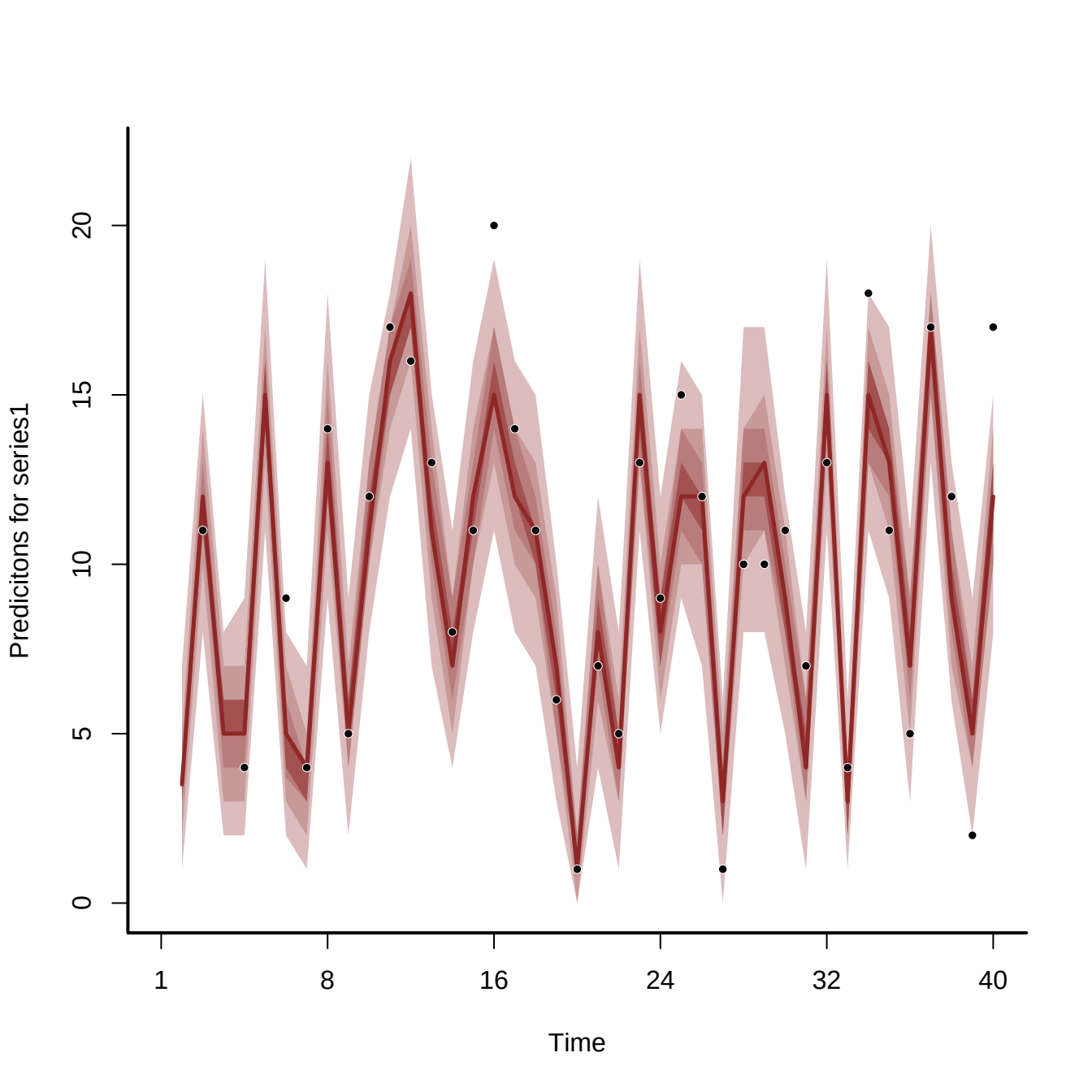

√frequency
2.0
1.5
1.0
0.5
0.0
−0.5
−1.0
0
5
10
15
20
y

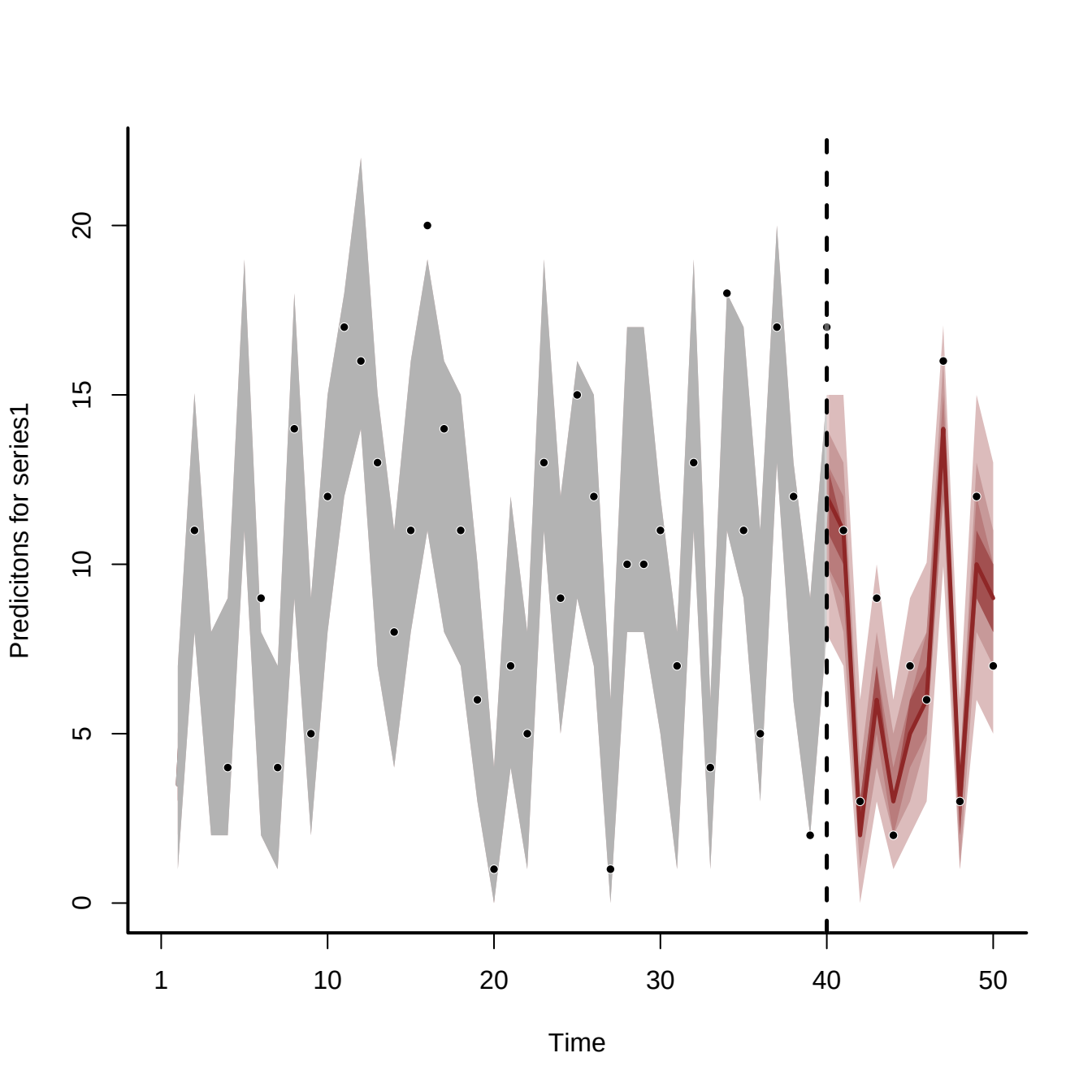

Resids vs Fitted
DS residuals
Fitted values
3
2
1
0
−1
−2
−3
5
10
15

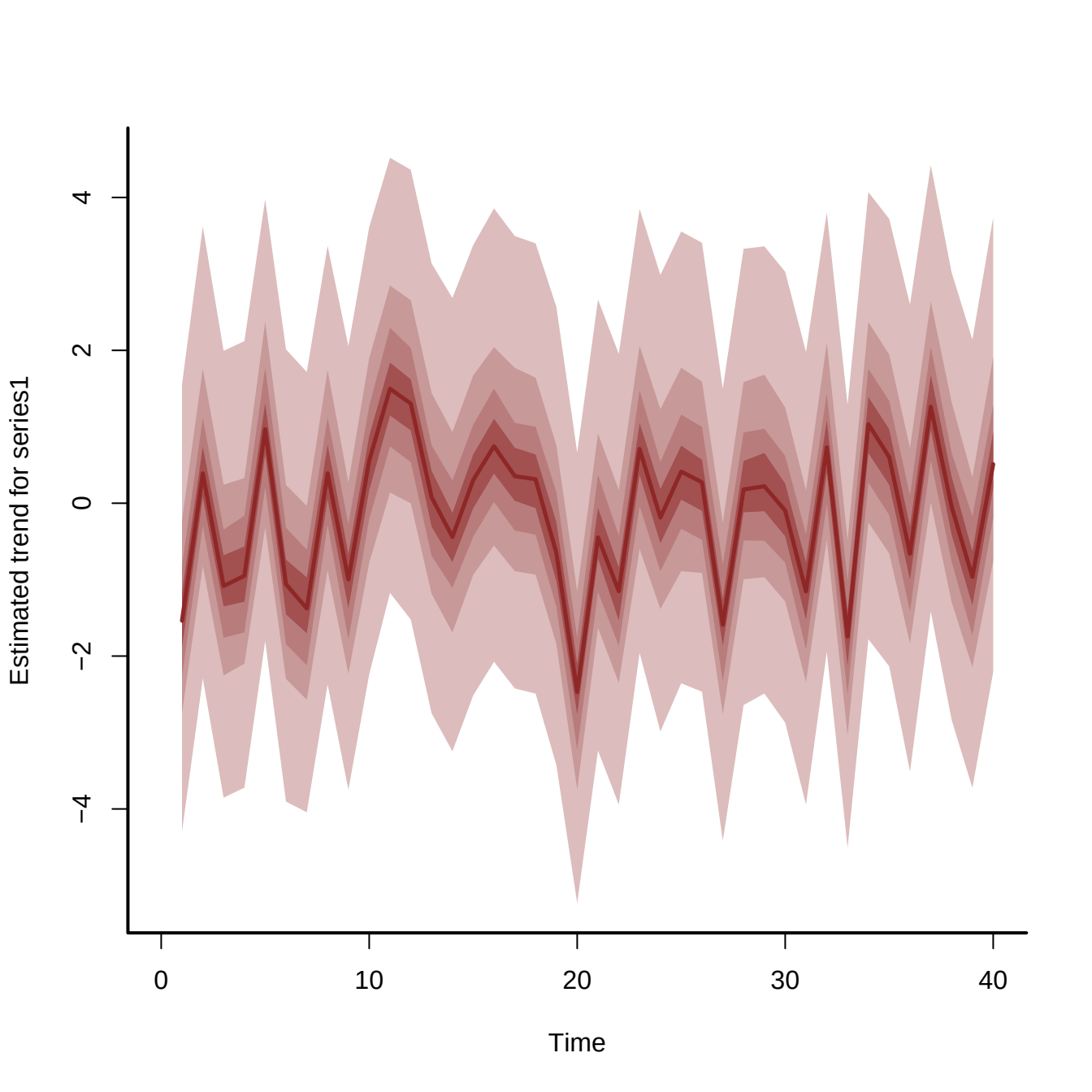

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
2
0
−2
−2
0
2

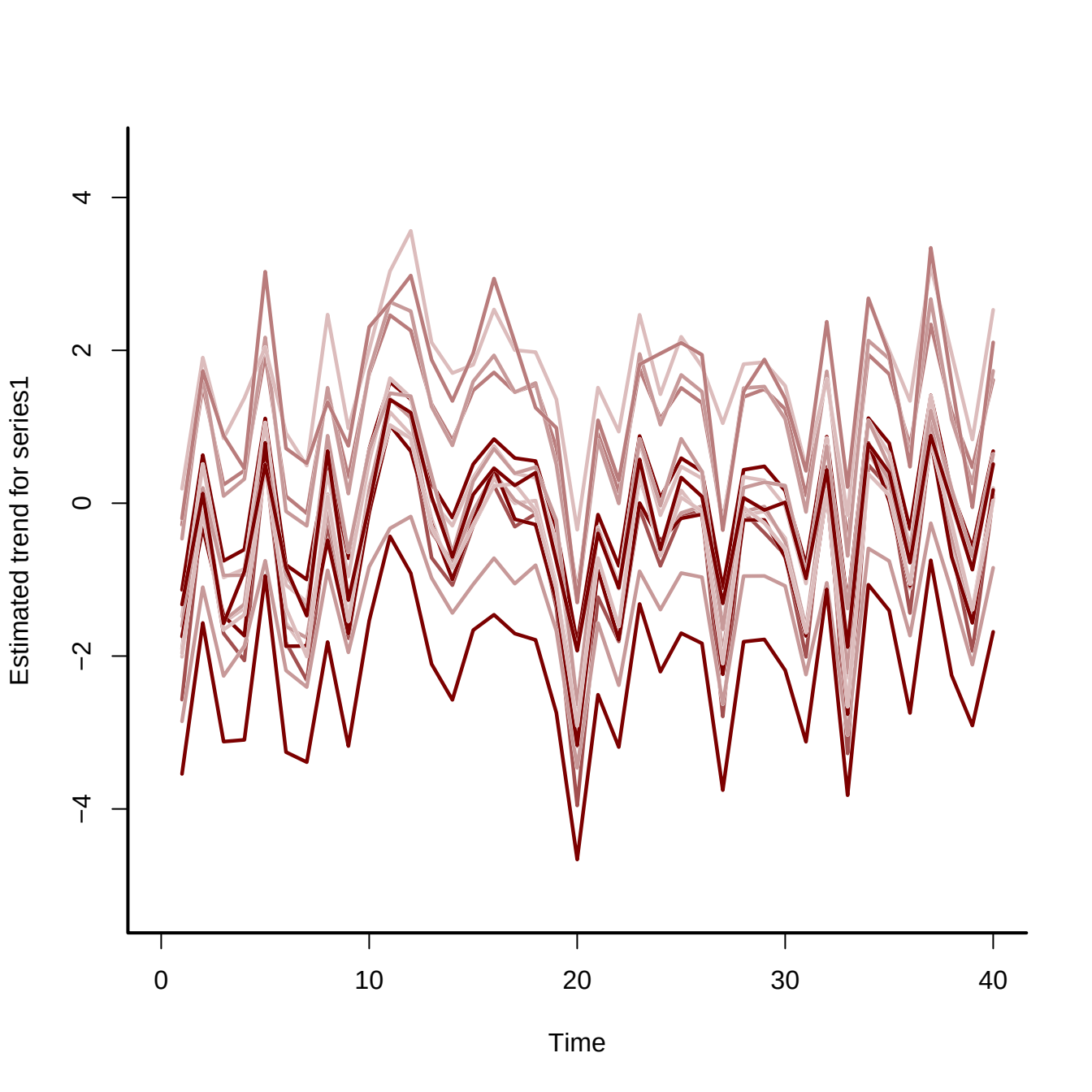

ACF
Autocorrelation
Lag
0.2
0.0
−0.2
4
8
12
16

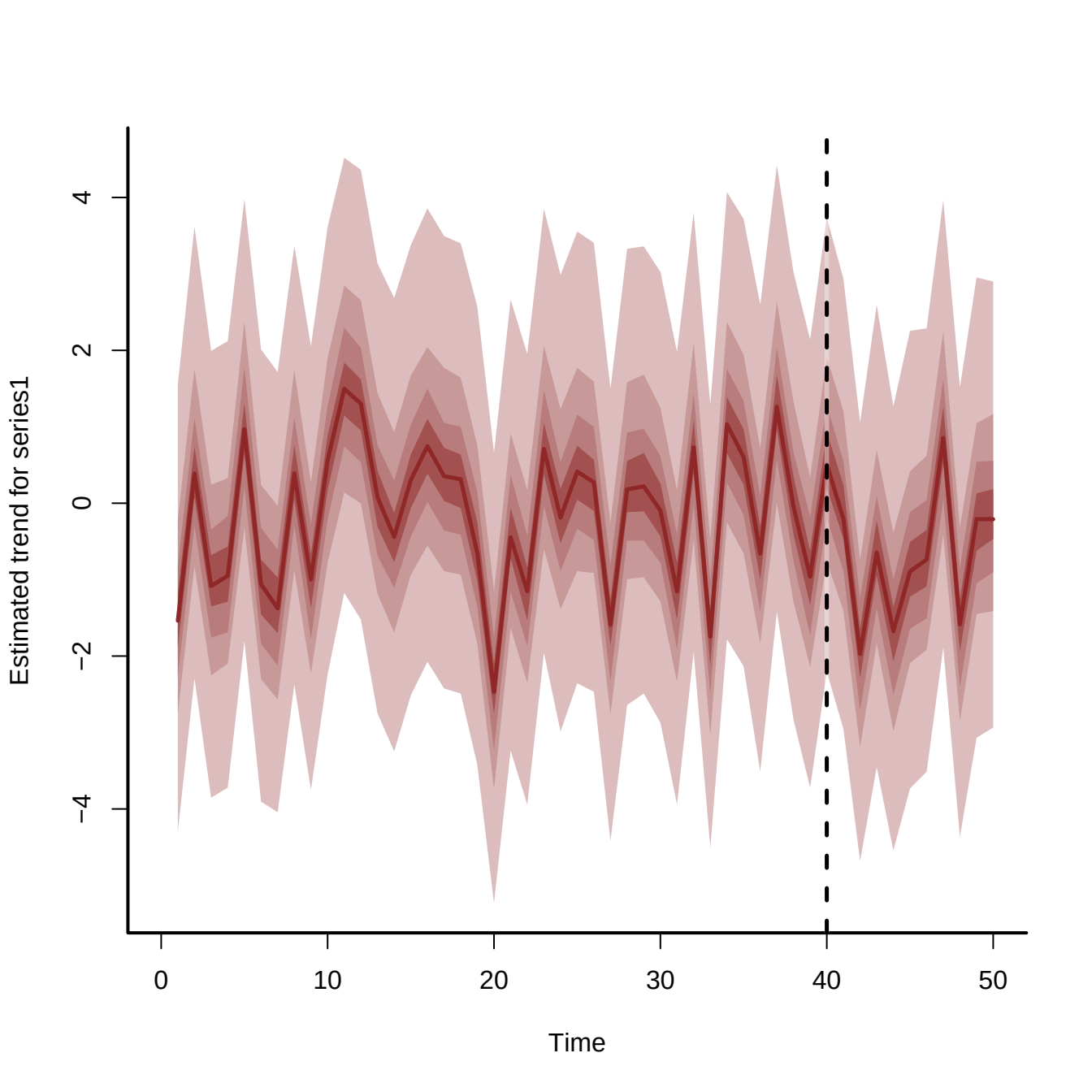

pACF
Partial autocorrelation
Lag
0.2
0.0
−0.2
4
8
12
16

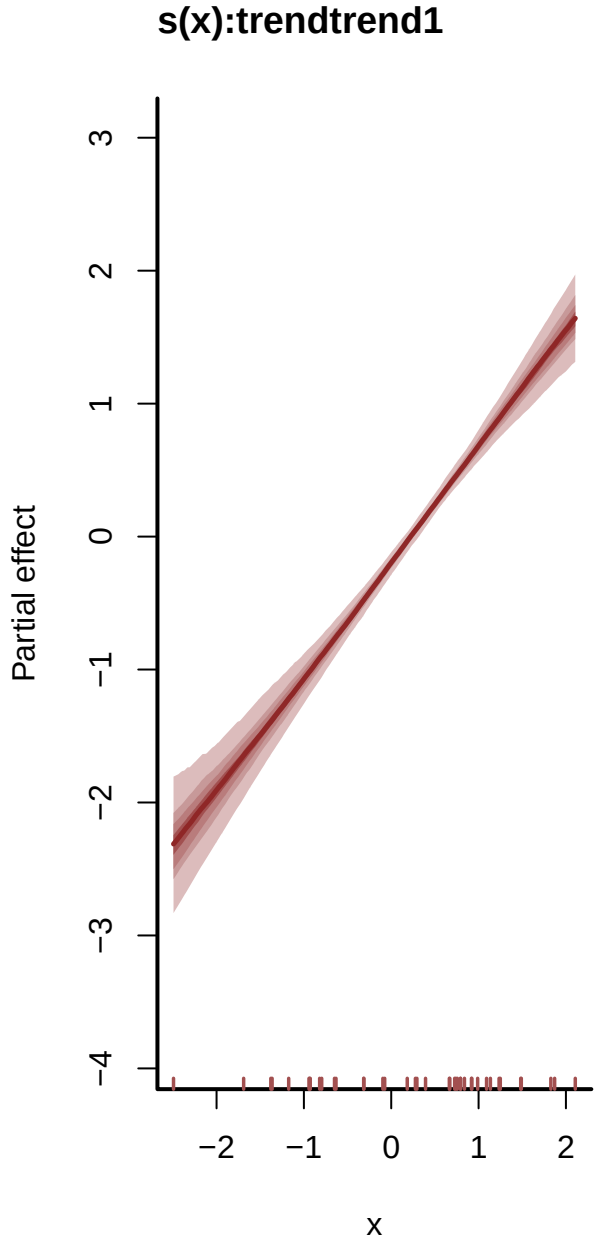

Predicitons for series1
0
5
10
15
20
1
8
16
24
32
40
Time

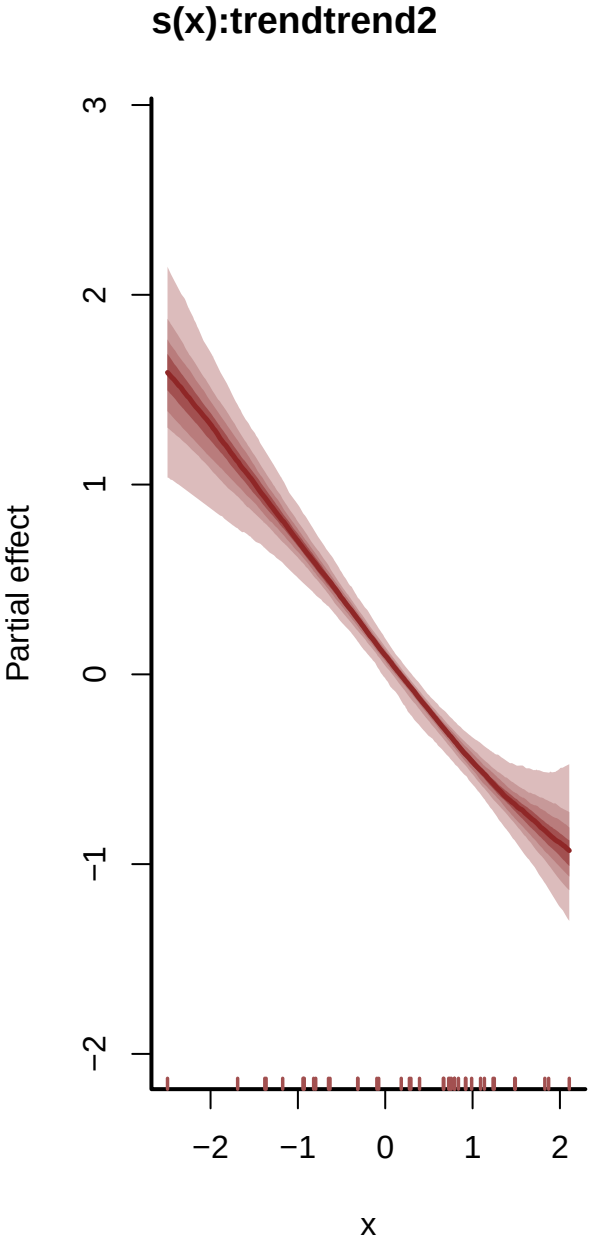

Predicitons for series1
0
5
10
15
20
1
10
20
30
40
50
Time

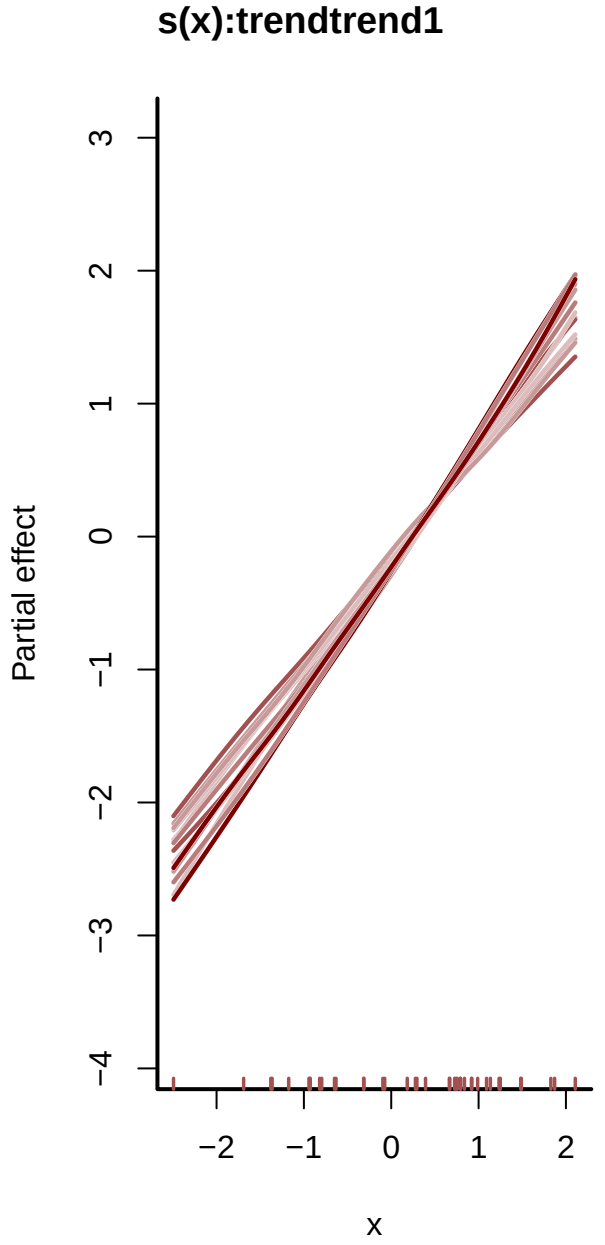

Estimated trend for series1
4
2
0
−2
−4
0
