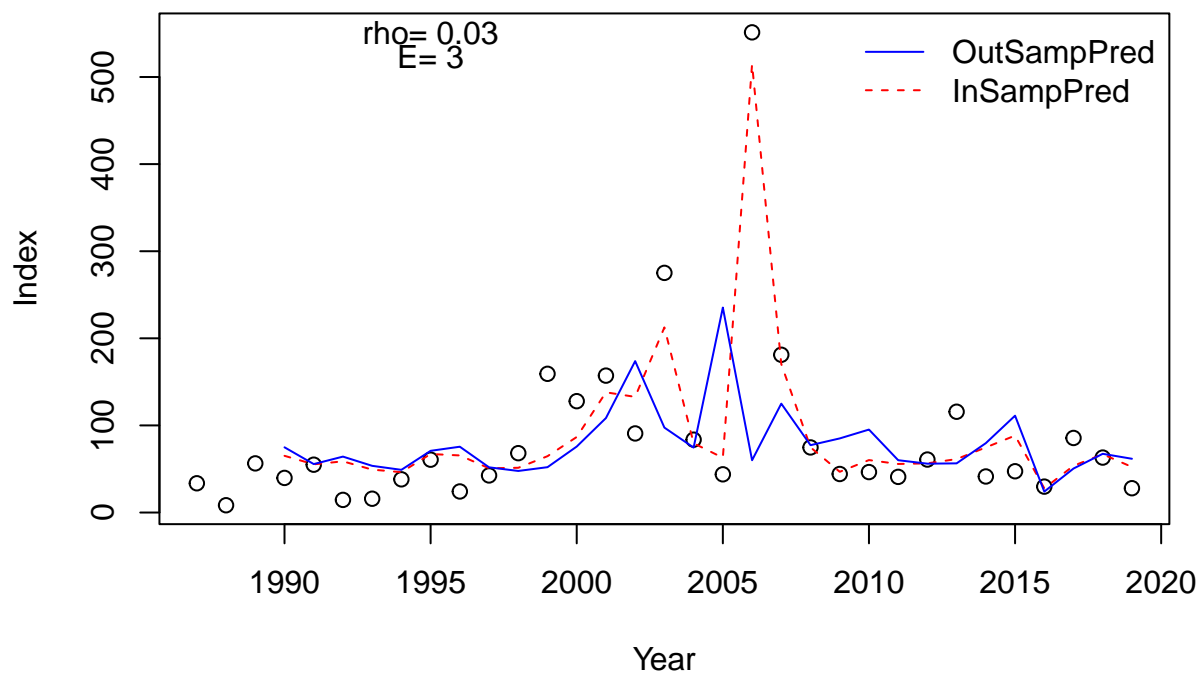# Brown Shrimp EDM Testing

Lew Coggins

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Brown Shrimp

```
## Number of predictors: 3
## Length scale parameters:
##      predictor posteriormode
## phi1   Index_1       0.00959
## phi2   Index_2       0.46232
## phi3   Index_3       1.23707
## Process variance (ve): 0.1955448
## Pointwise prior variance (sigma2): 2.989169
## Number of populations: 1
## In-sample R-squared: 0.8975028
## Out-of-sample R-squared: -0.1471965
```
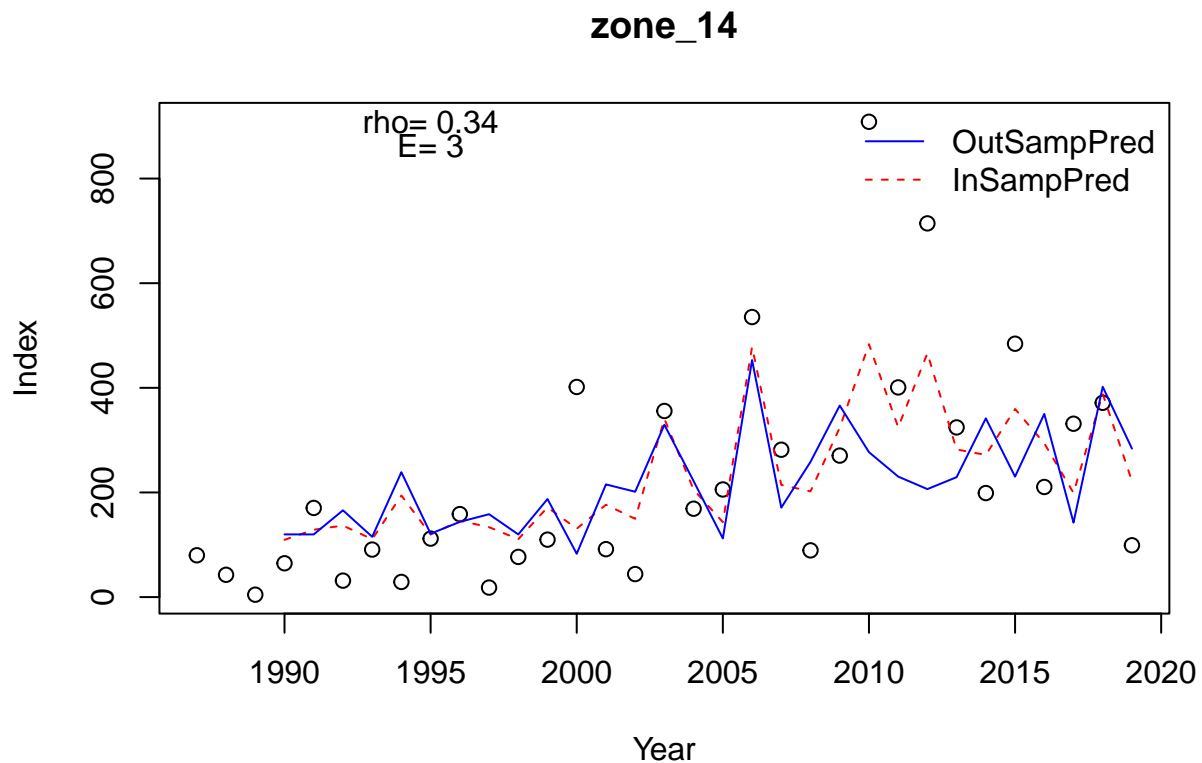
```
## Number of predictors: 3
## Length scale parameters:
##       predictor posteriormode
## phi1   Index_1        0.55509
## phi2   Index_2        0.36826
## phi3   Index_3        0.73603