10
20
30
40
Time

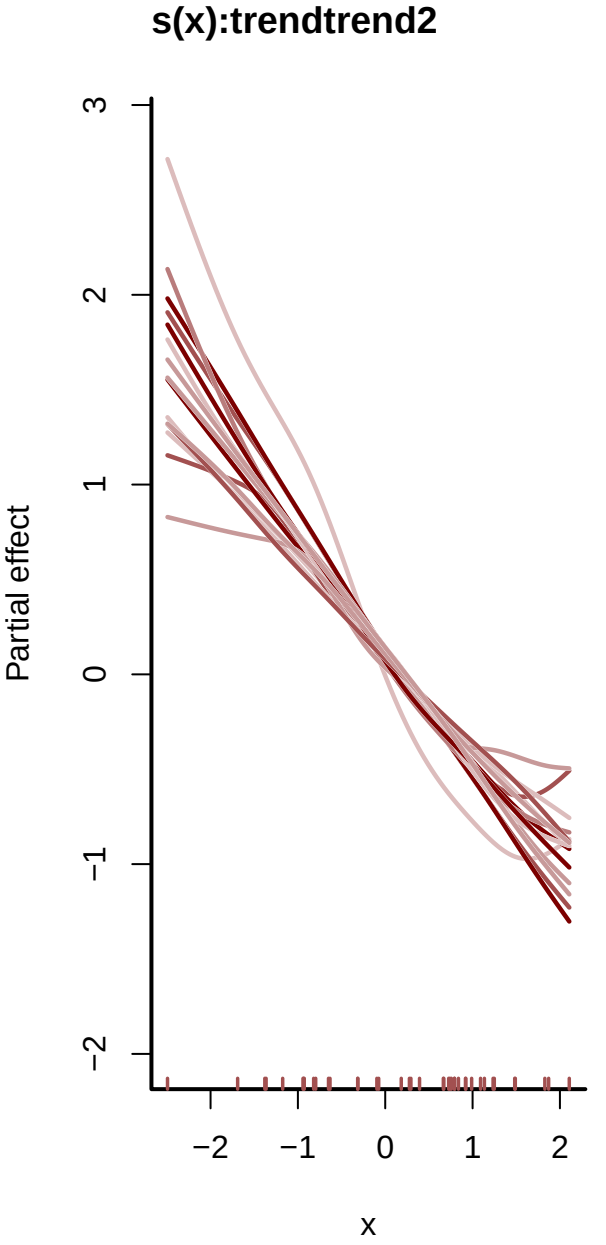

Estimated trend for series1
4
2
0
−2
−4
0
10
20
30
40
Time

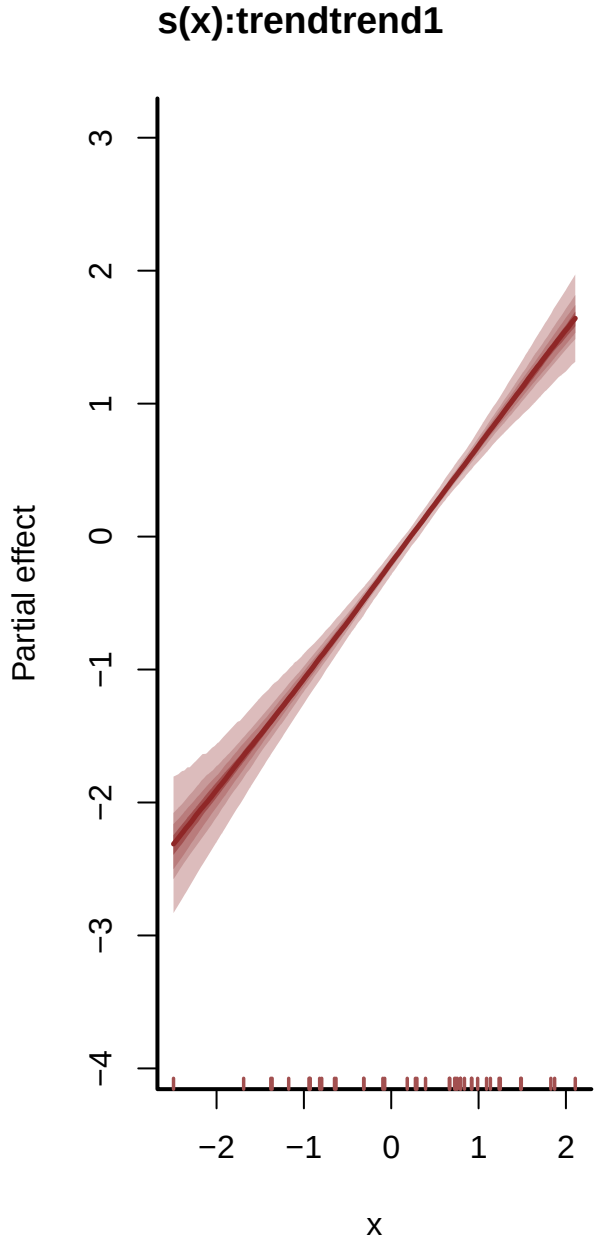

Estimated trend for series1
4
2
0
−2
−4
0
10
20
30
40
50
Time

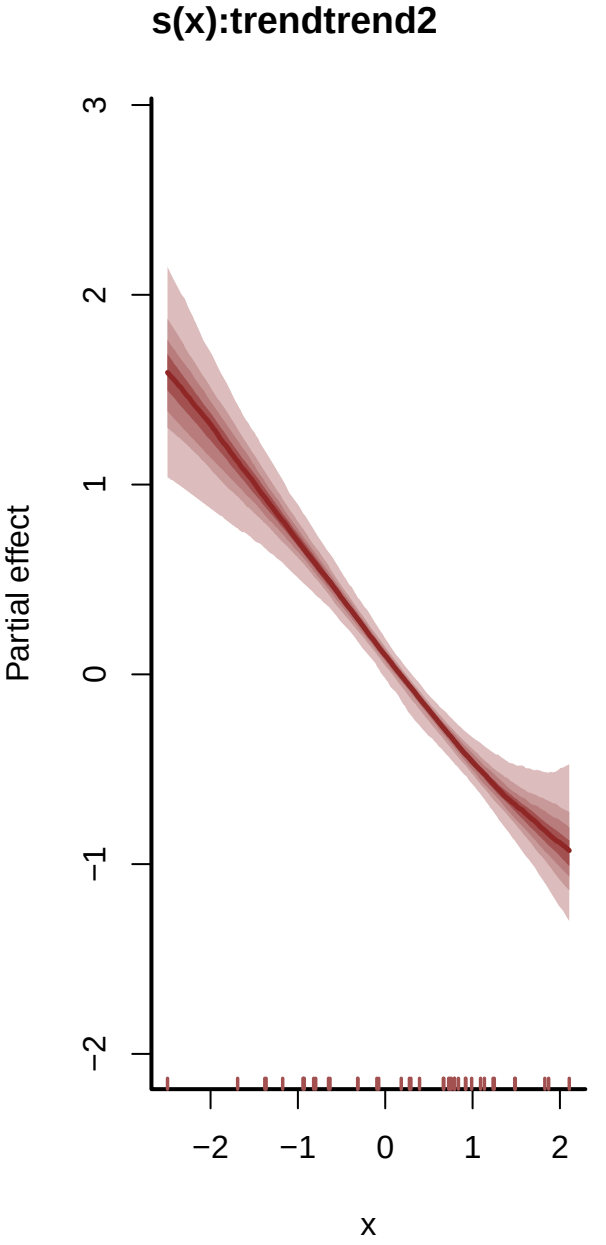

s(x):trendtrend1
Partial effect
3
2
1
0
−1
−2
−3
−4
−2
−1
0
1
2
x

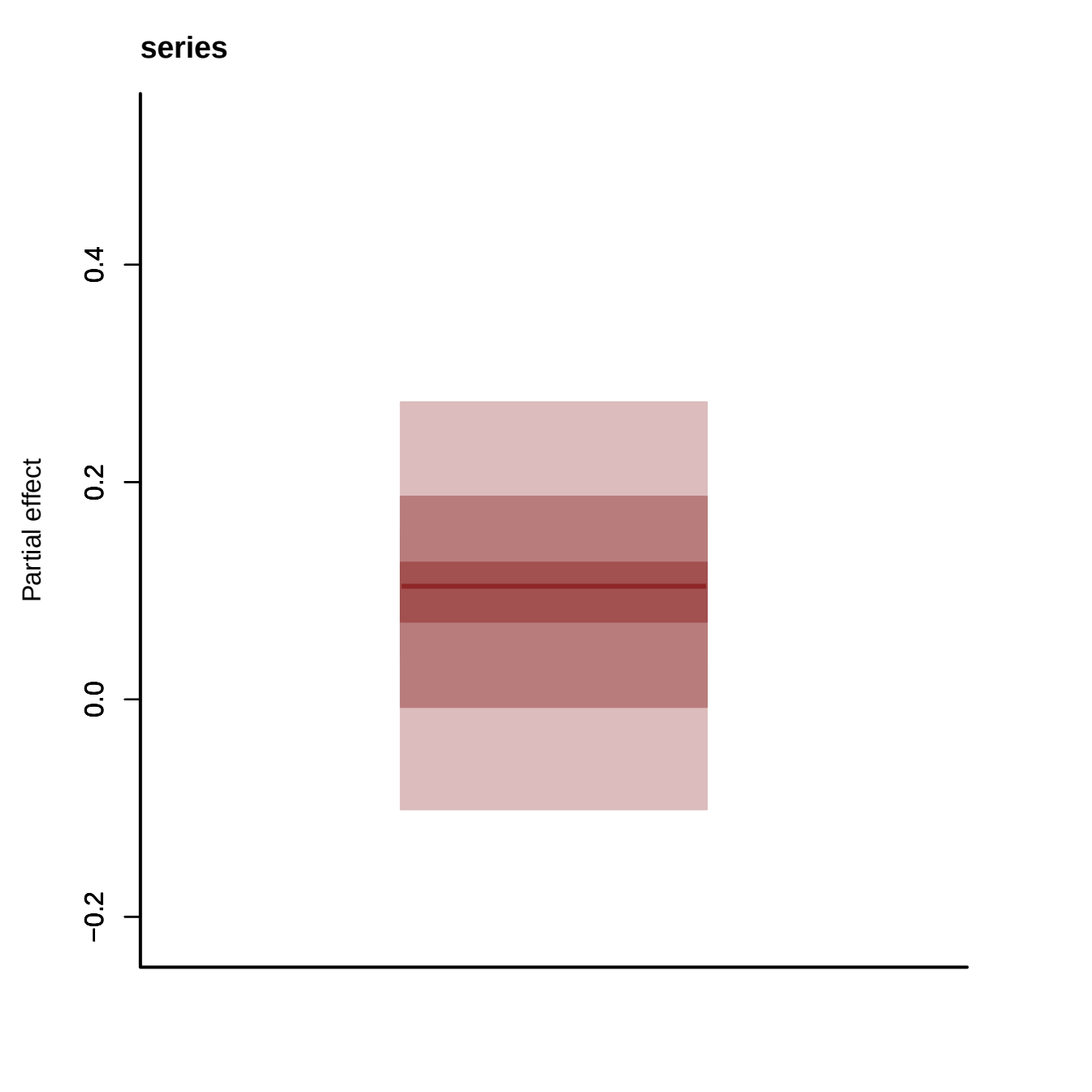

s(x):trendtrend2
Partial effect
3
2
1
0
−1
−2
−2
−1
0
1
2
x

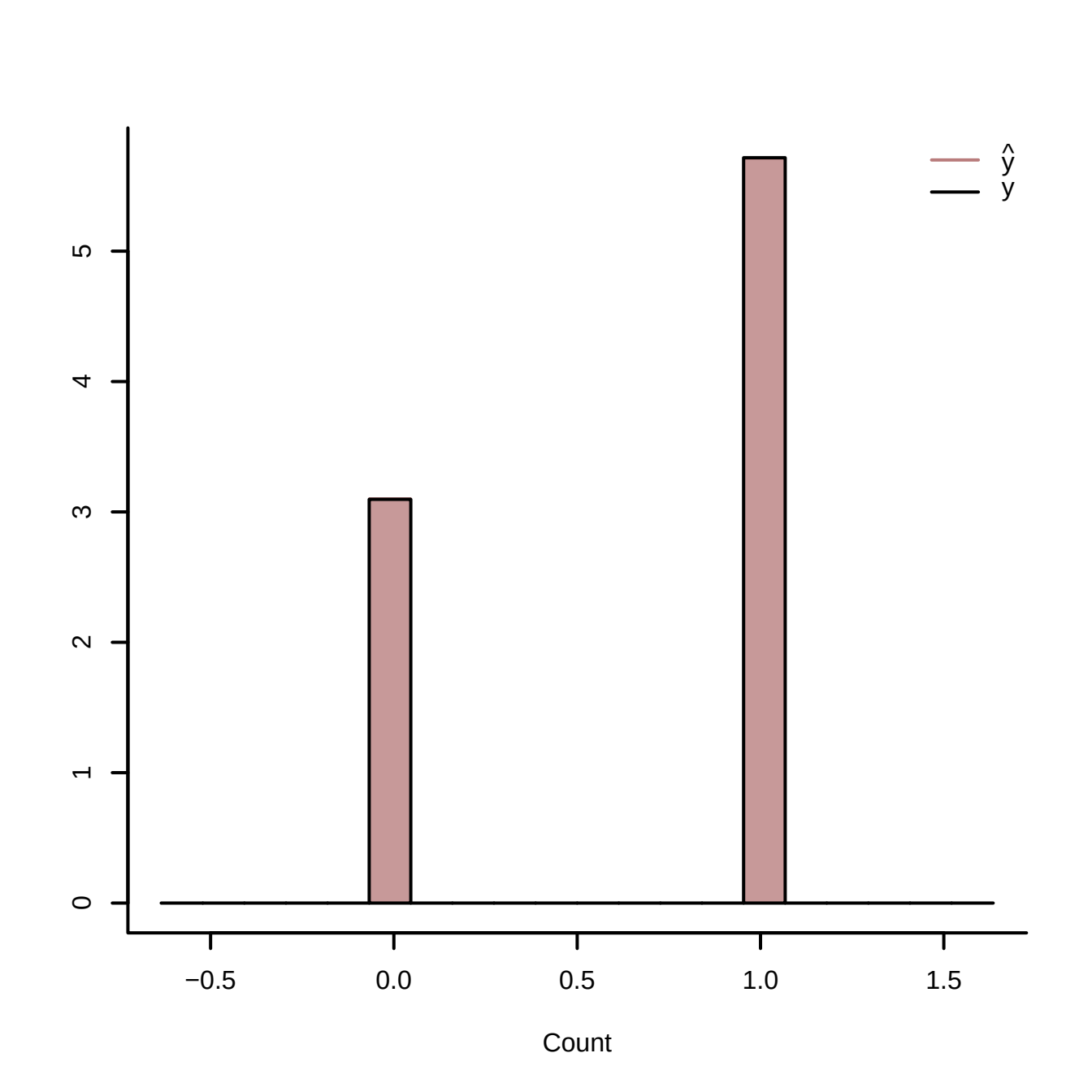

s(x):trendtrend1
Partial effect
3
2
1
0
−1
−2
−3
−4
−2
−1
0
1
2
x

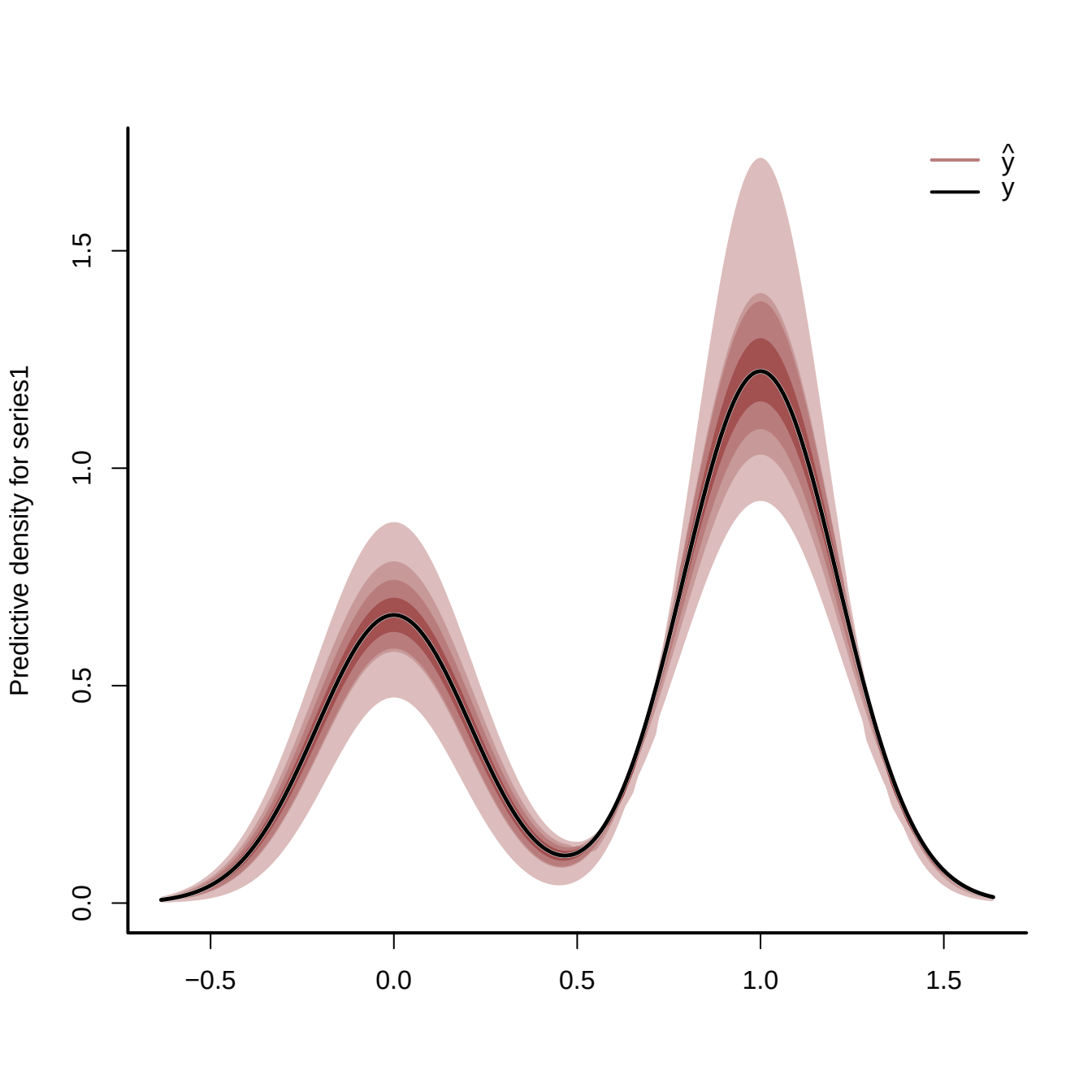

s(x):trendtrend2
Partial effect
3
2
1
0
−1
−2
−2
−1
0
1
2
x

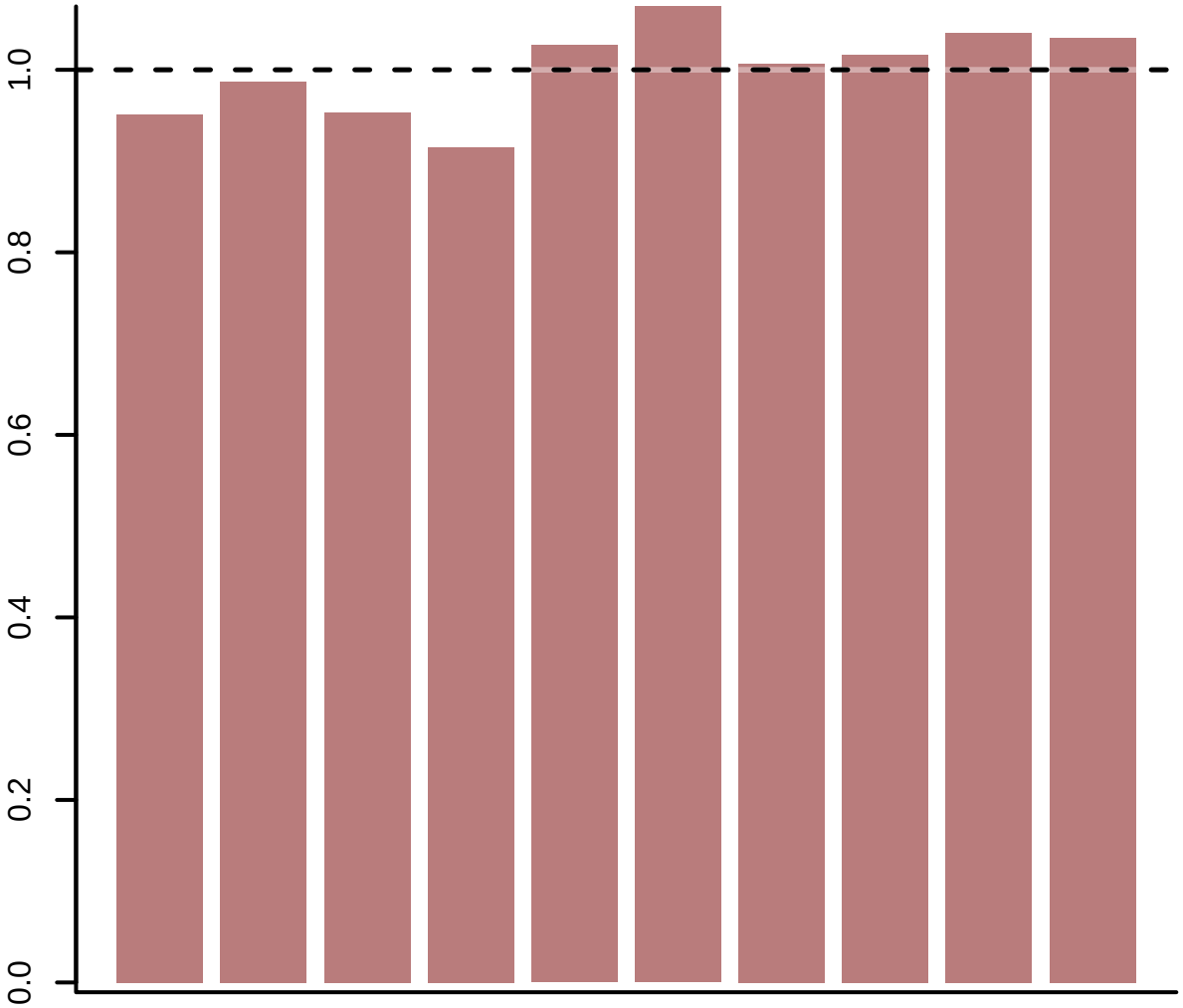

s(x):trendtrend1
Partial effect
3
2
1
0
−1
−2
−3
−4
−2
−1
0
1
2
x

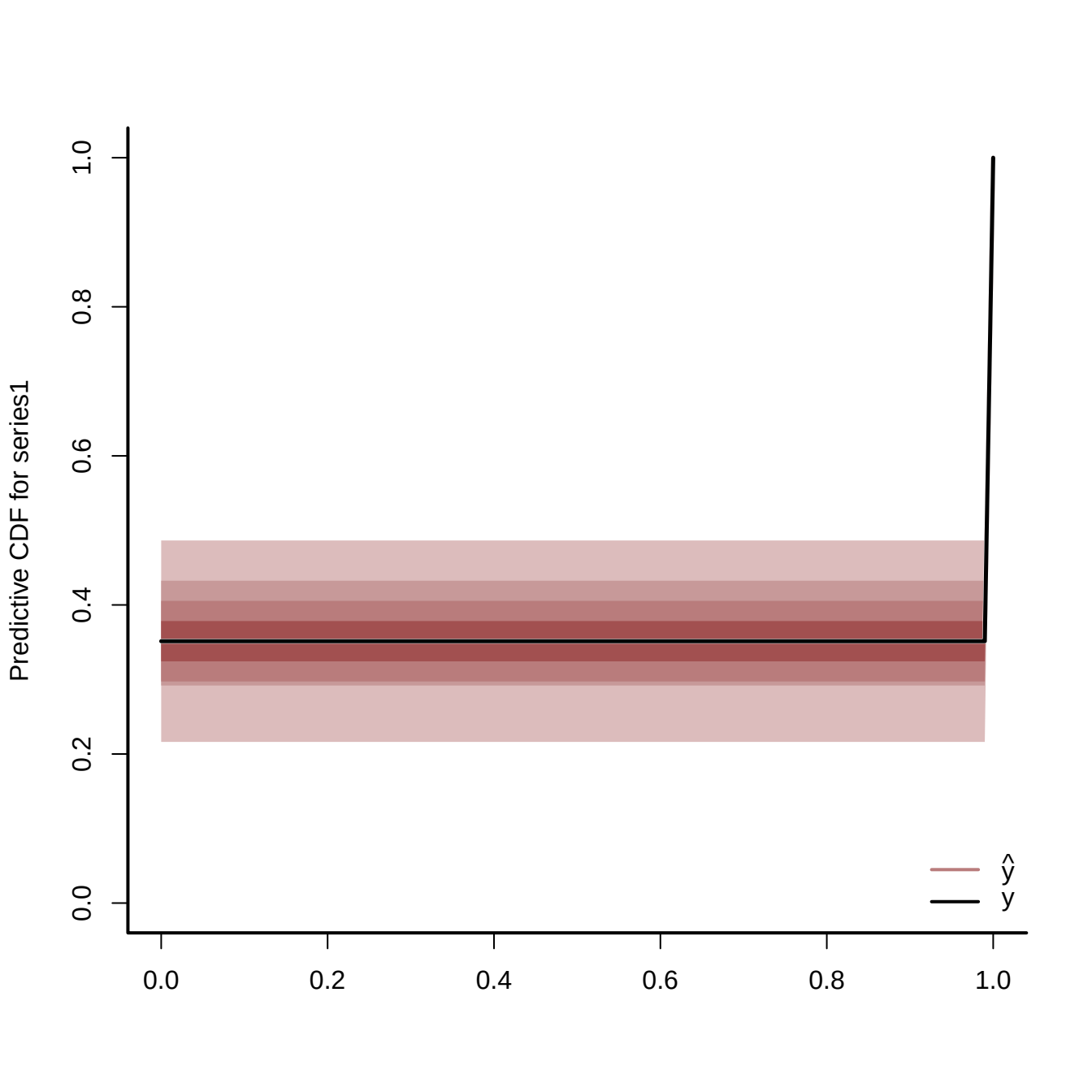

s(x):trendtrend2
Partial effect
3
2
1
0
−1
−2
−2
−1
0
1
2
x

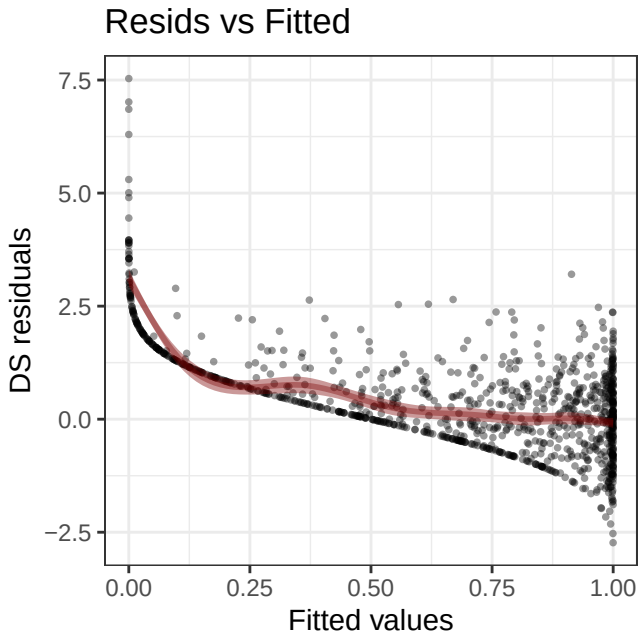

series
Partial effect
0.4
0.2
0.0
−0.2

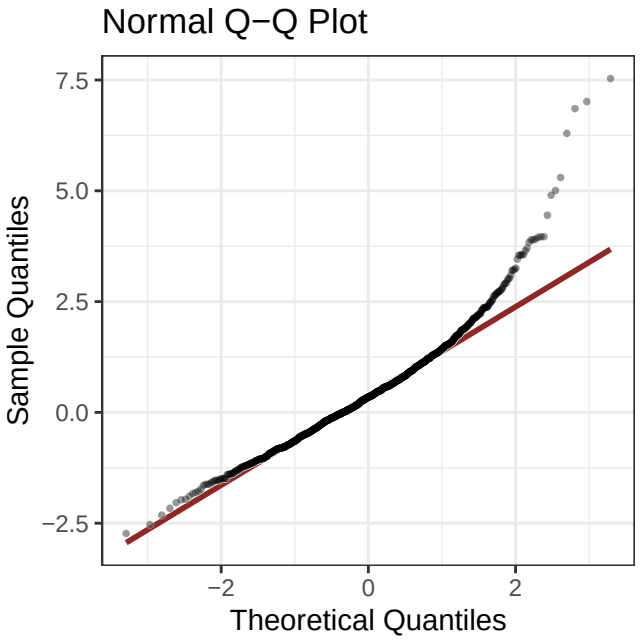

ŷ
y
0
1
2
3
4
5
−0.5
0.0
0.5
1.0
1.5
Count

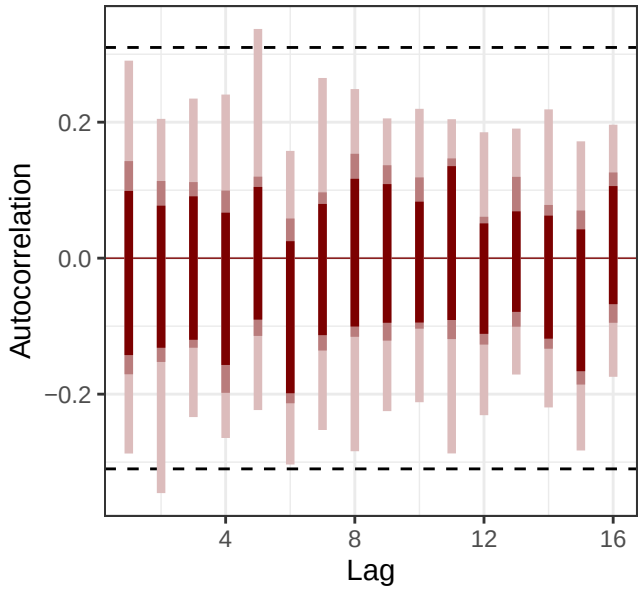

Predictive density for series1
0.0
0.5
1.0
1.5
−0.5
0.0
0.5
1.0
1.5
y^
y

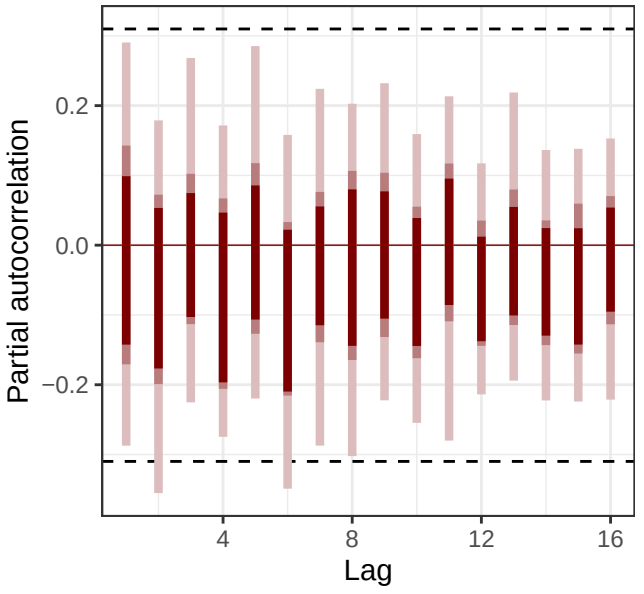

0.0
0.2
0.4
0.6
0.8
1.0
Predictive PIT for series1

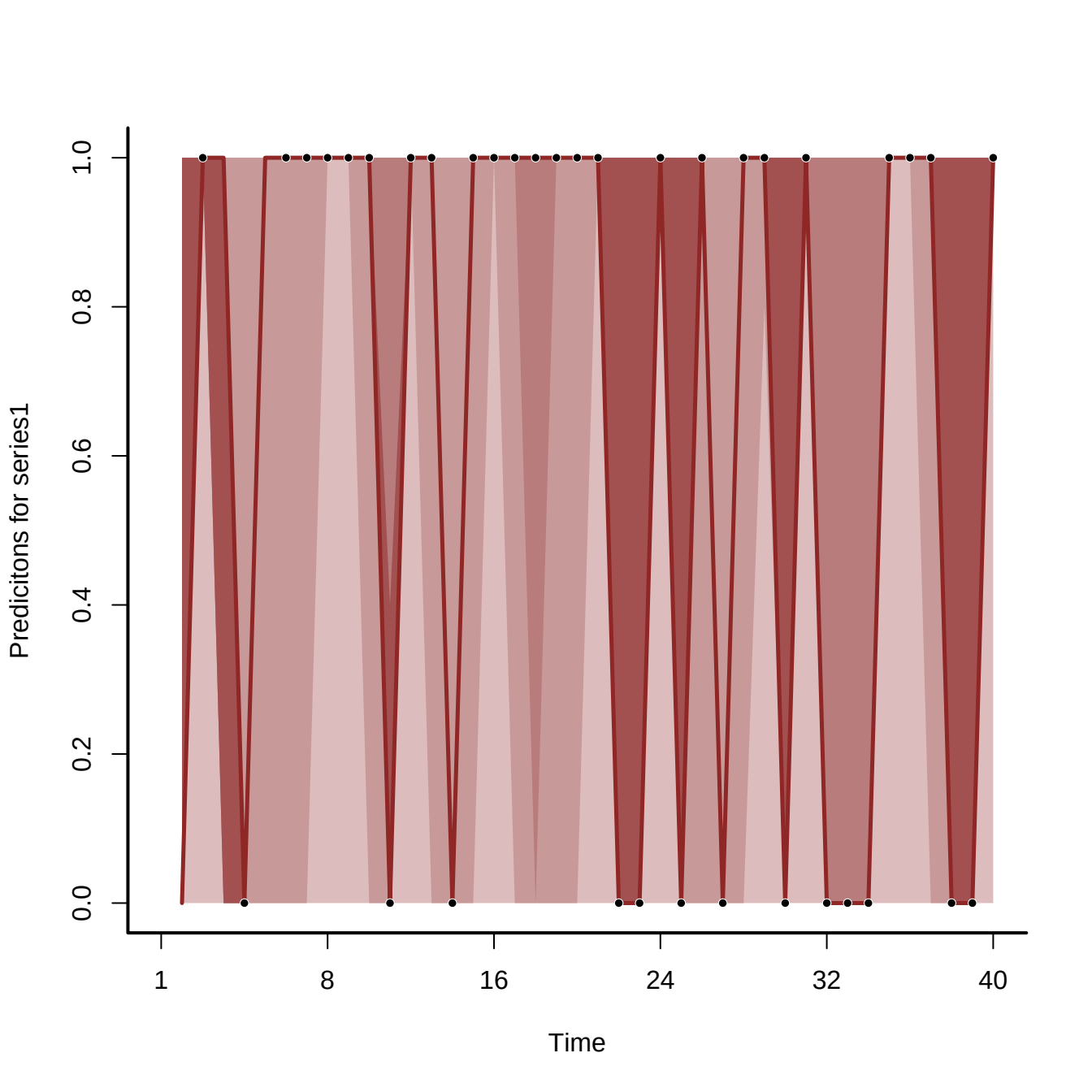

Predictive CDF for series1
0.0
0.2
0.4
0.6
0.8
1.0
ŷ
y

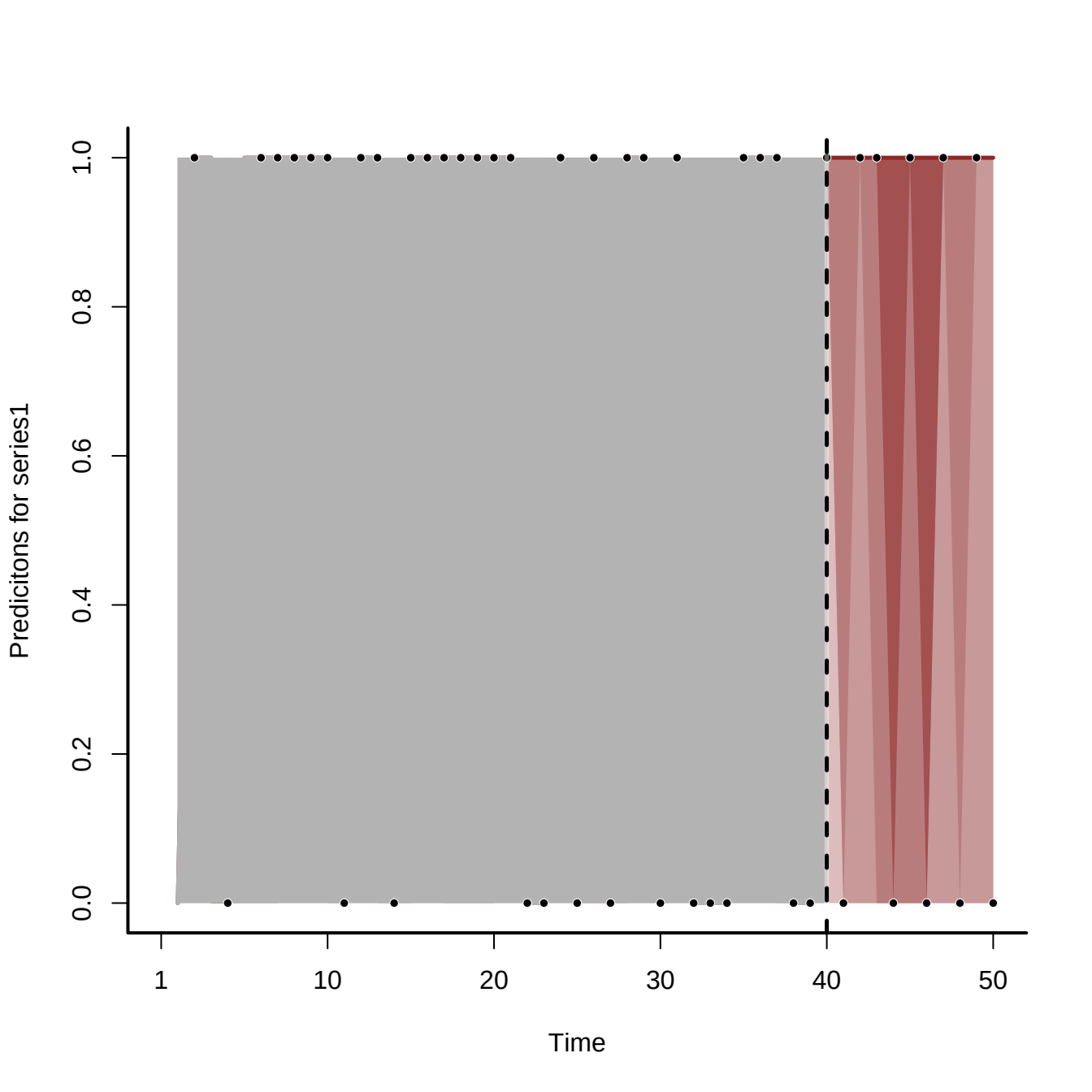

Resids vs Fitted
DS residuals
Fitted values
7.5
5.0
2.5
0.0
−2.5
0.00
0.25
0.50
0.75
1.00

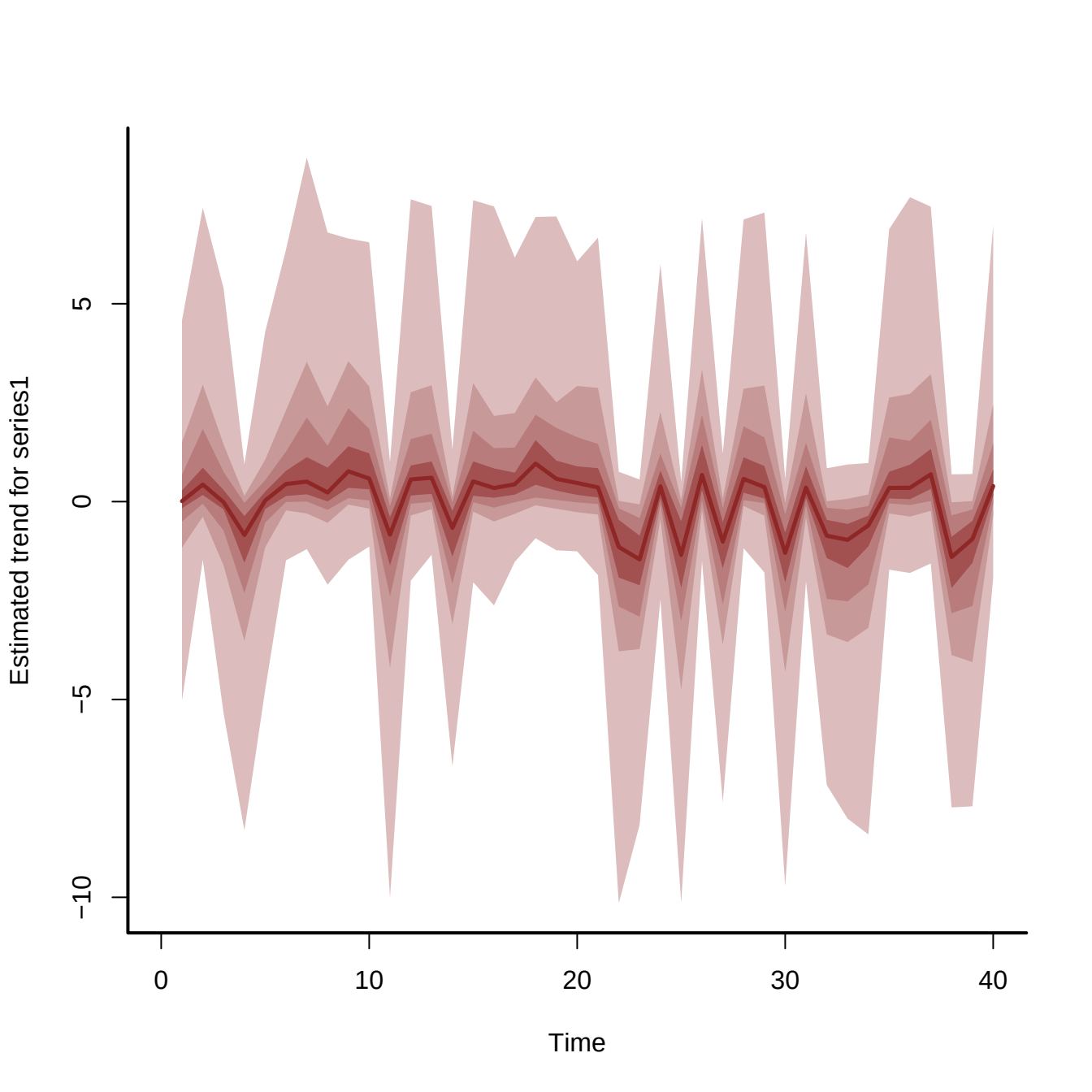

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
7.5
5.0
2.5
0.0
−2.5
−2
0
2

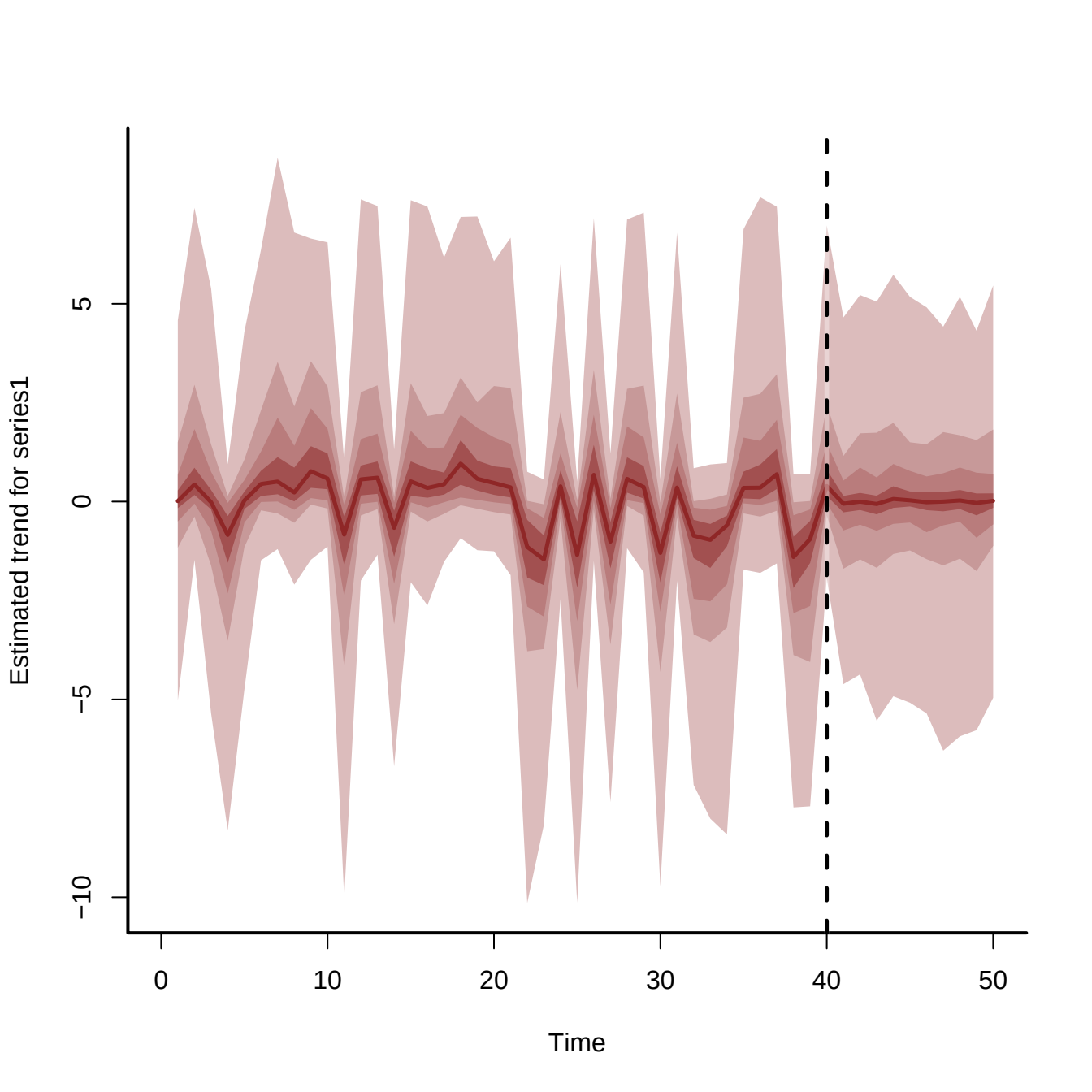

ACF
Autocorrelation
Lag
0.2
0.0
−0.2
4
8
12
16

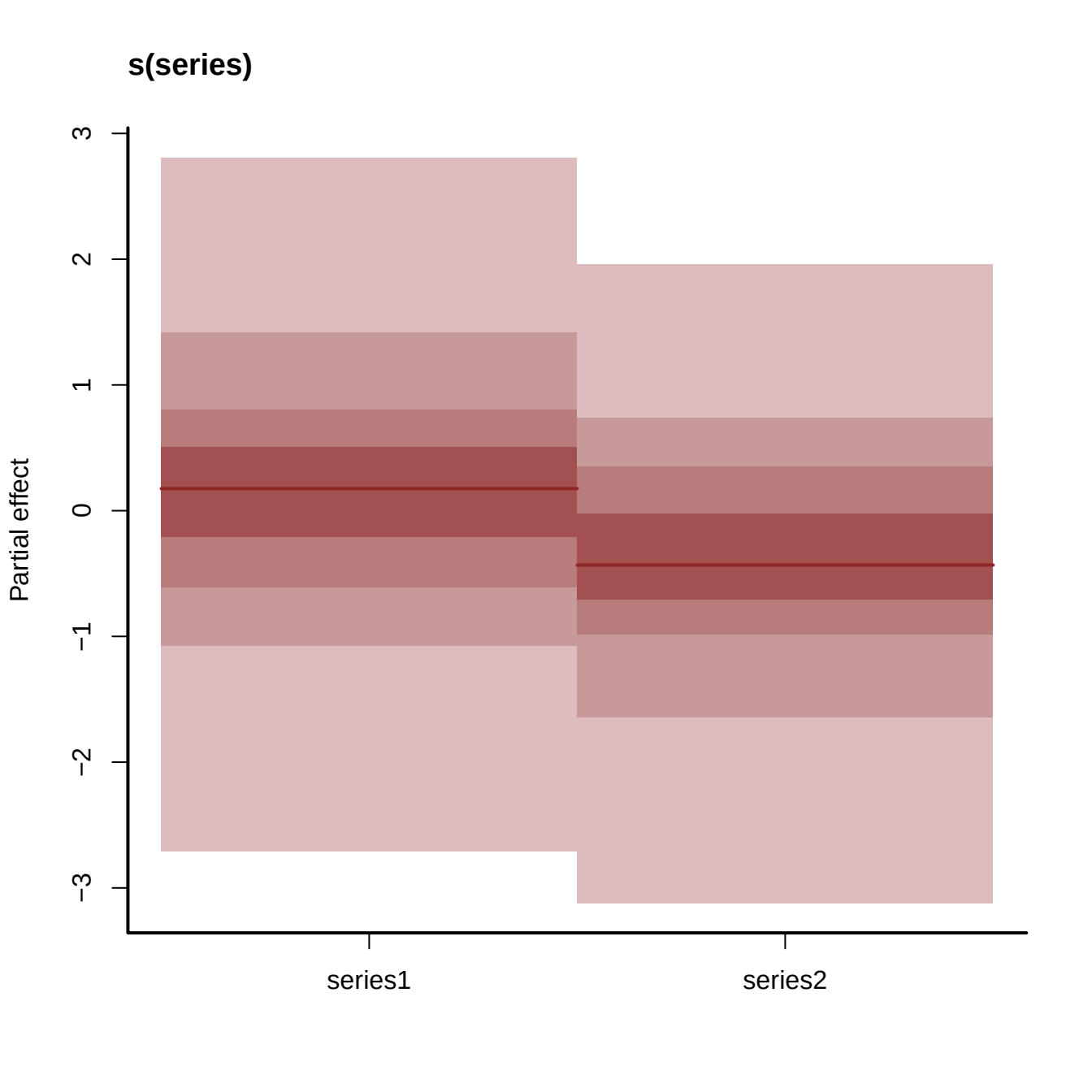

pACF
Partial autocorrelation
Lag
0.2
0.0
−0.2
4
8
12
16

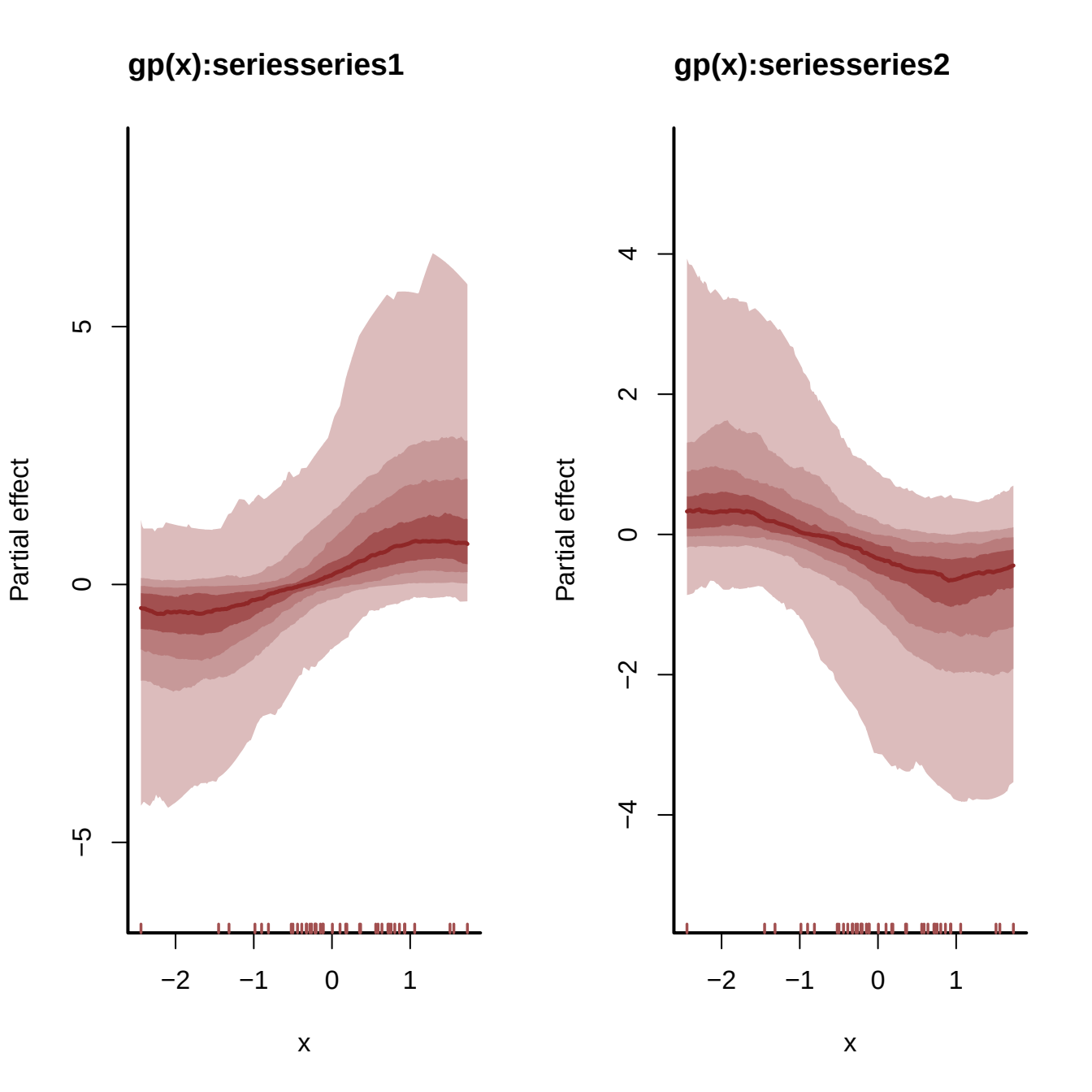

Predicitons for series1
0.0
0.2
0.4
0.6
0.8
1.0
1
8
16
24
32
40
Time

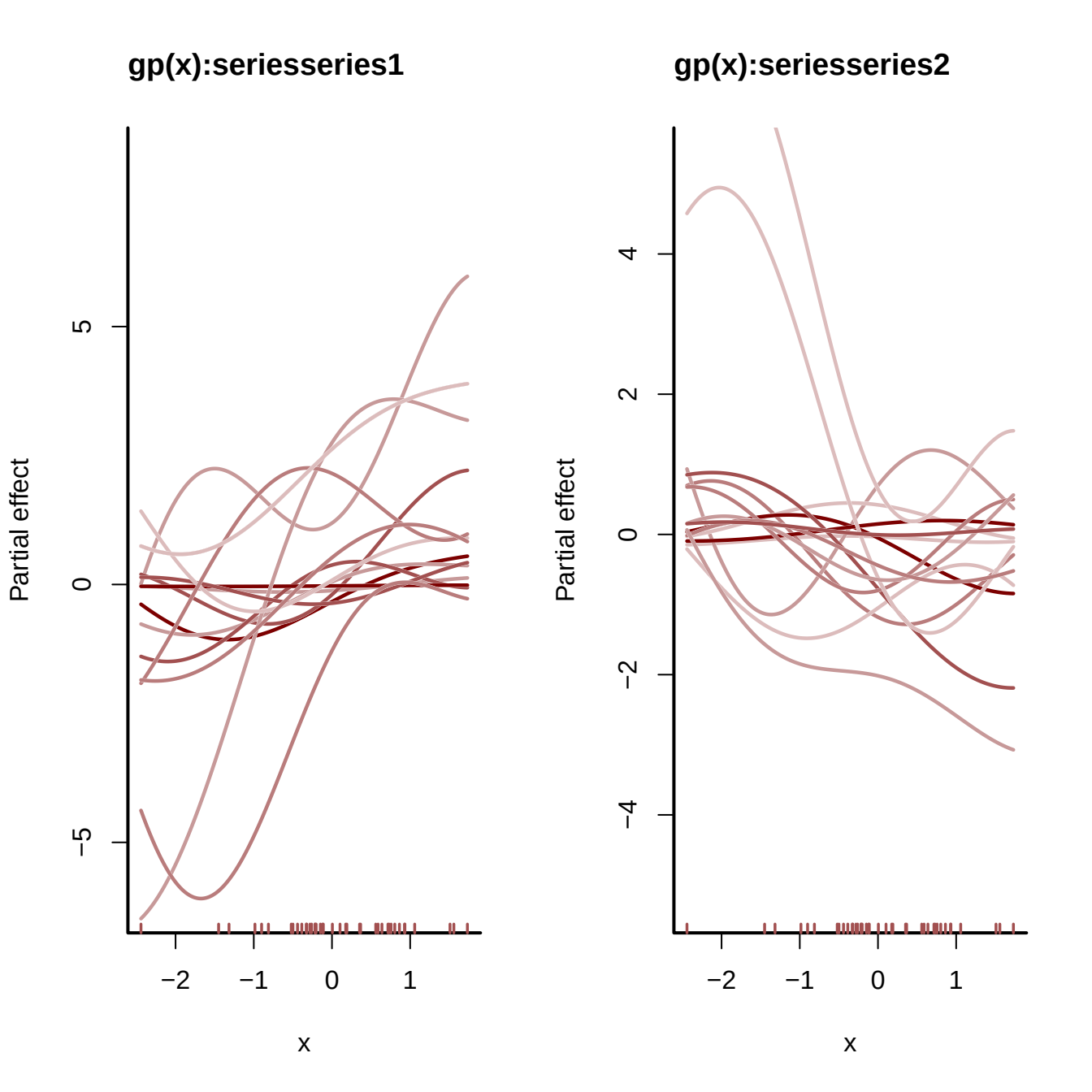

Predicitons for series1
0.0
0.2
0.4
0.6
0.8
1.0
1
10
20
30
40
50
Time

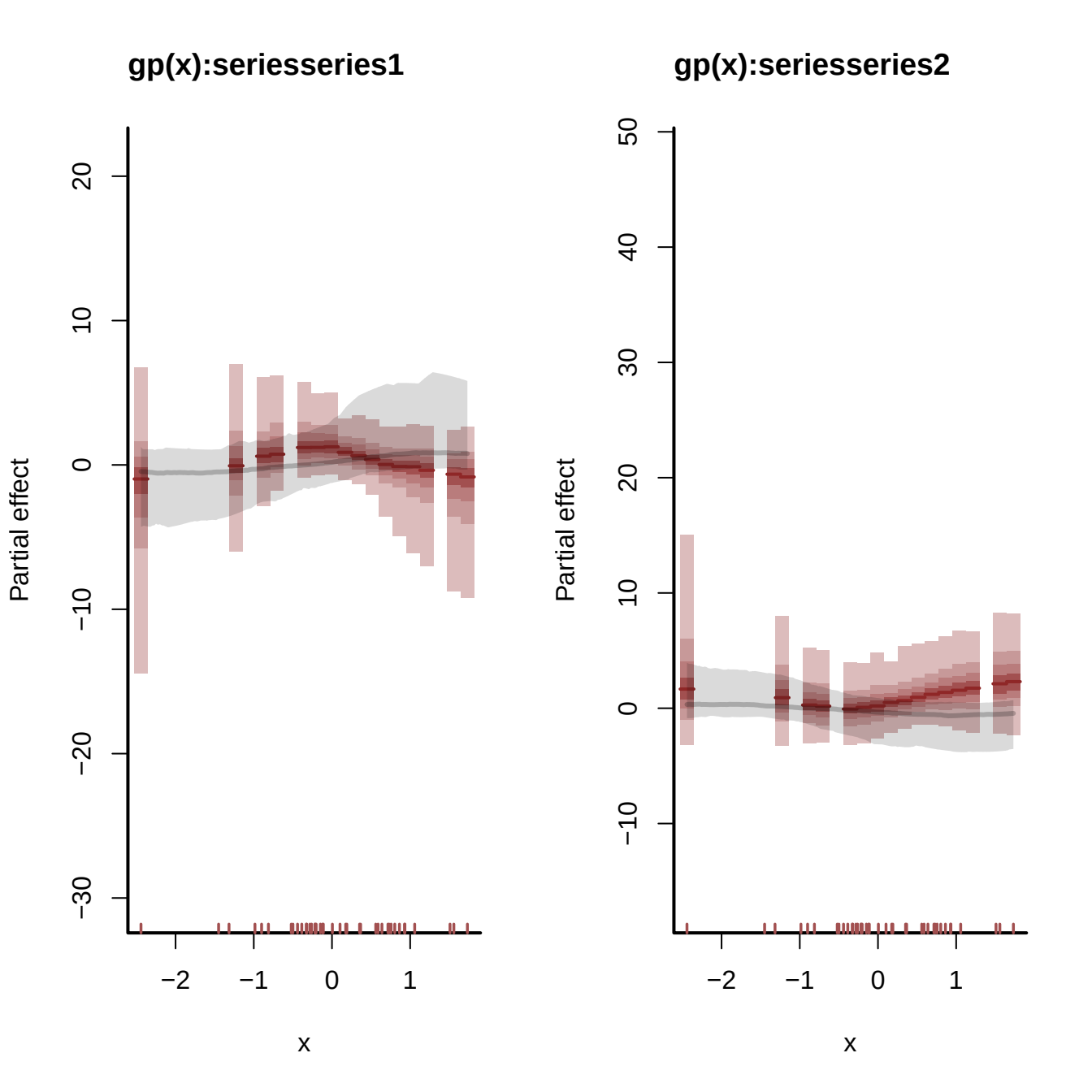

Estimated trend for series1
5
0
−5
−10
0
10
20
30
40
Time

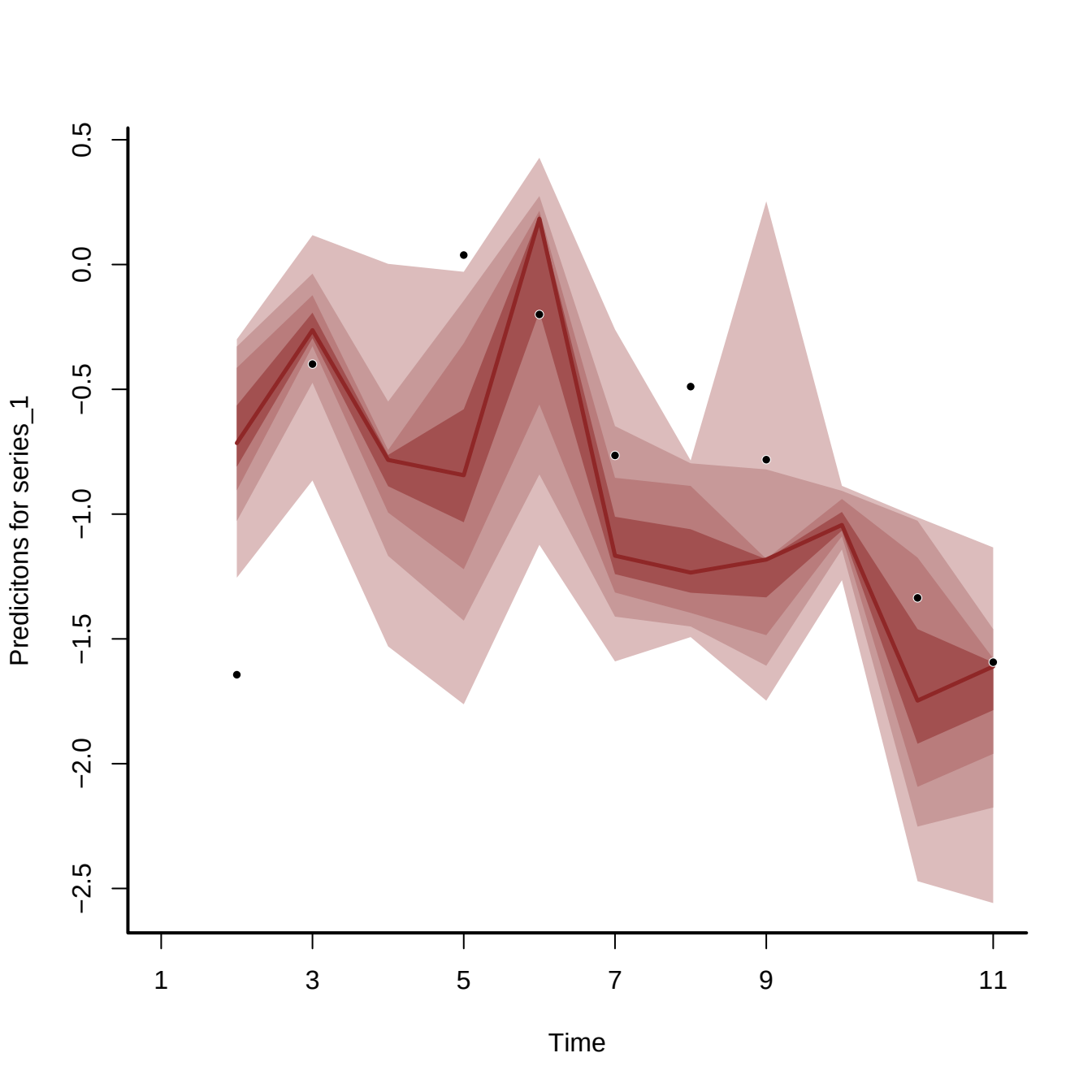

Estimated trend for series1
5
0
−5
−10
0
10
20
30
40
50
Time

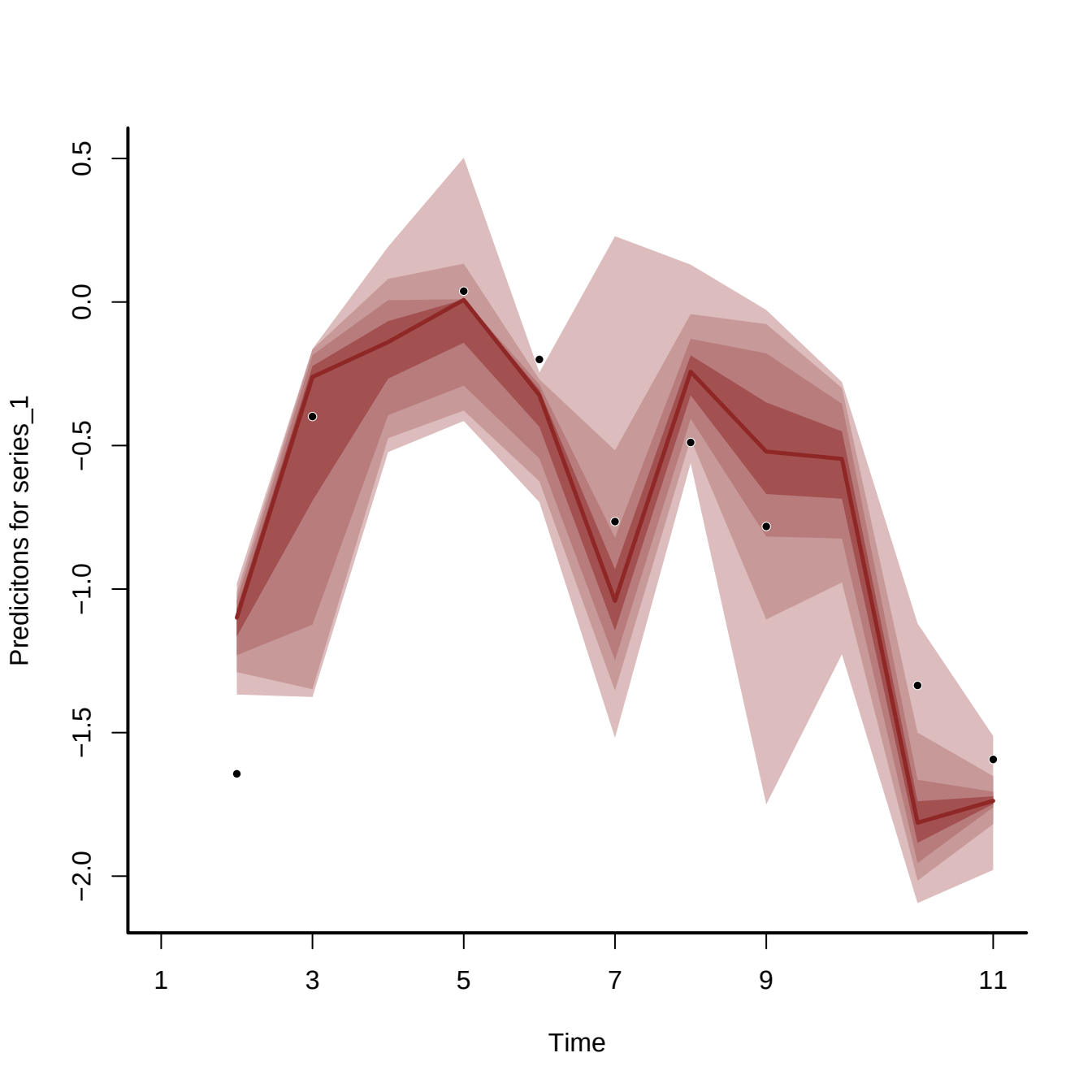

s(series)
Partial effect
3
2
1
0
−1
−2
−3
series1
series2

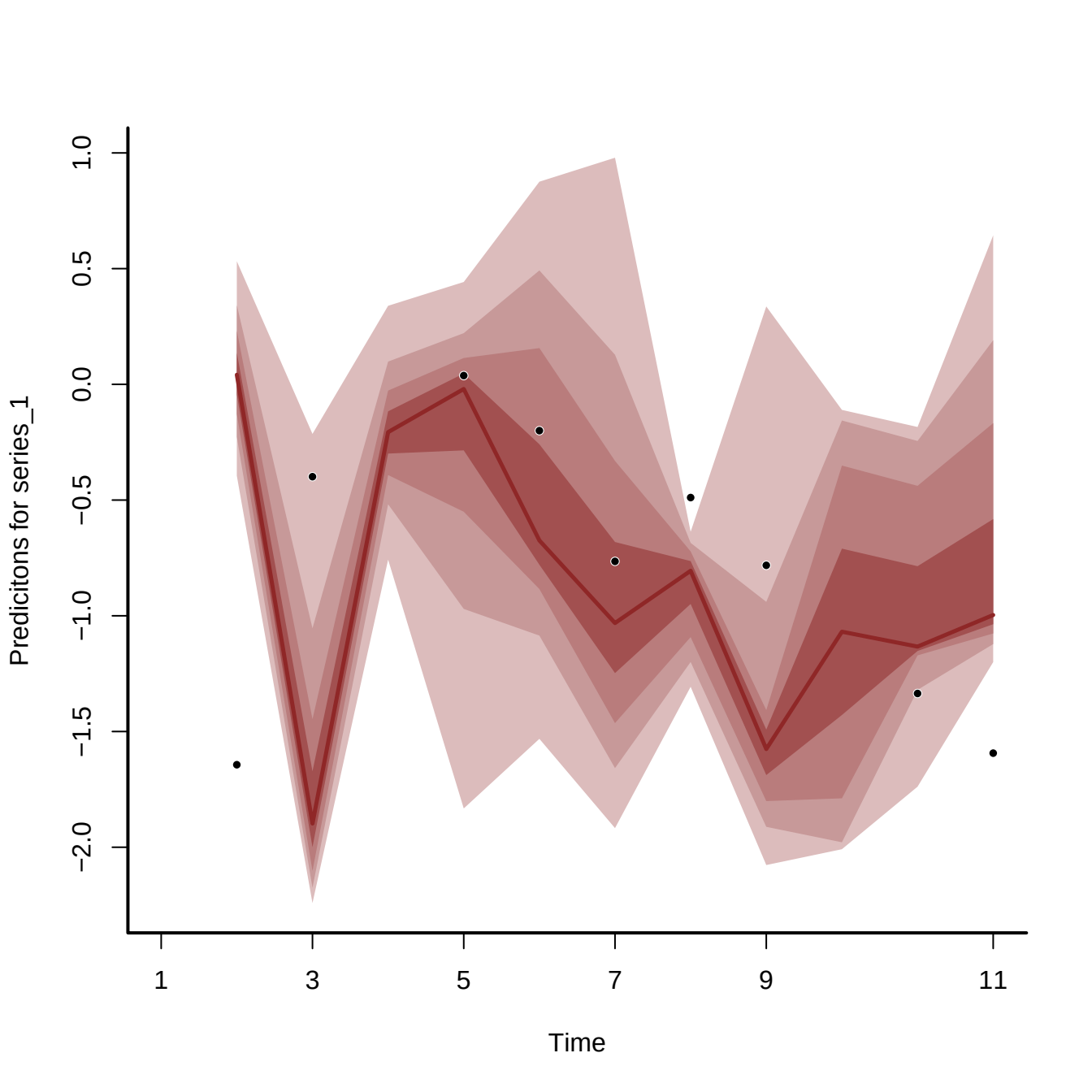

gp(x):seriesseries1
Partial effect
5
0
−5
−2
−1
0
1
x
gp(x):seriesseries2
Partial effect
4
2
0
−2
−4
−2
−1
0
1
x

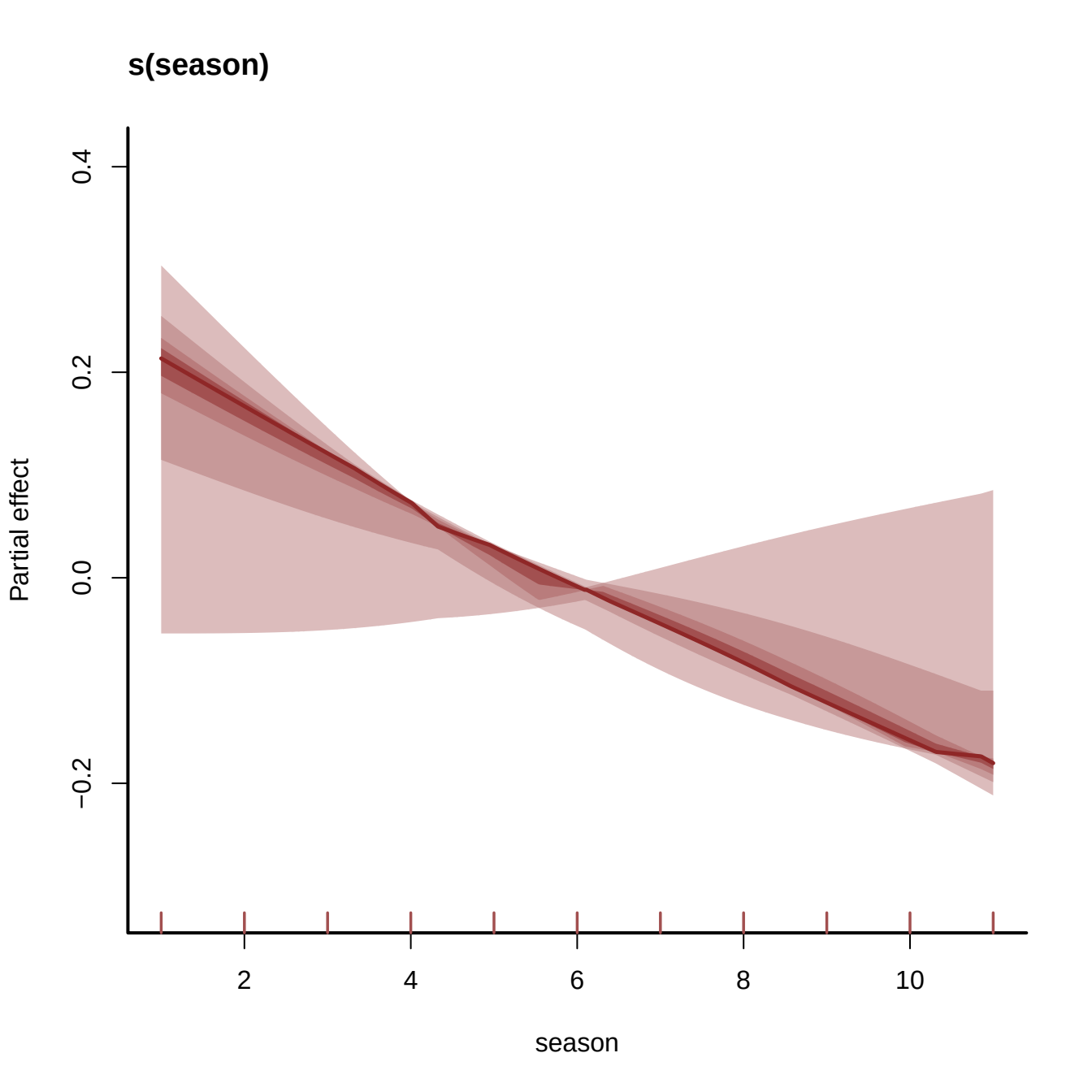

gp(x):seriesseries1
gp(x):seriesseries2
Partial effect
Partial effect
5
0
−5
4
2
0
−2
−4
−2
−1
0
1
−2
−1
0
1
x
x

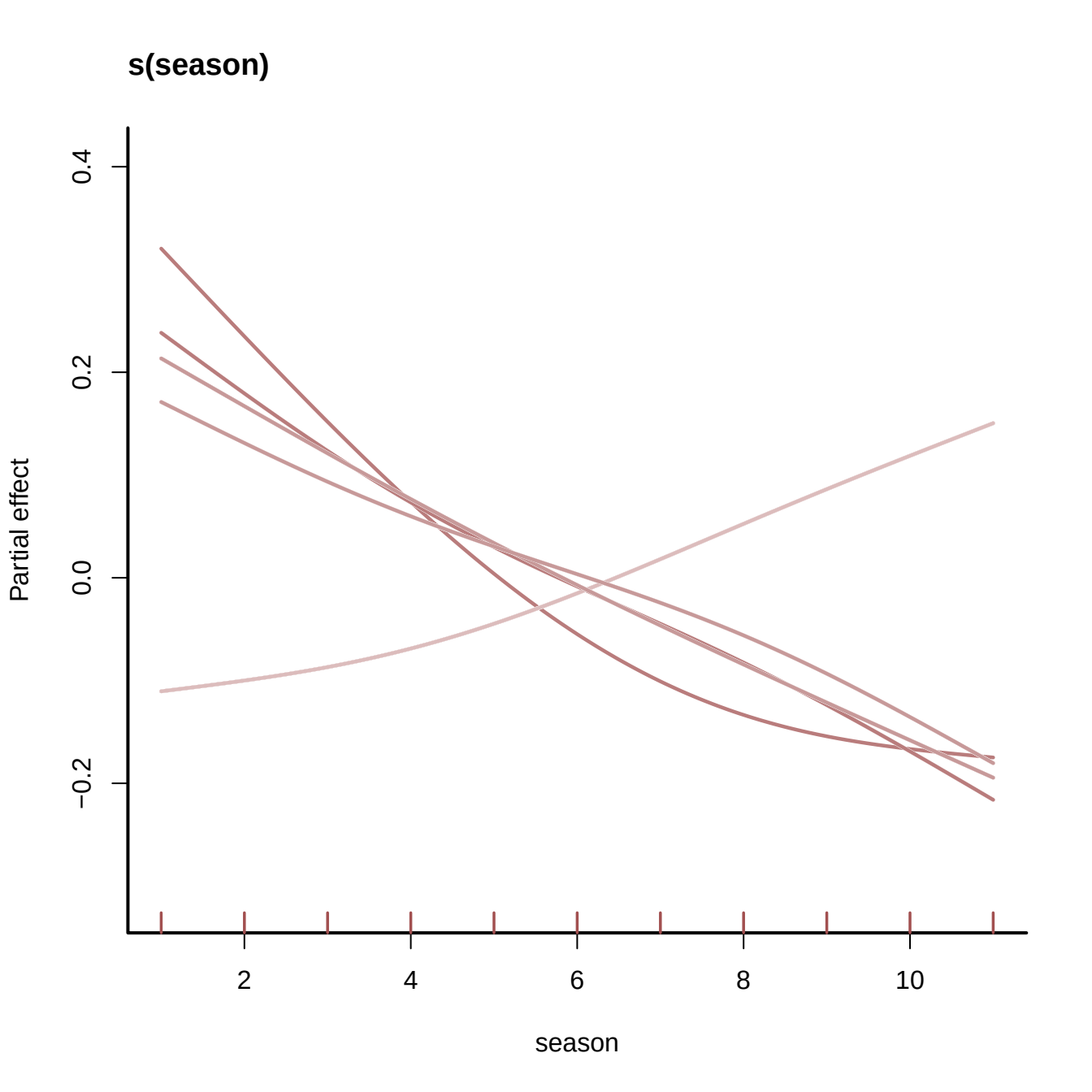

gp(x):seriesseries1
Partial effect
20
10
0
−10
−20
−30
−2
−1
0
1
x
gp(x):seriesseries2
Partial effect
50
40
30
20
10
0
−10
−2
−1
0
1
x

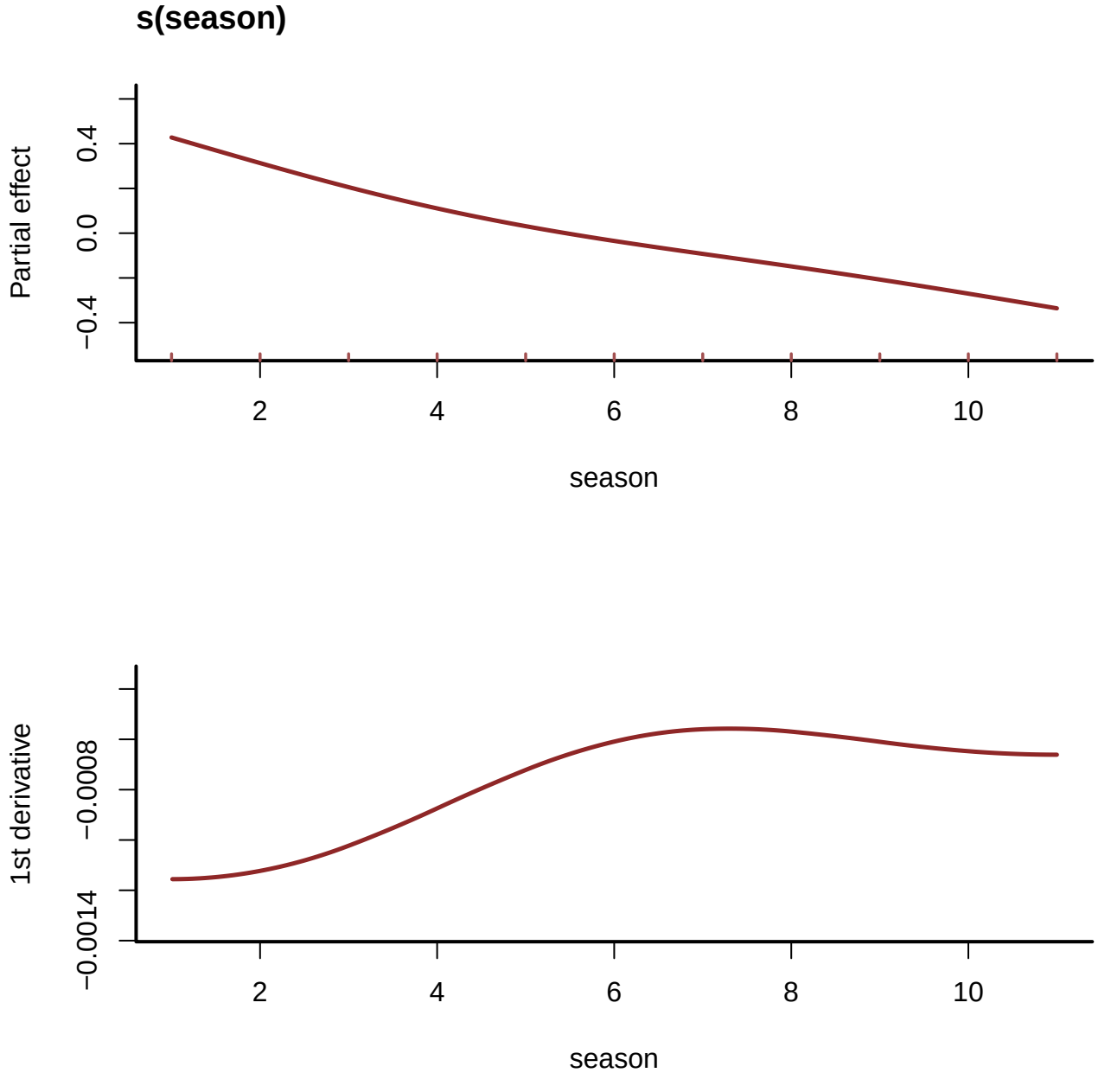

Predicitons for series_1
0.5
0.0
−0.5
−1.0
−1.5
−2.0
−2.5
1
3
5
7
9
11
Time

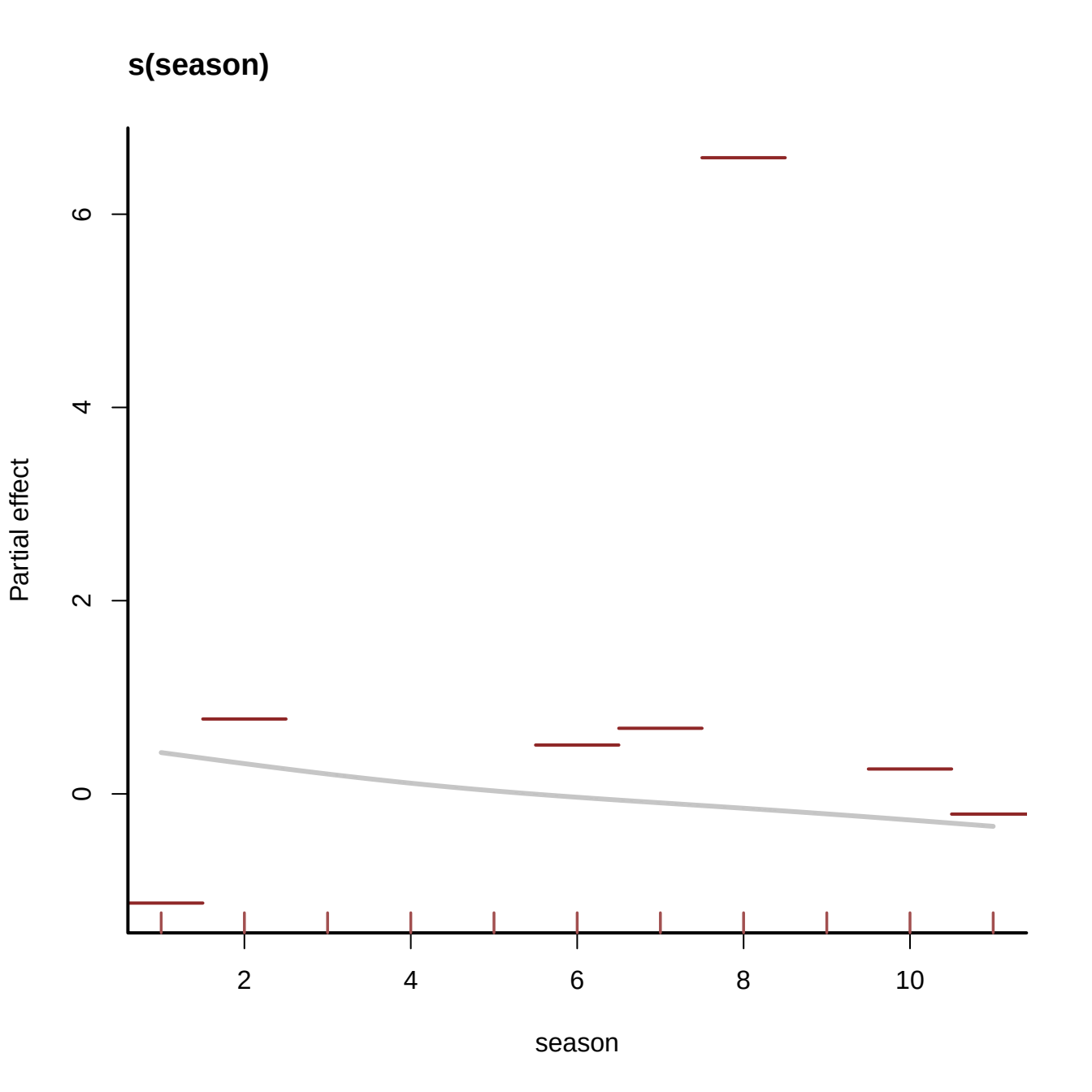

Predicitons for series_1
0.5
0.0
−0.5
−1.0
−1.5
−2.0
1
3
5
7
9
11
Time

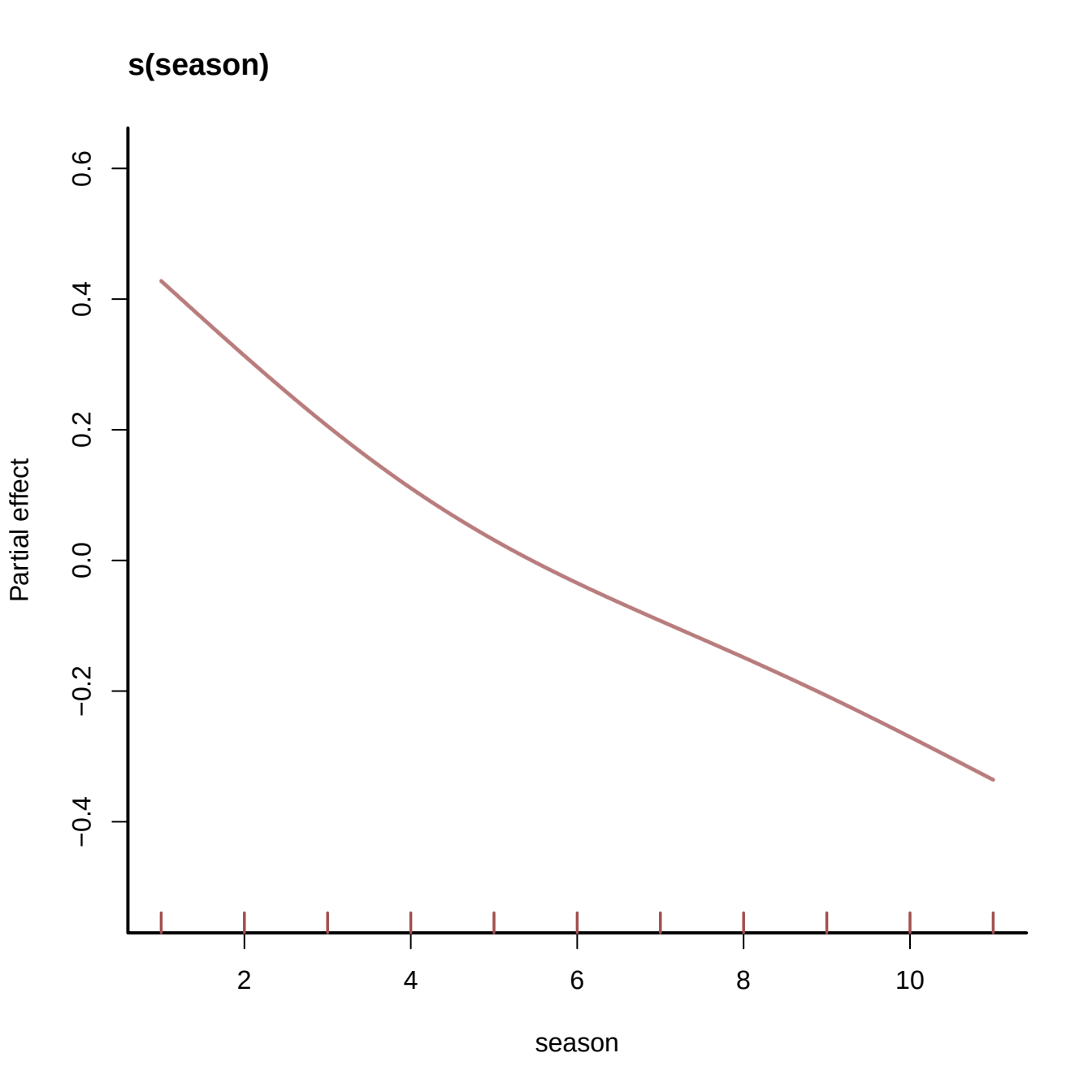

Predicitons for series_1
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
1
3
5
7
9
11
Time

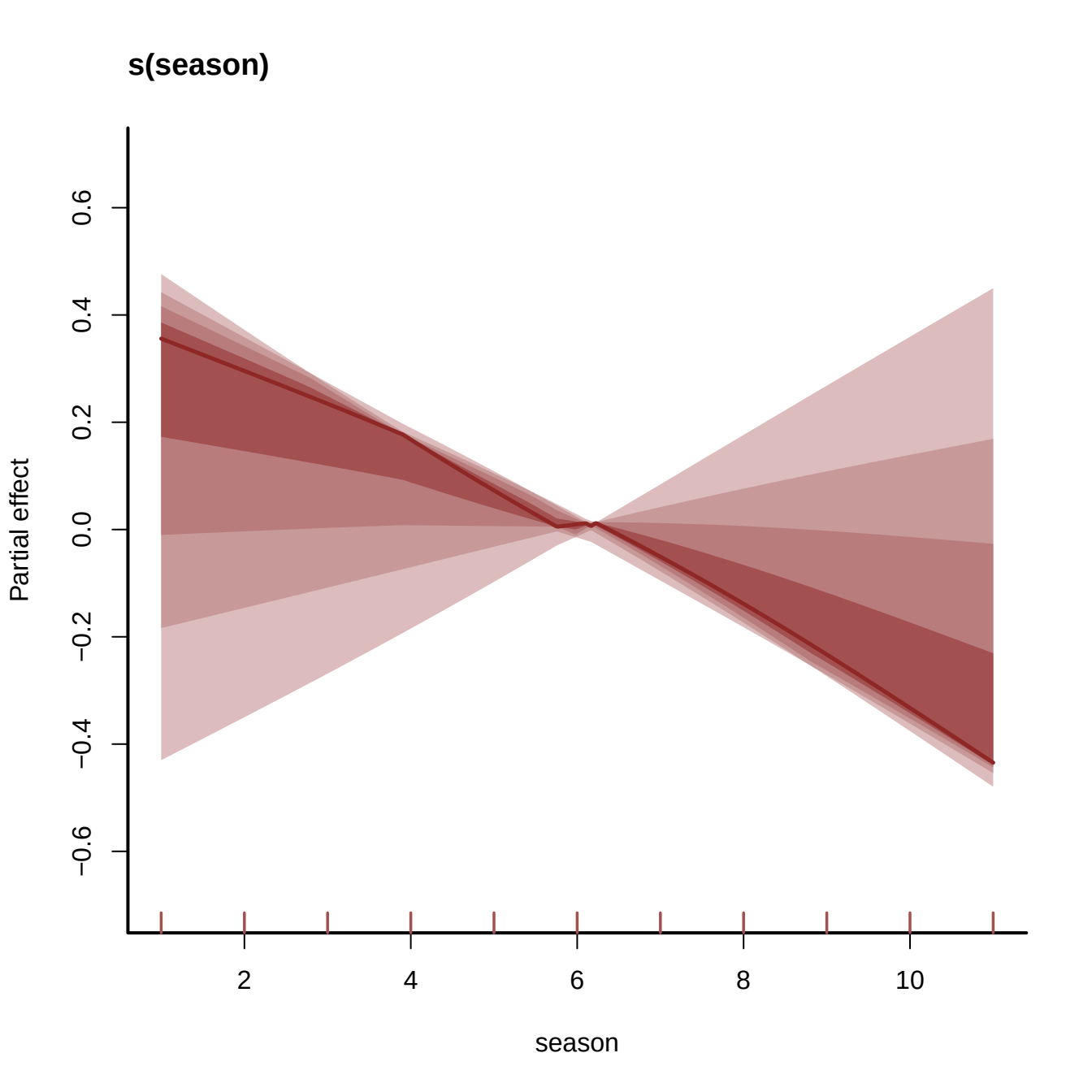

s(season)
Partial effect
0.4
0.2
0.0
−0.2
2
4
6
8
10
season

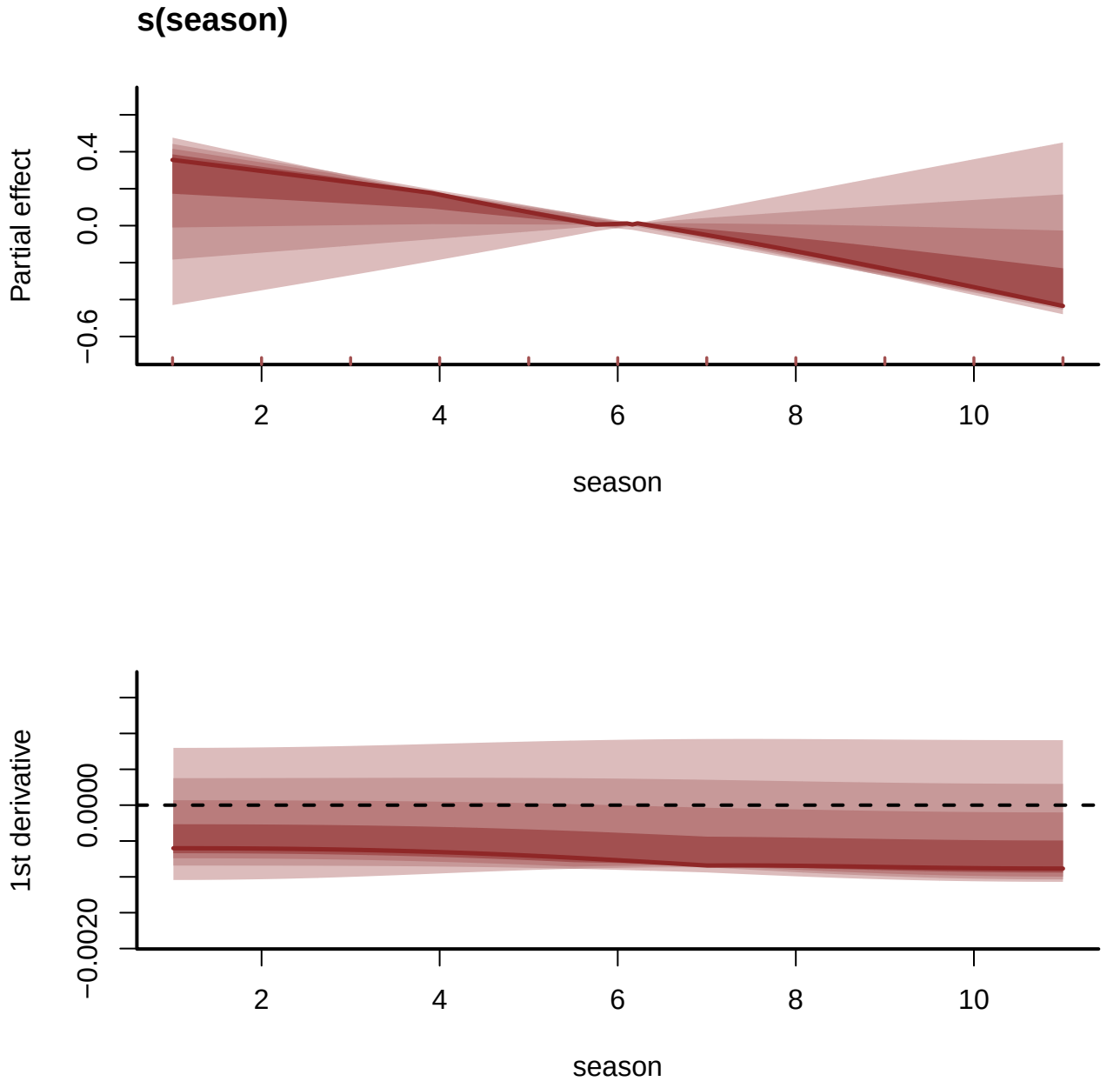

s(season)
Partial effect
0.4
0.2
0.0
−0.2
2
4
6
8
10
season

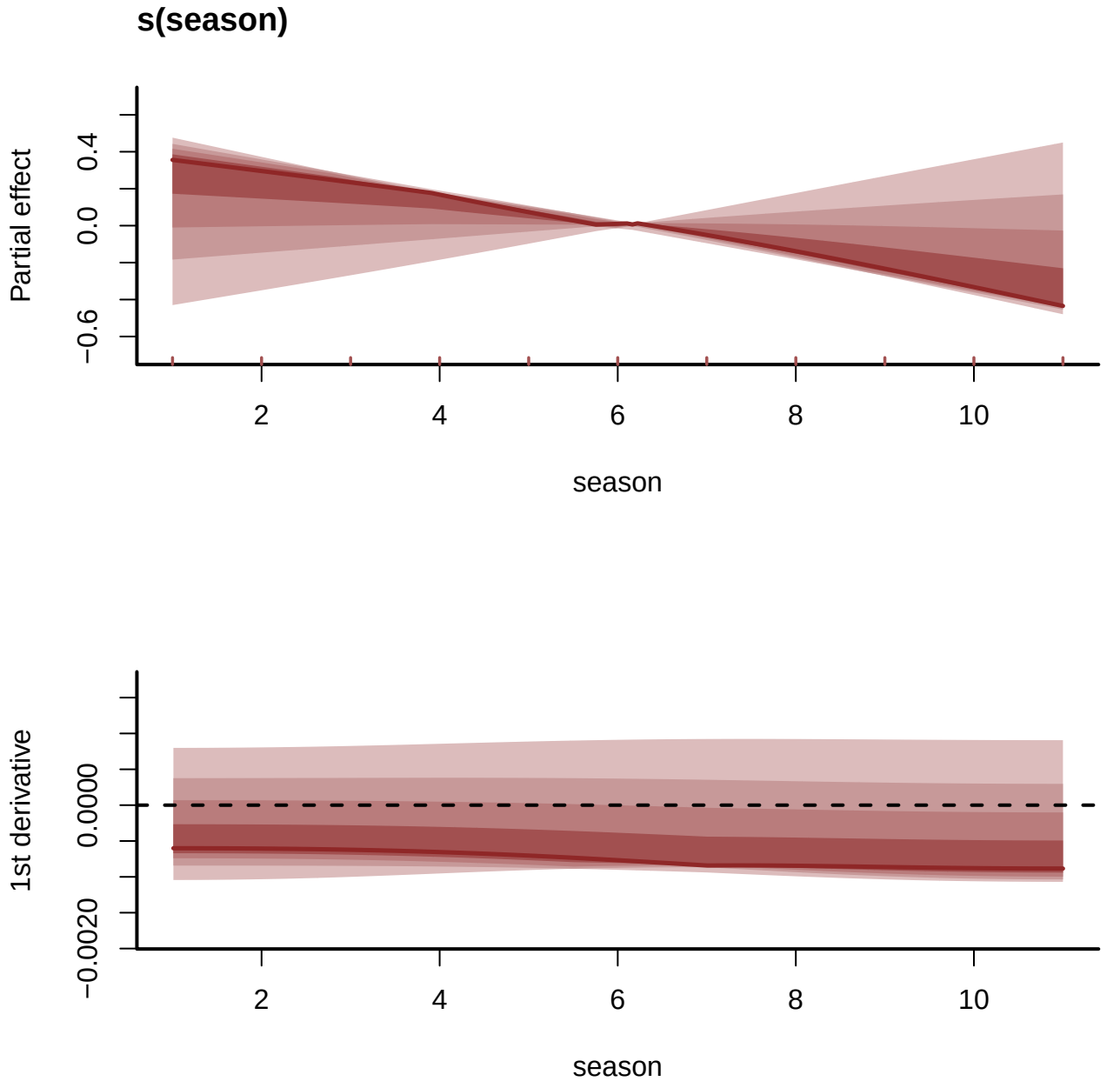

s(season)
Partial effect
0.4
0.0
−0.4
2
4
6
8
10
season
1st derivative
−0.0008
−0.0014
2
4
6
8
10
season

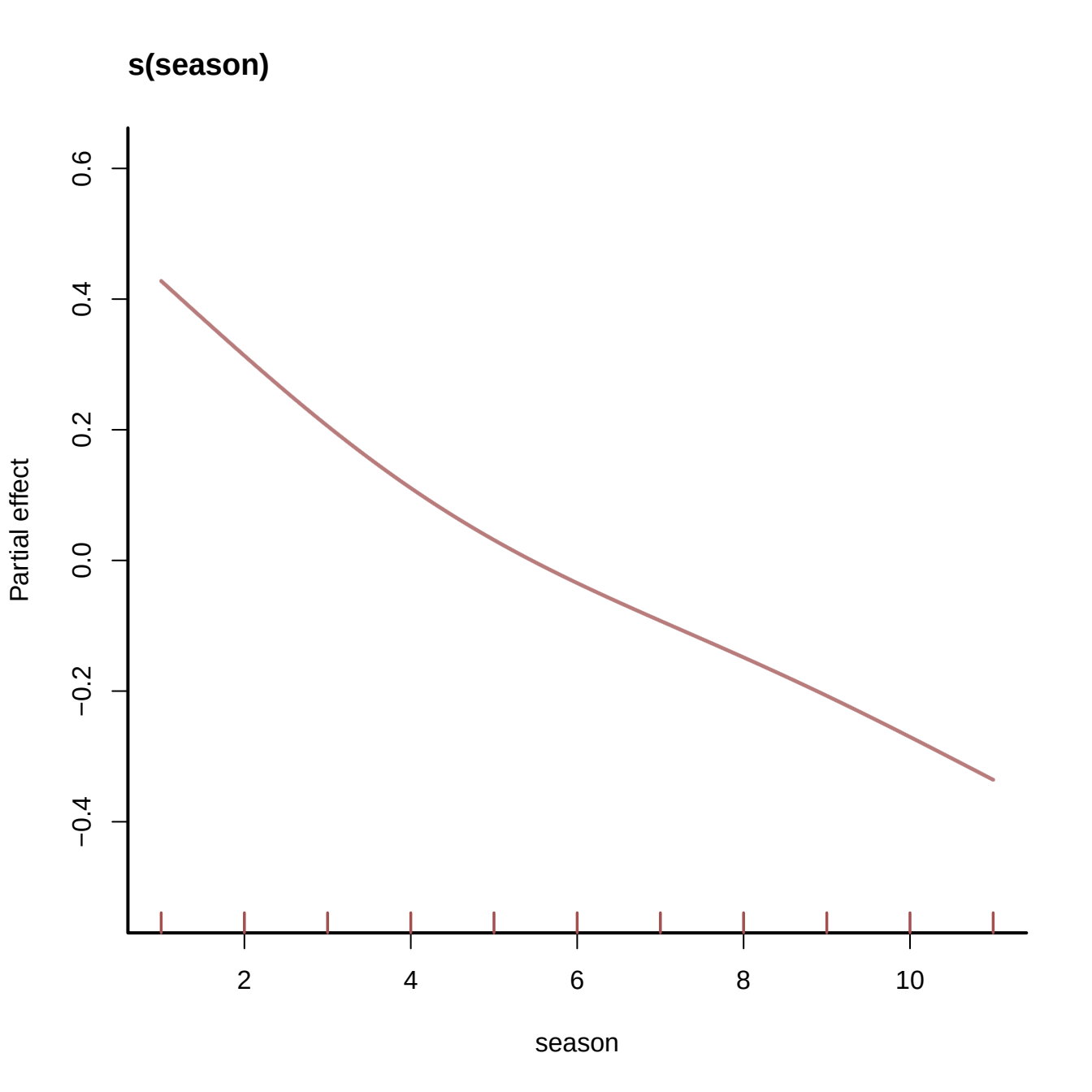

s(season)
Partial effect
0
2
4
6
2
4
6
8
10
season

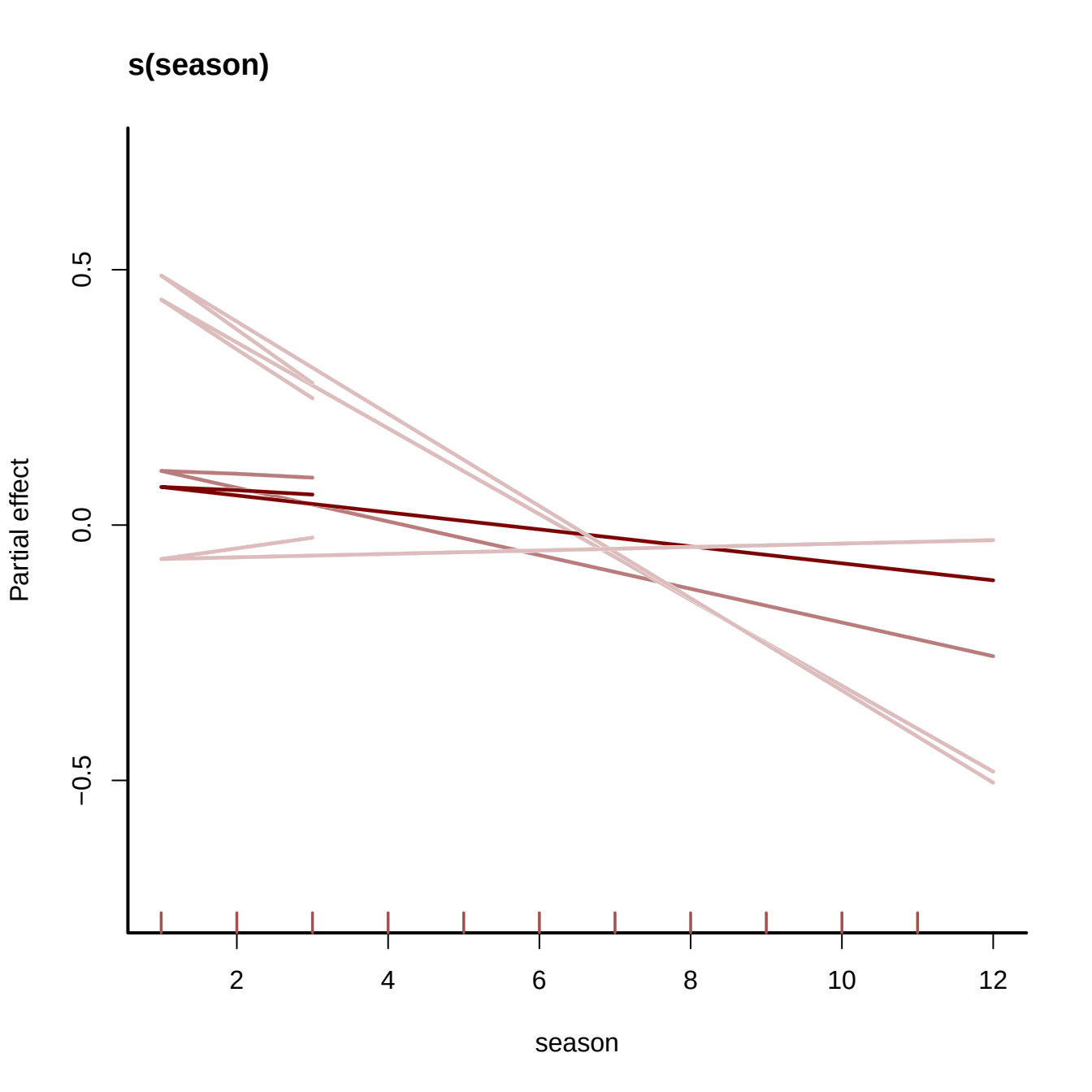

s(season)
Partial effect
0.6
0.4
0.2
0.0
−0.2
−0.4
2
4
6
8
10
season

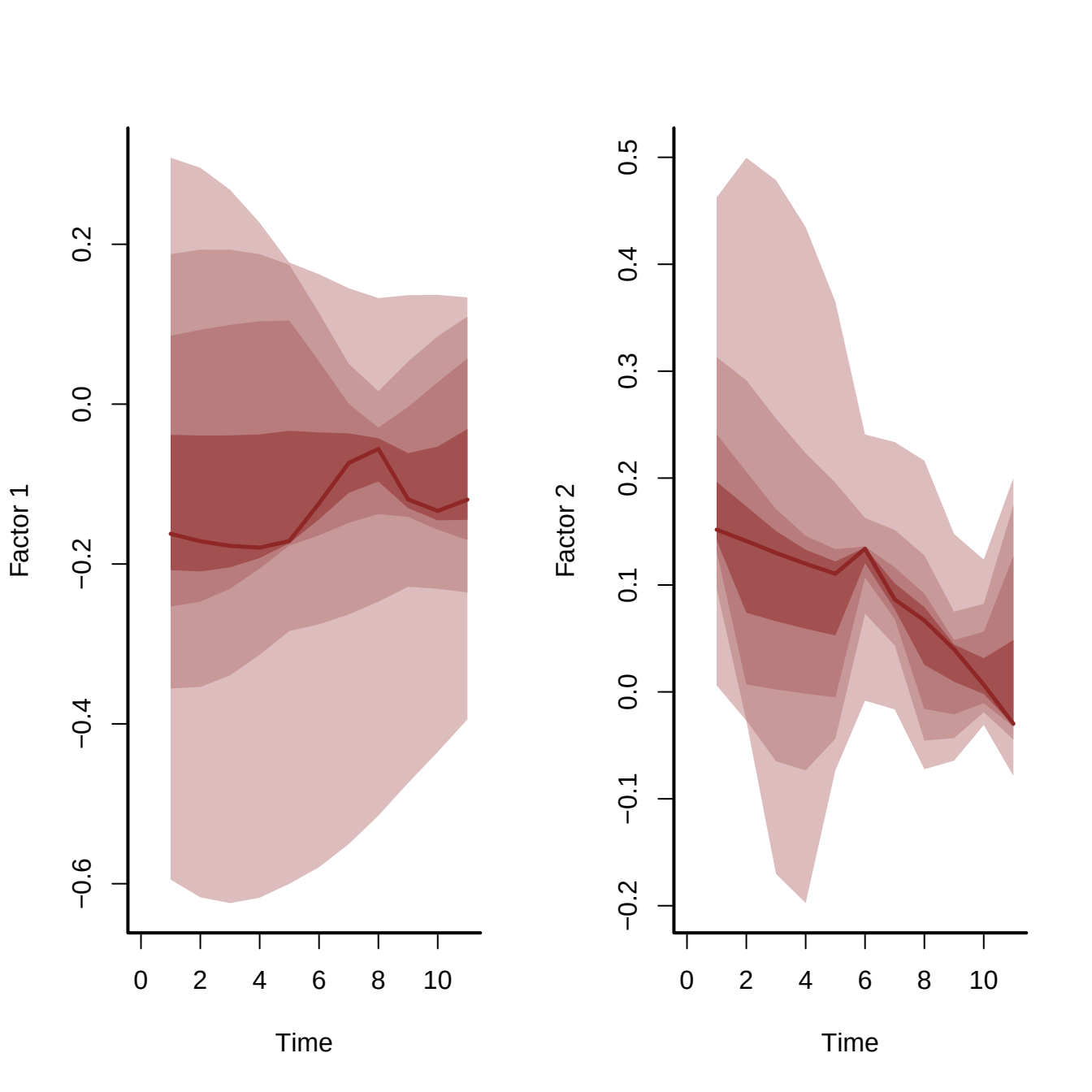

s(season)
Partial effect
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6
2
4
6
8
10
season

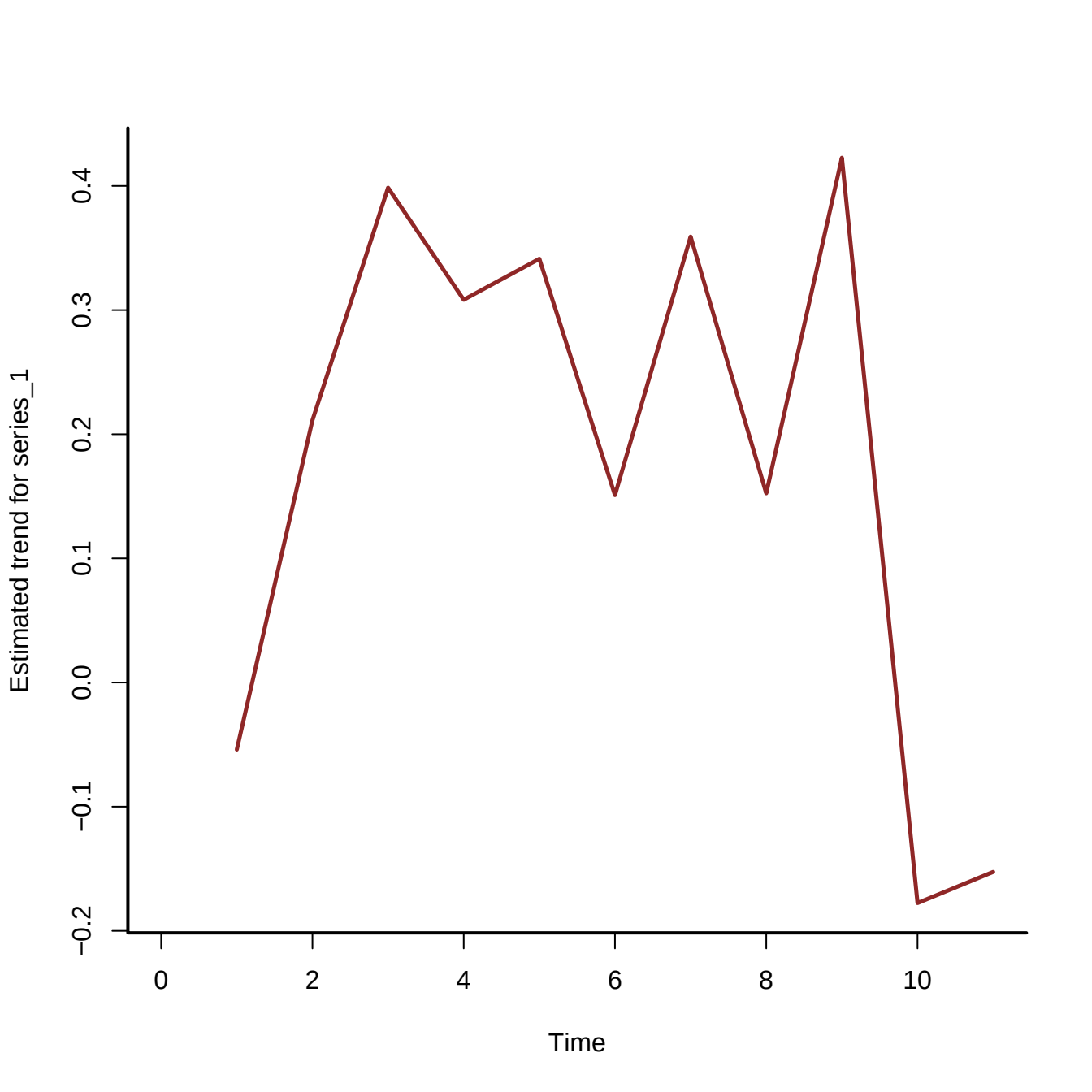

s(season)
Partial effect
0.4
0.0
−0.6
2
4
6
8
10
season
1st derivative
0.0000
−0.0020
2
4
6
8
10
season

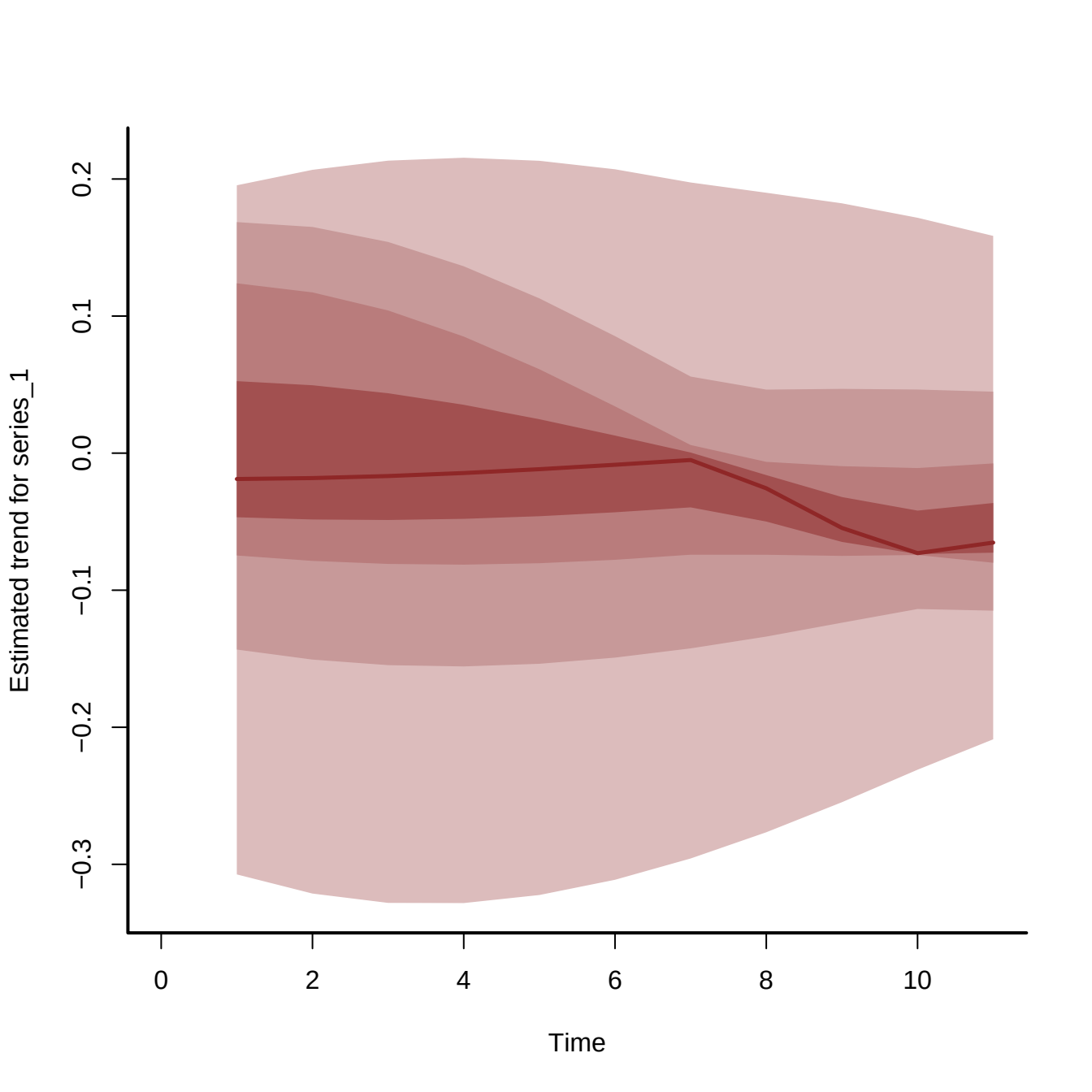

s(season)
Partial effect
0.4
0.0
−0.6
2
4
6
8
10
season
1st derivative
0.0000
−0.0020
2
4
6
8
10
season

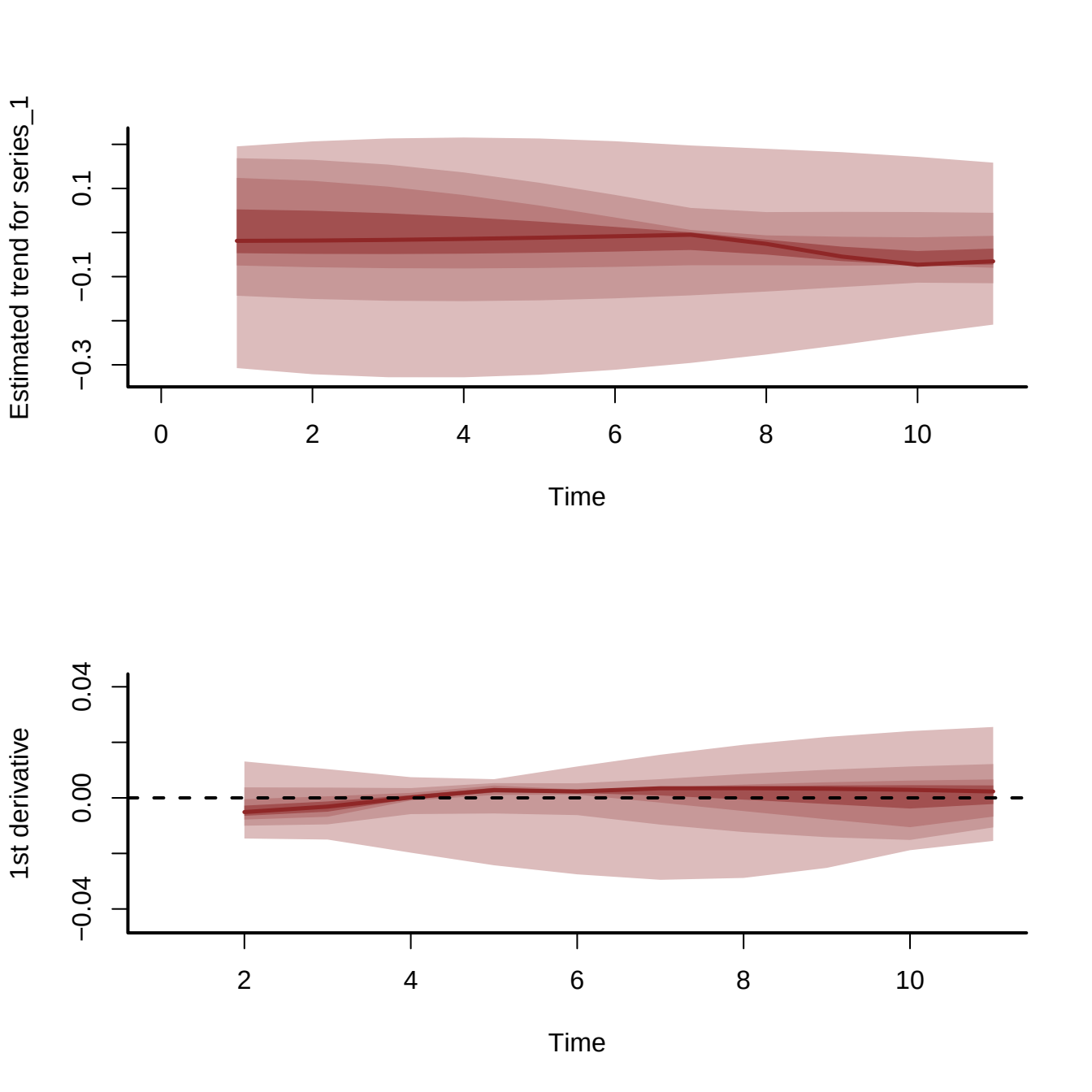

s(season)
Partial effect
0.6
0.4
0.2
0.0
−0.2
−0.4
2
4
6
8
10
season

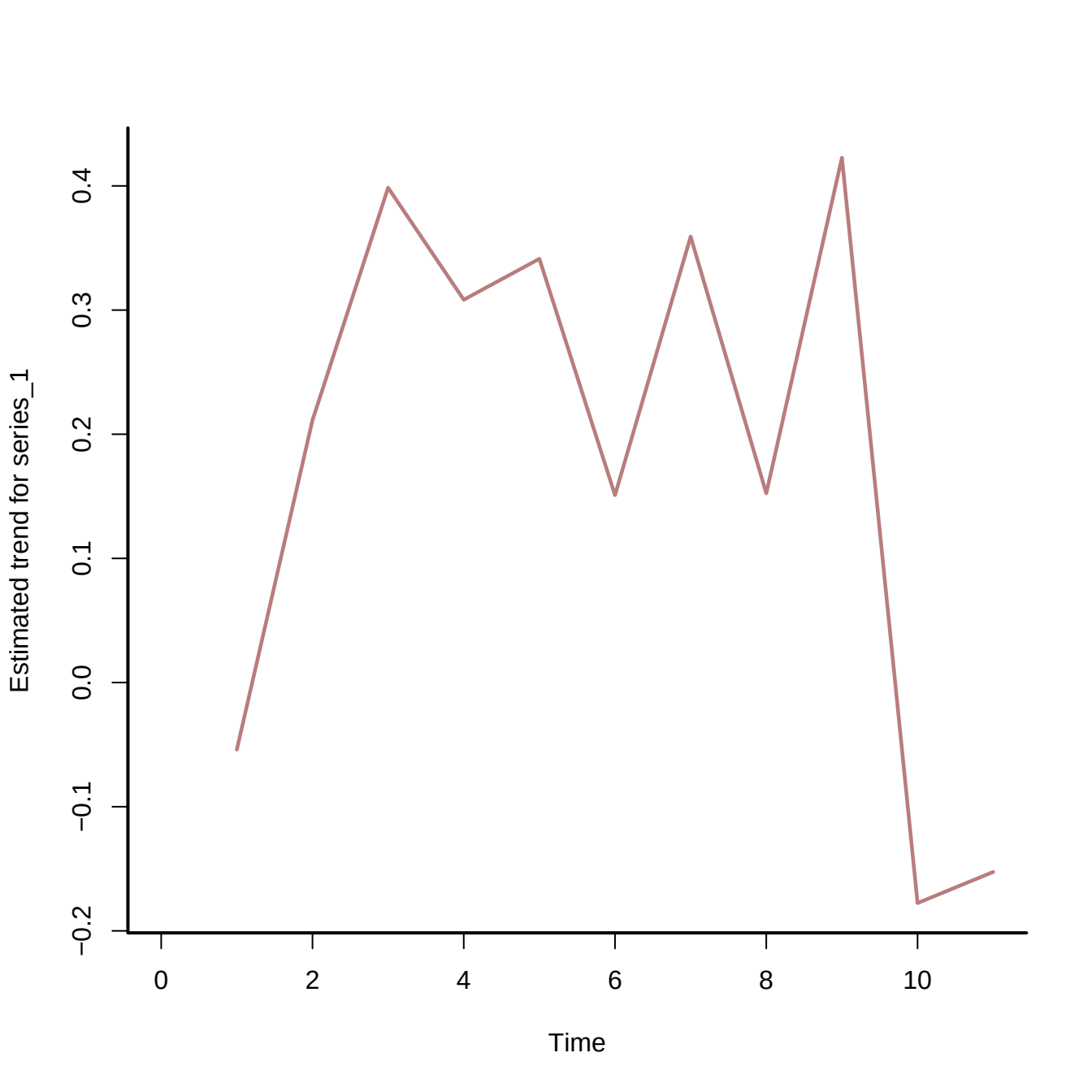

s(season)
Partial effect
0.5
0.0
−0.5
2
4
6
8
10
12
season

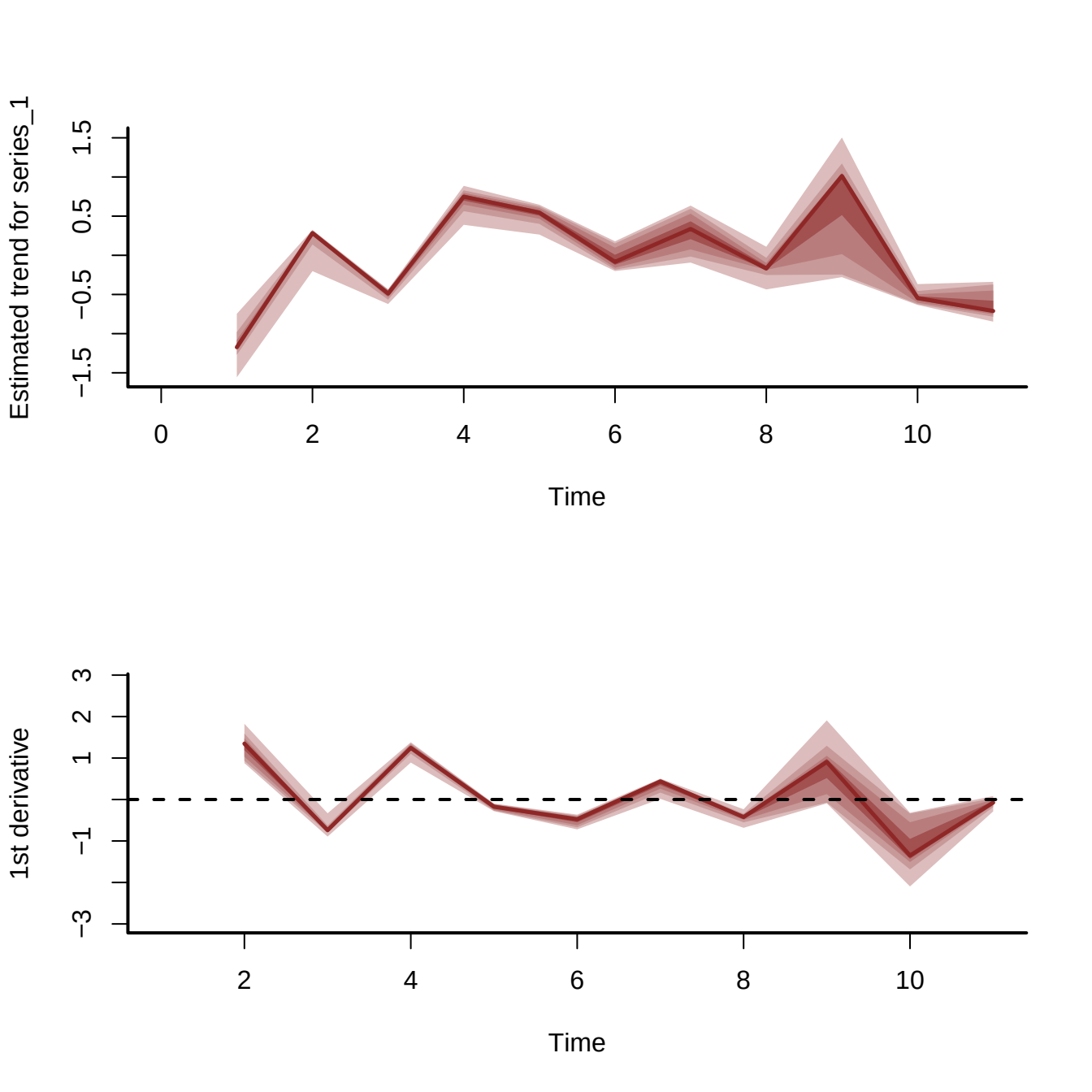

Factor 1
0.2
0.0
−0.2
−0.4
−0.6
0
2
4
6
8
10
Time
Factor 2
0.5
0.4
0.3
0.2
0.1
0.0
−0.1
−0.2
0
2
4
6
8
10
Time

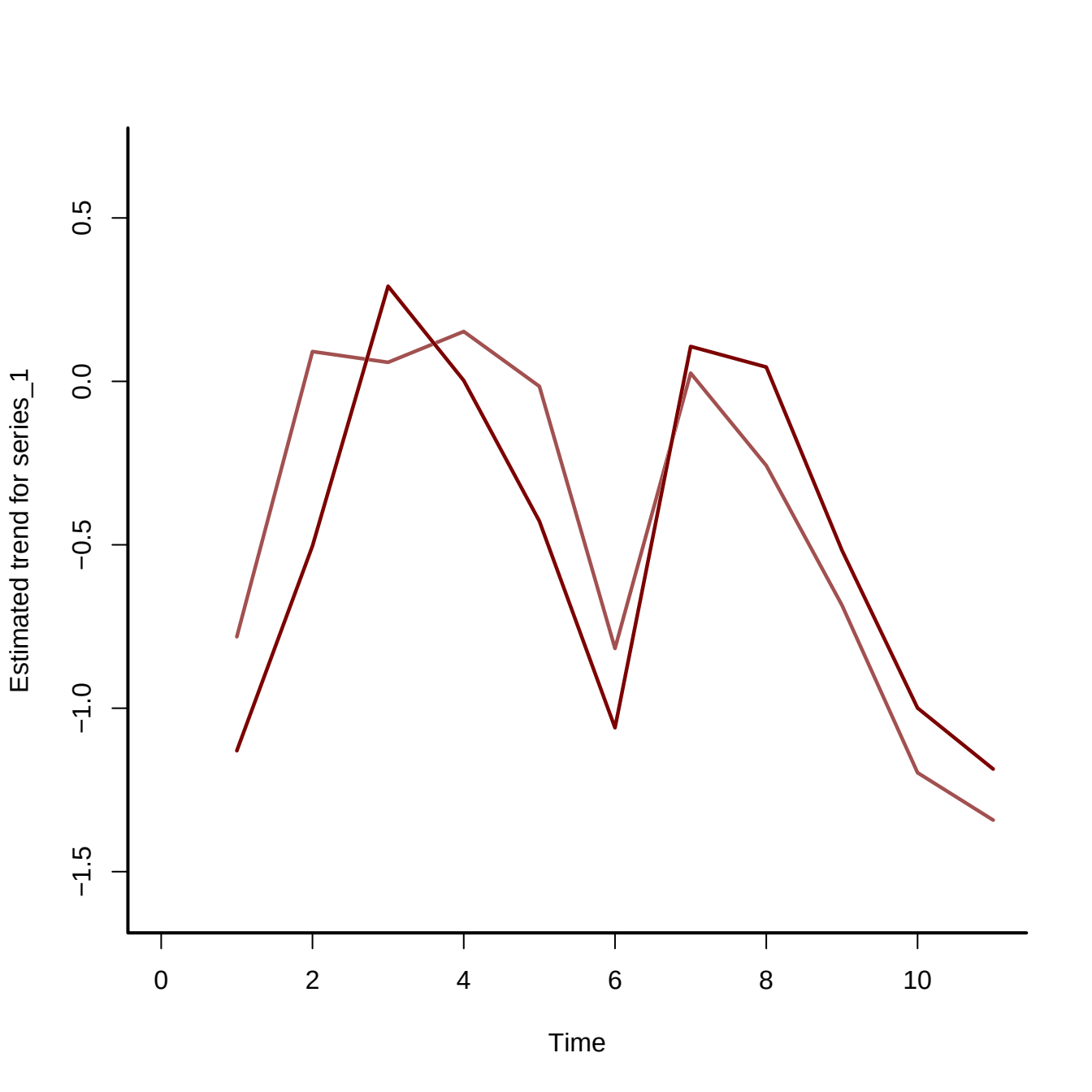

Estimated trend for series_1
0.4
0.3
0.2
0.1
0.0
−0.1
−0.2
0
2
4
6
8
10
Time

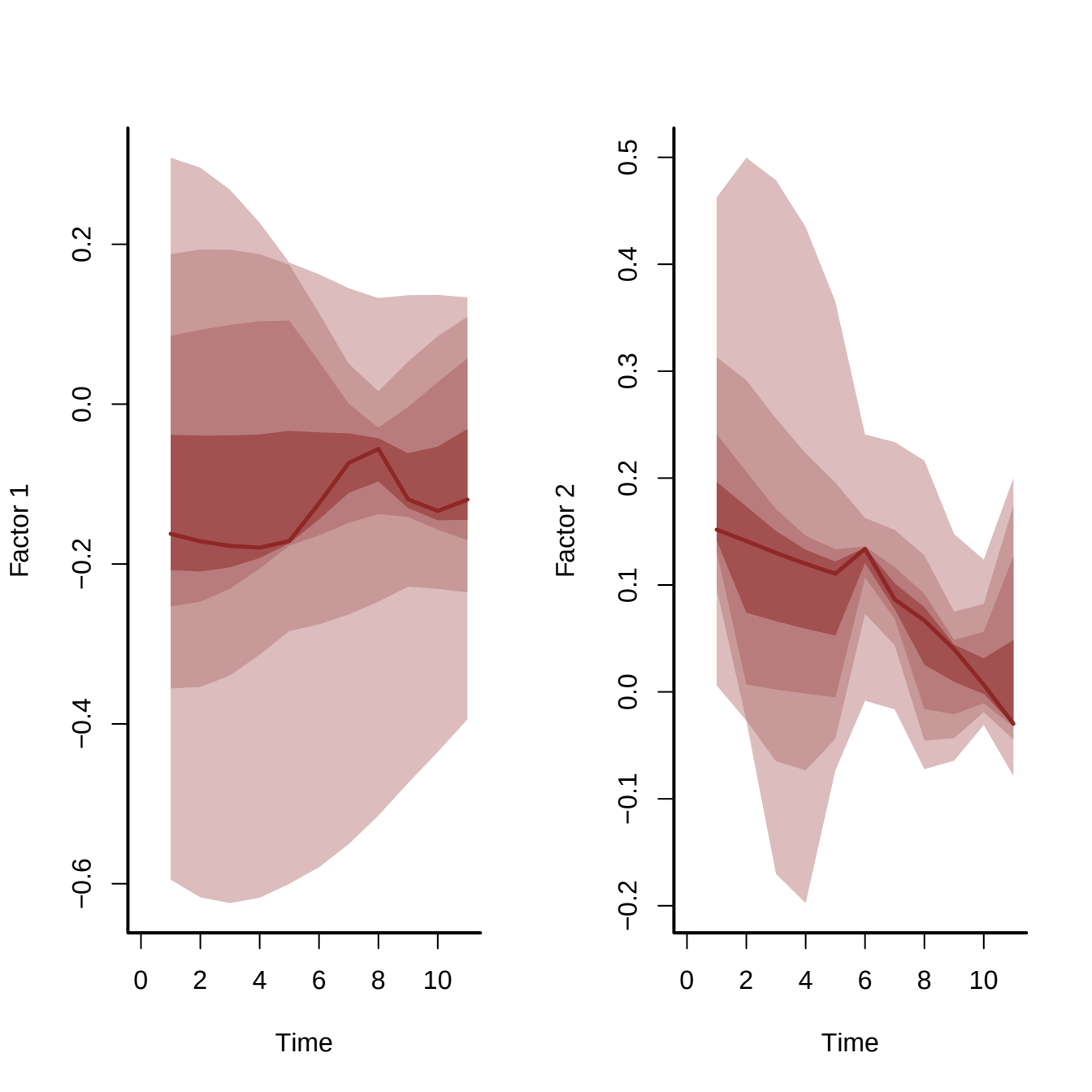

Estimated trend for series_1
0.2
0.1
0.0
−0.1
−0.2
−0.3
0
2
4
6
8
10
Time

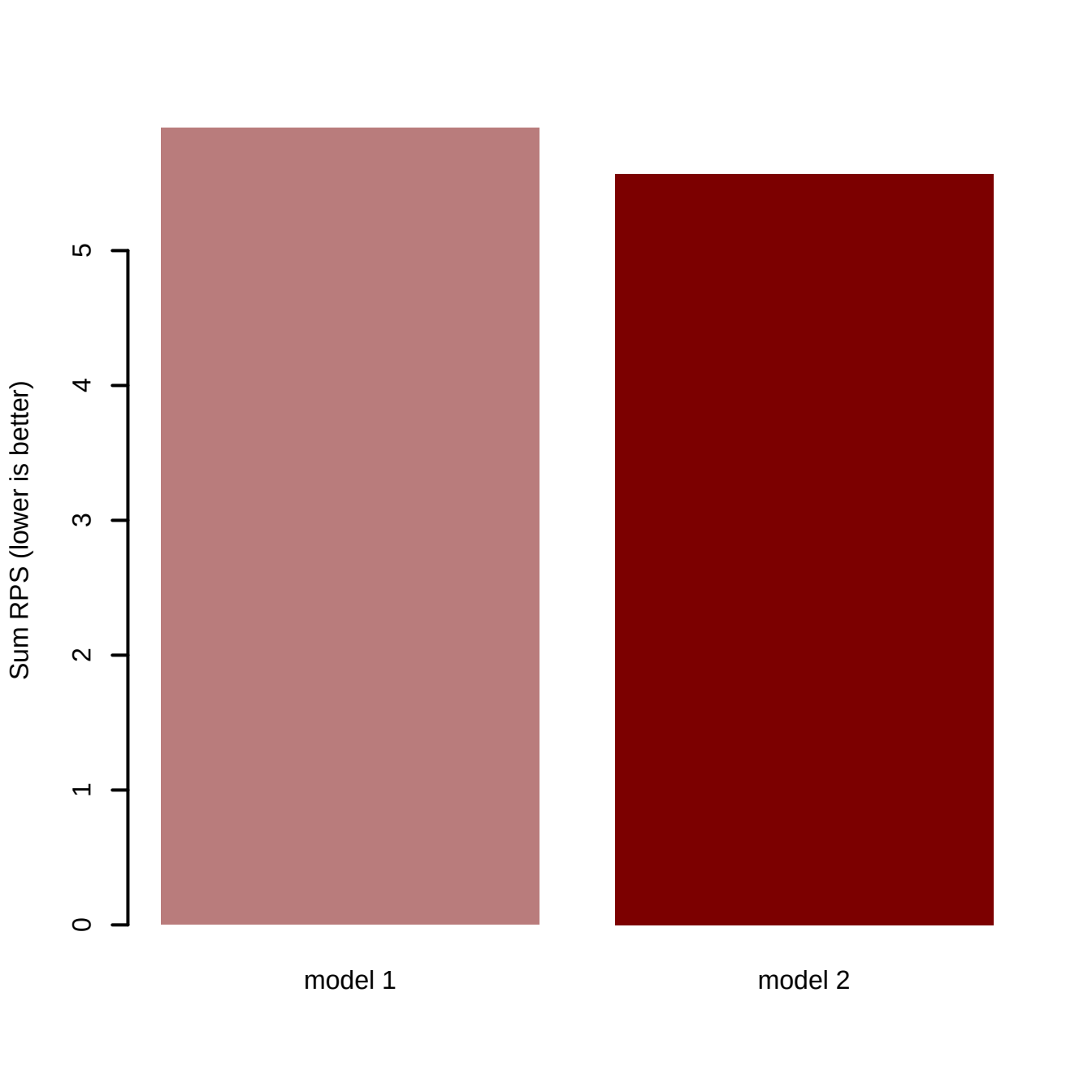

Estimated trend for series_1
−0.3
−0.1
0.1
0
2
4
6
8
10
Time
1st derivative
−0.04
0.00
0.04
2
4
6
8
10
Time

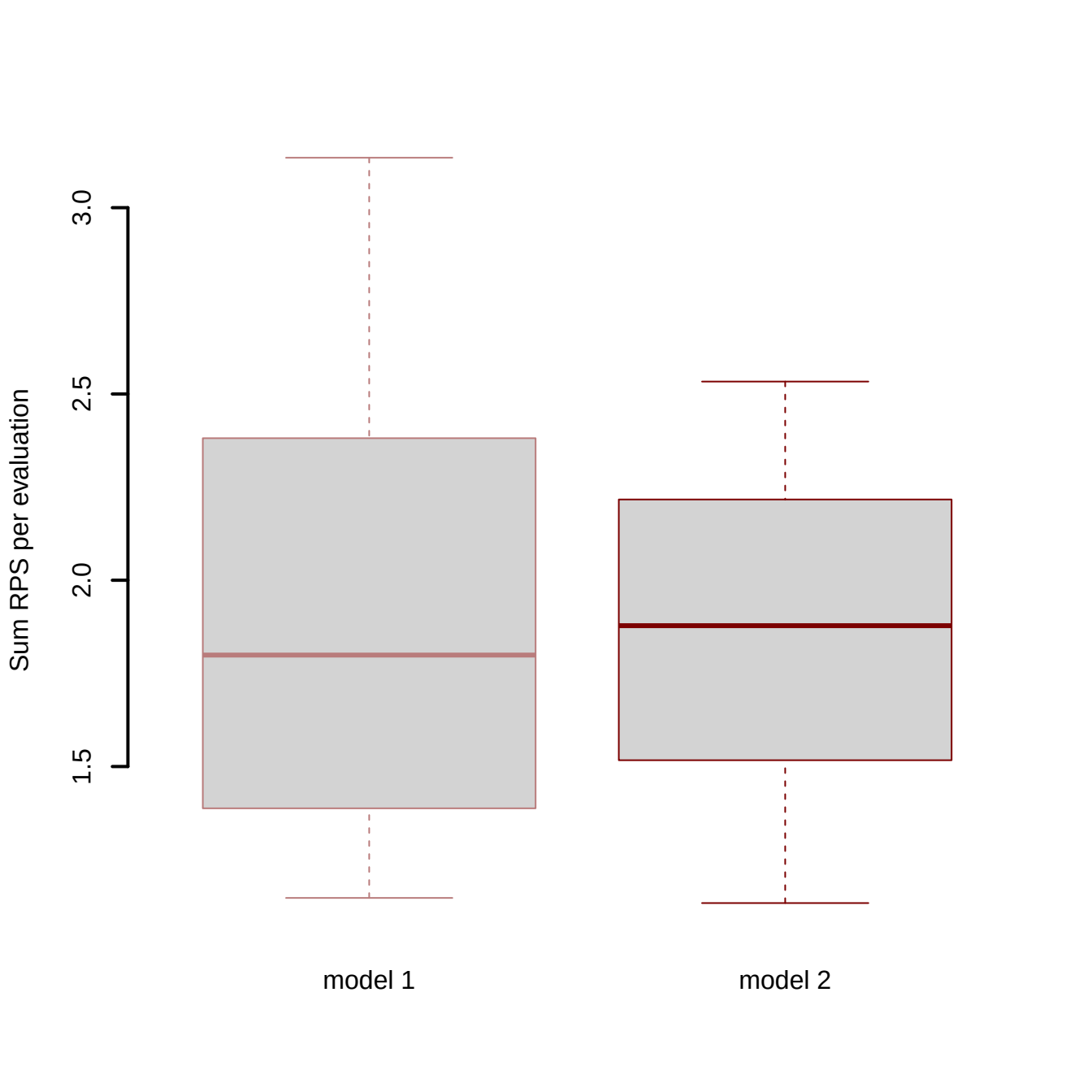

Estimated trend for series_1
0.4
0.3
0.2
0.1
0.0
−0.1
−0.2
0
2
4
6
8
10
Time

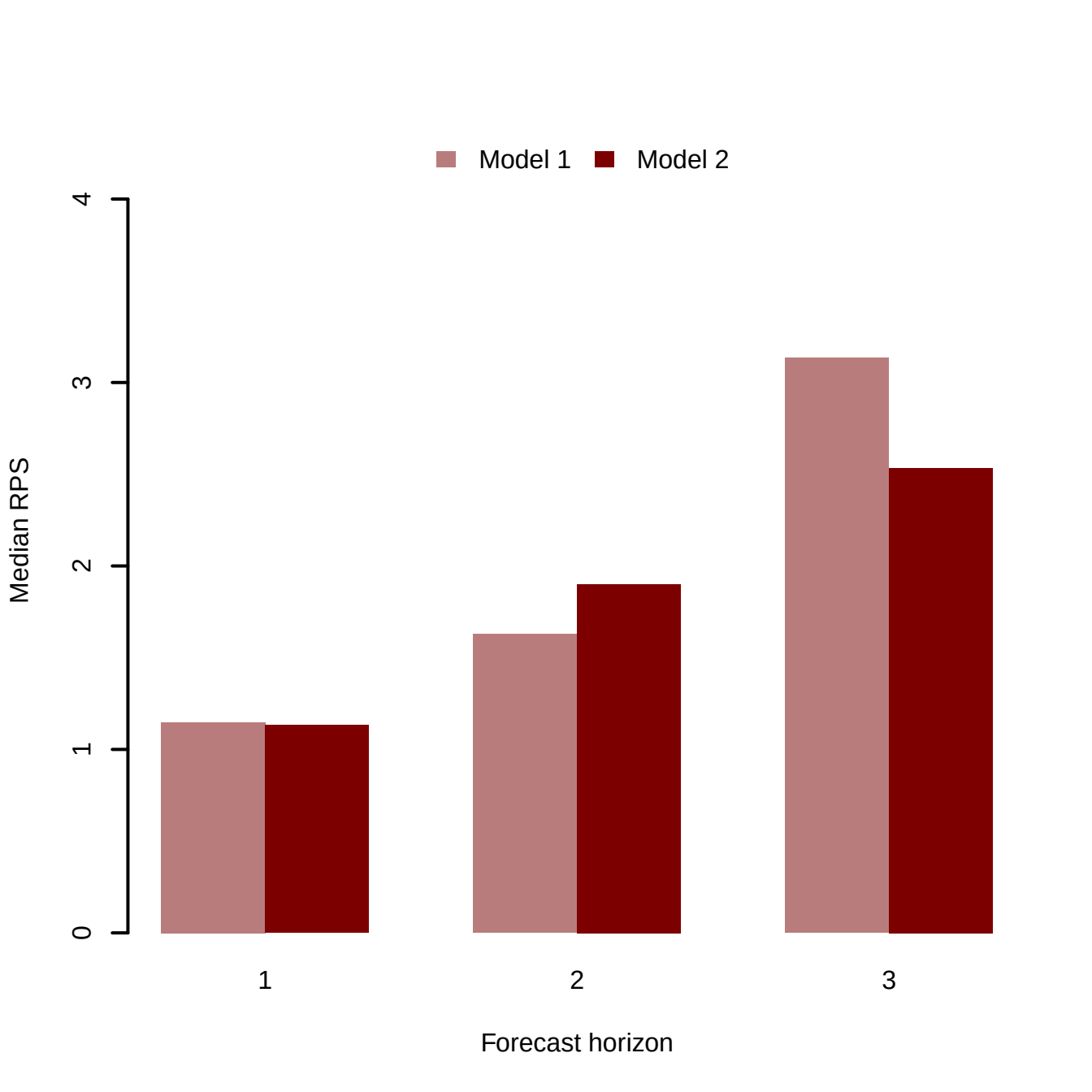

Estimated trend for series_1
1.5
0.5
−0.5
−1.5
0
2
4
6
8
10
Time
1st derivative
3
2
1
−1
−3
2
4
6
8
10
Time

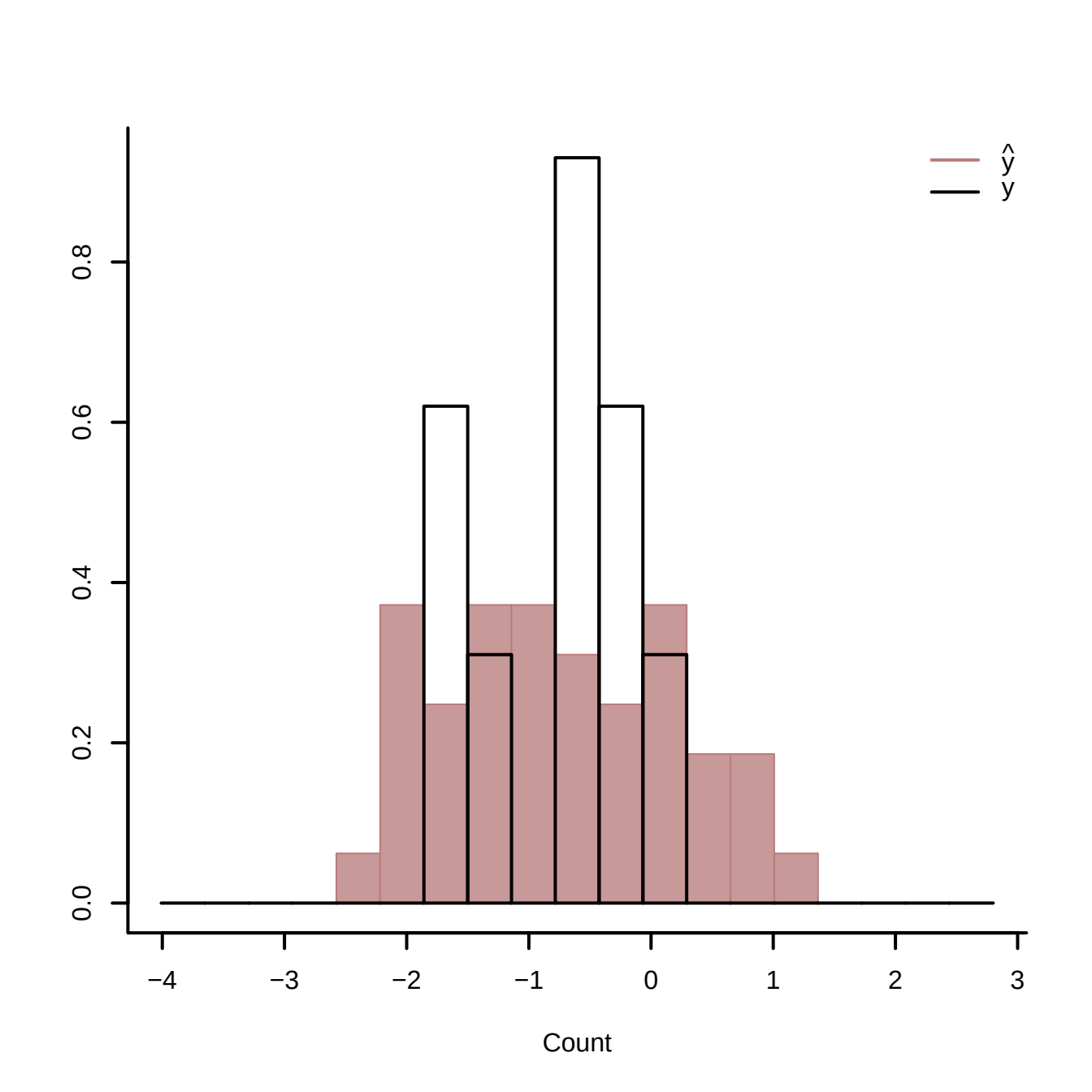

Estimated trend for series_1
0.5
0.0
−0.5
−1.0
−1.5
0
2
4
6
8
10
Time

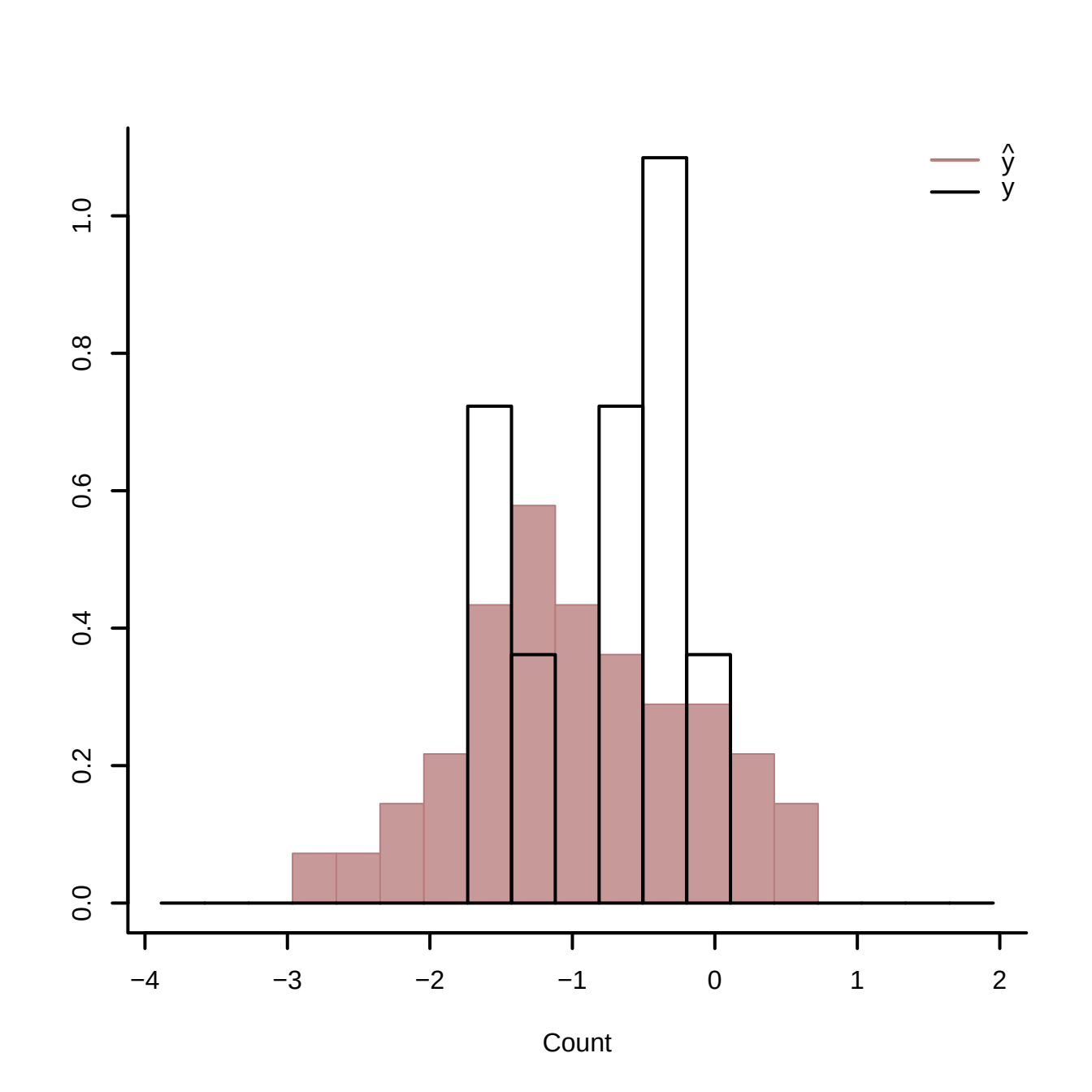

Factor 1
0.2
0.0
−0.2
−0.4
−0.6
0
2
4
6
8
10
Time
Factor 2
0.5
0.4
0.3
0.2
0.1
0.0
−0.1
−0.2
0
2
4
6
8
10
Time

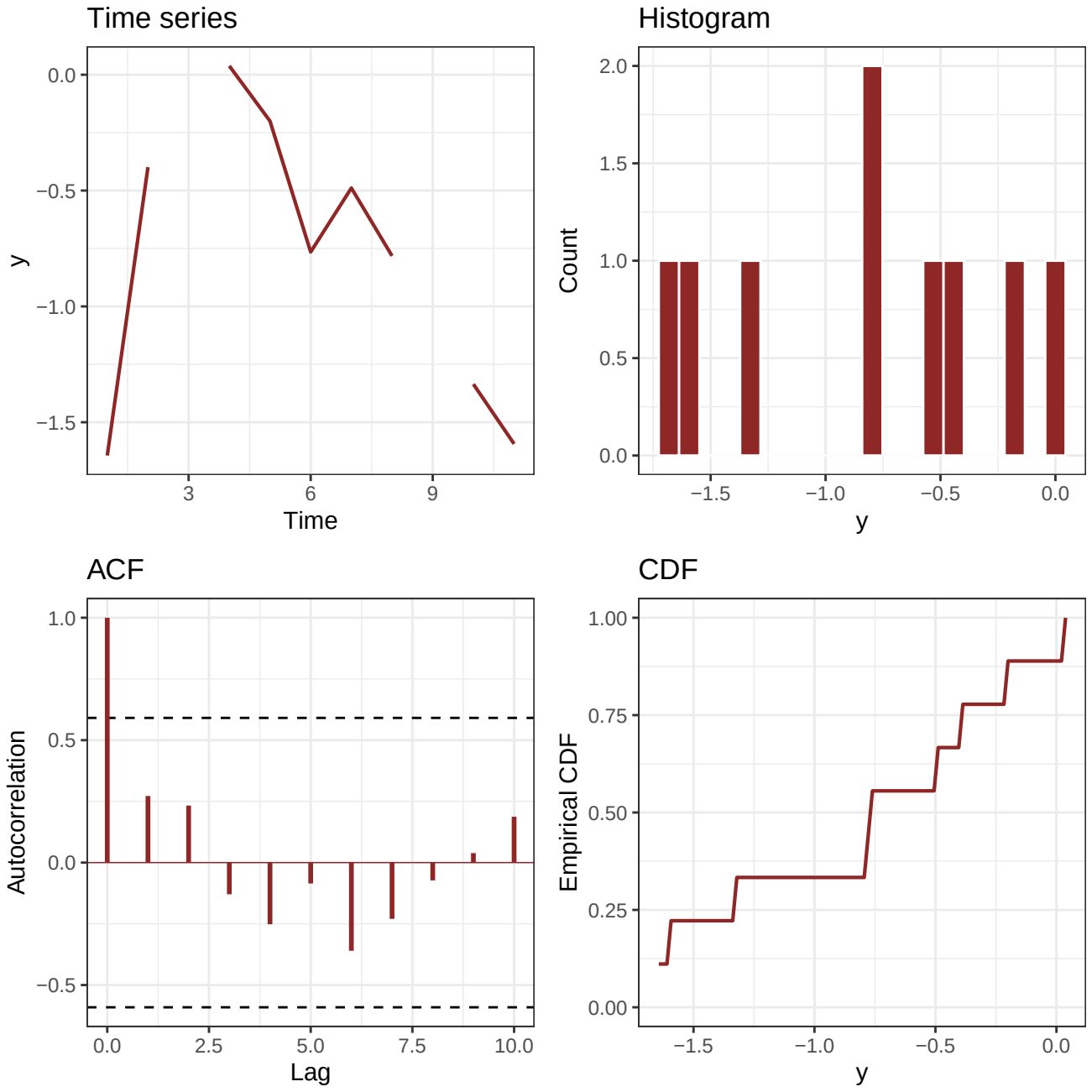

Sum RPS (lower is better)
0
1
2
3
4
5
model 1
model 2

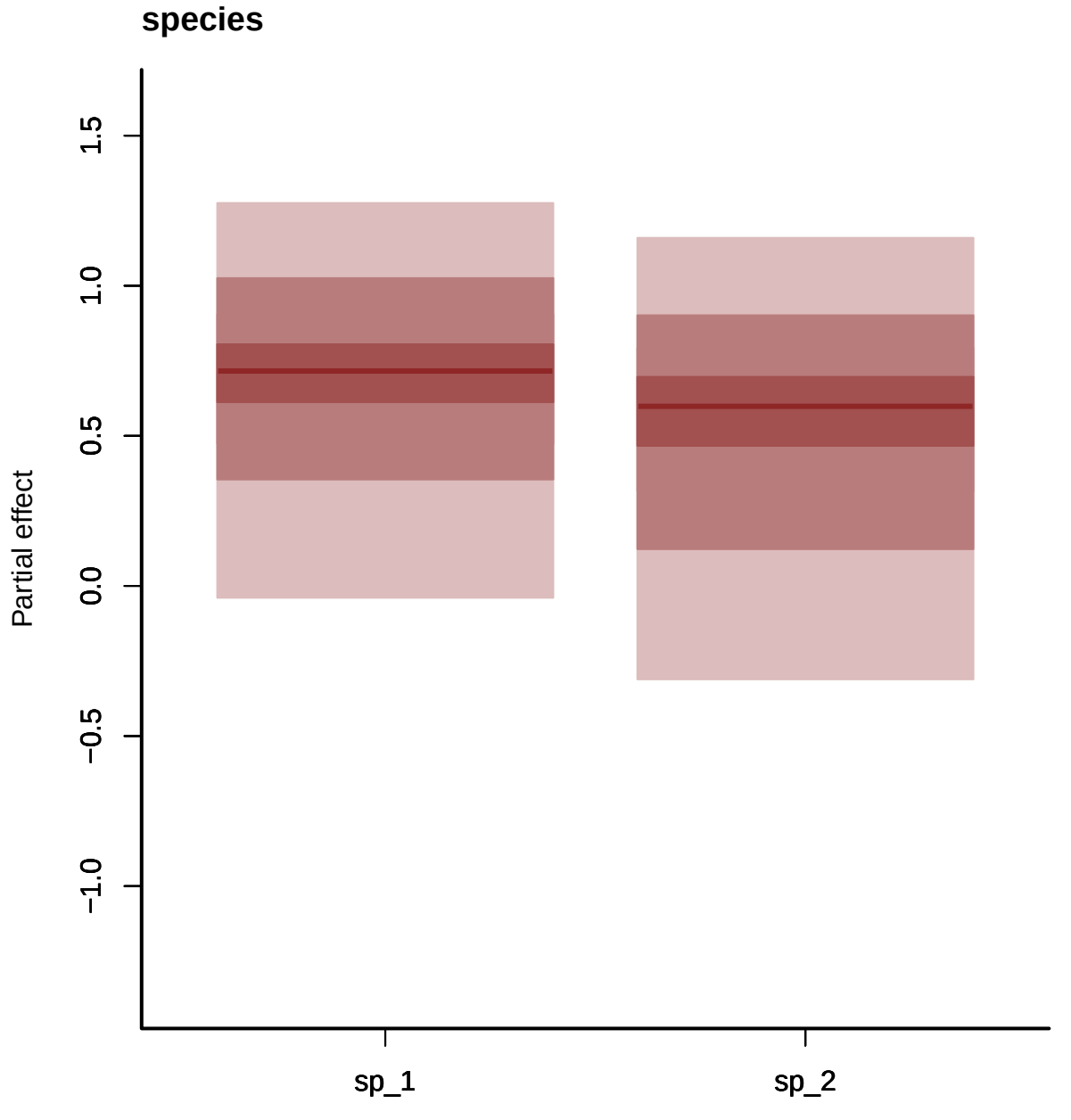

Sum RPS per evaluation
1.5
2.0
2.5
3.0
model 1
model 2

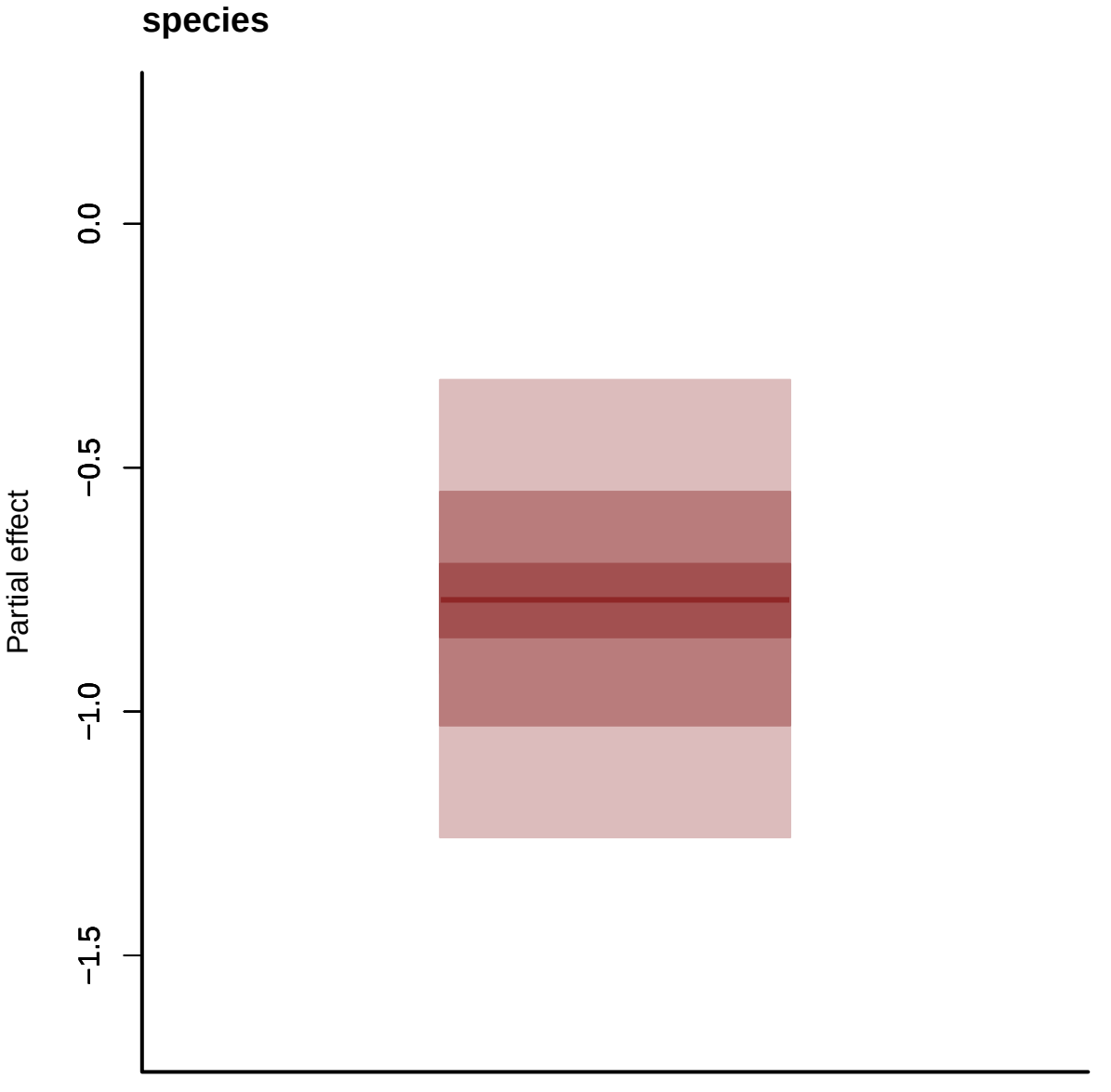

Model 1
Model 2
Median RPS
0
1
2
3
4
1
2
3
Forecast horizon

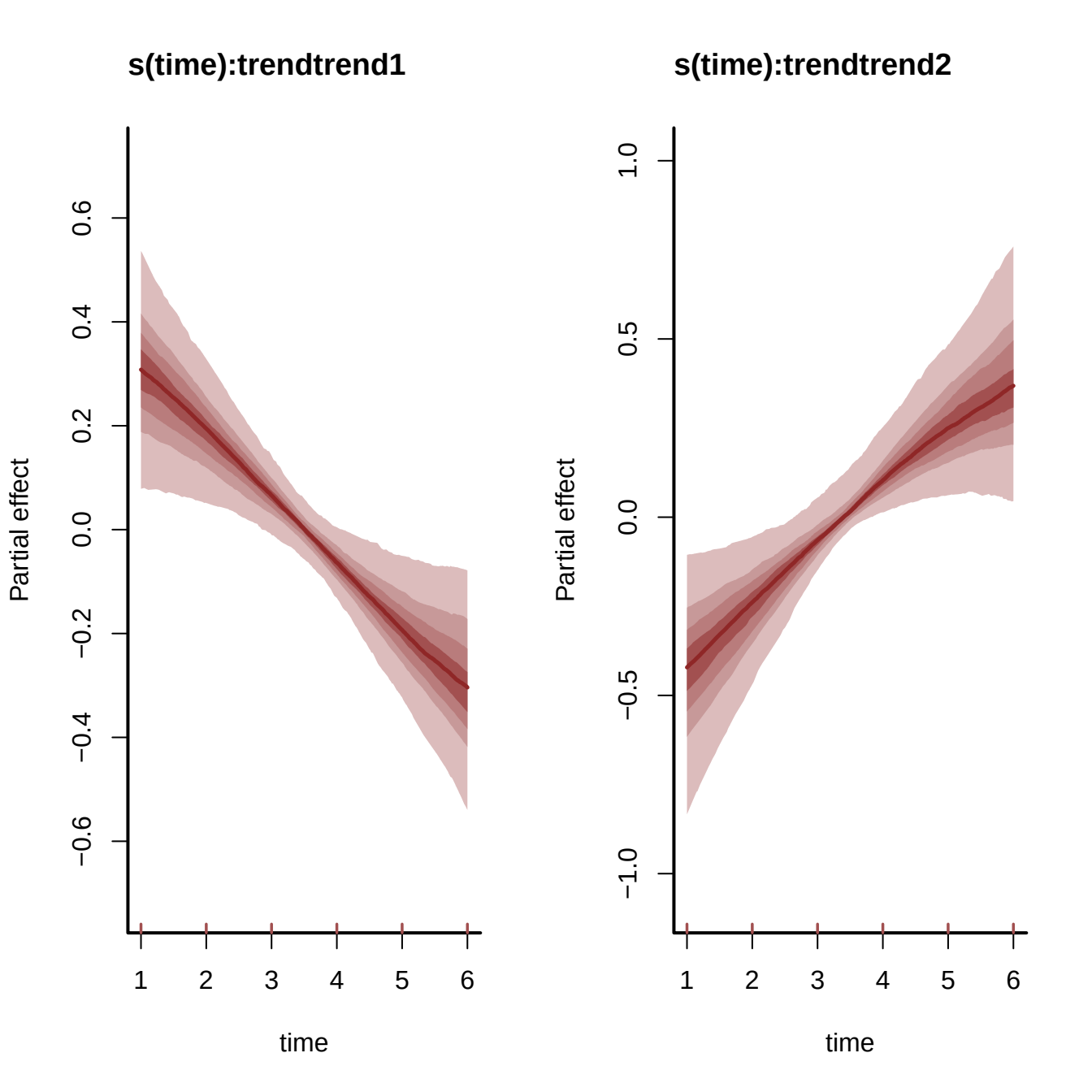

ŷ
y
0.0
0.2
0.4
0.6
0.8
−4
−3
−2
−1
0
1
2
3
Count

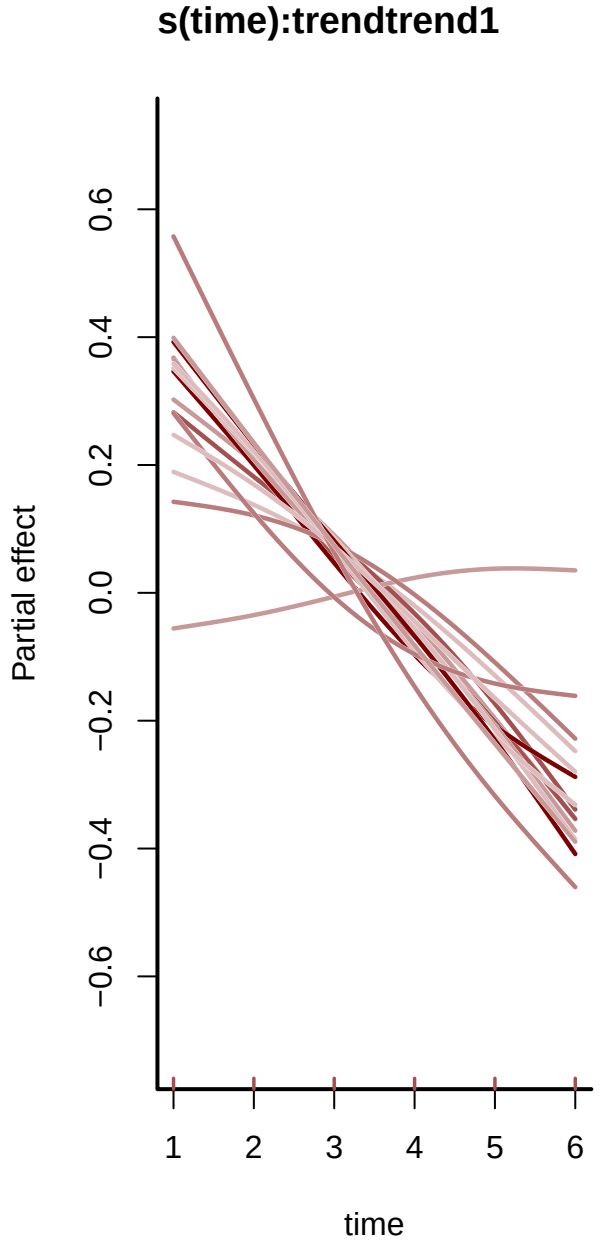

ŷ
y
0.0
0.2
0.4
0.6
0.8
1.0
−4
−3
−2
−1
0
1
2
Count

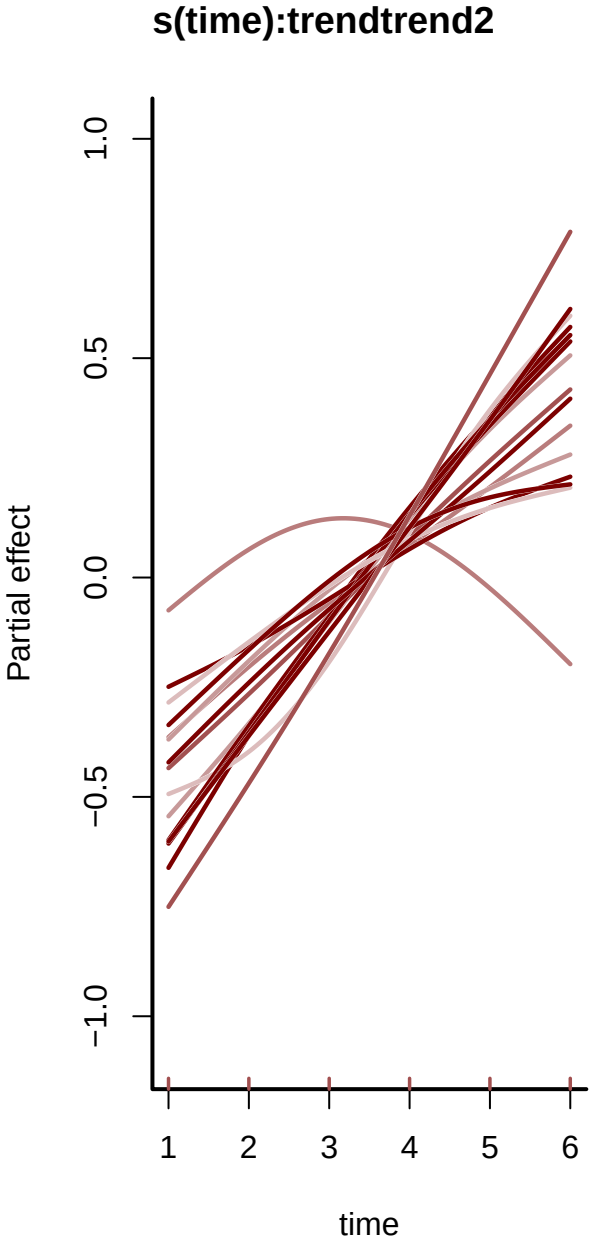

Time series
y
Time
Histogram
Count
y
ACF
Autocorrelation
Lag
CDF
Empirical CDF
y

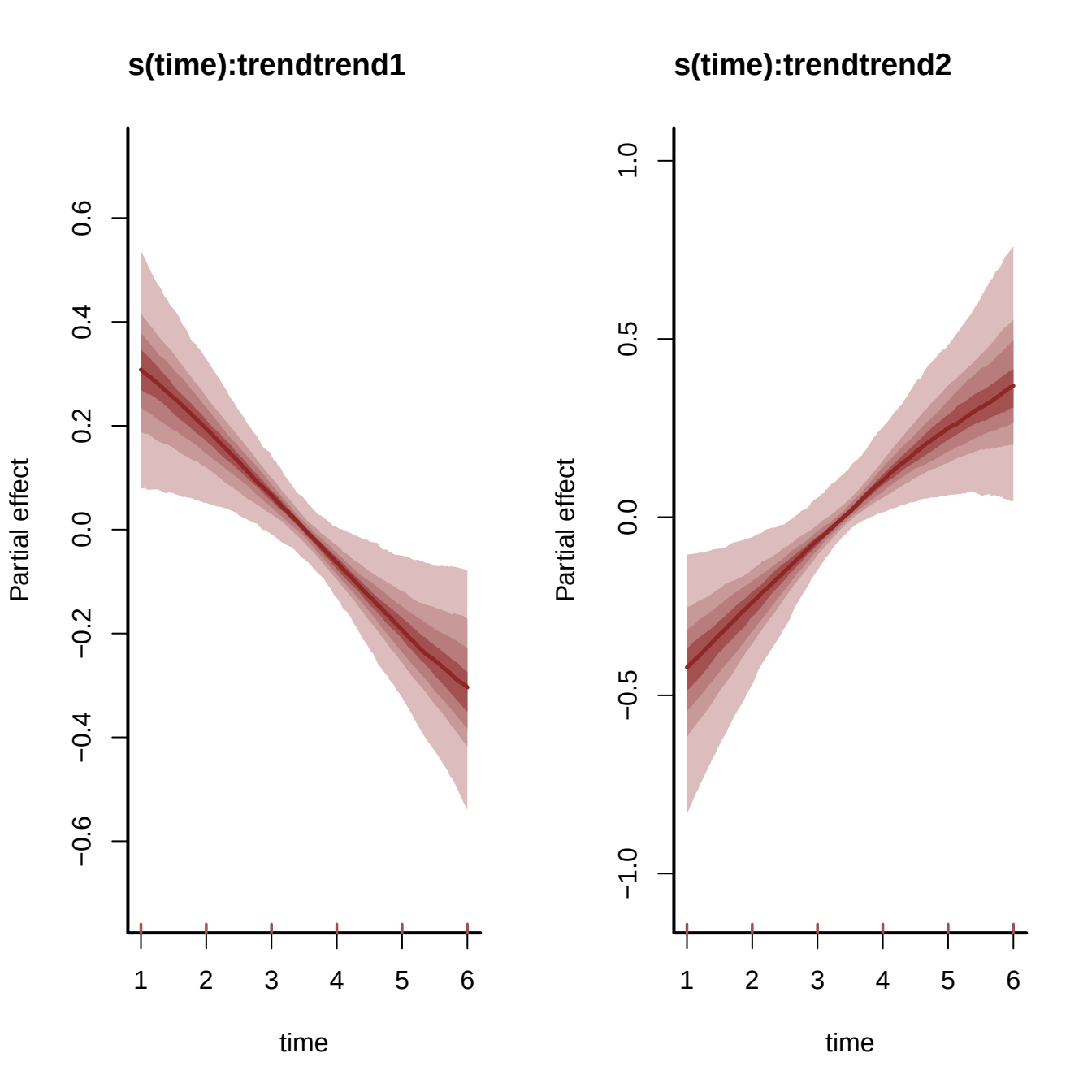

species
Partial effect
1.5
1.0
0.5
0.0
−0.5
−1.0
sp_1
sp_2


species
Partial effect
0.0
−0.5
−1.0
−1.5


s(time):trendtrend1
Partial effect
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6
1
2
3
4
5
6
time
s(time):trendtrend2
Partial effect
1.0
0.5
0.0
−0.5
−1.0
1
2
3
4
5
6
time


s(time):trendtrend1
Partial effect
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6
1
2
3
4
5
6
time


s(time):trendtrend2
Partial effect
1.0
0.5
0.0
−0.5
−1.0
1
2
3
4
5
6
time


s(time):trendtrend1
Partial effect
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6
1
2
3
4
5
6
time
s(time):trendtrend2
Partial effect
1.0
0.5
0.0
−0.5
−1.0
1
2
3
4
5
6
time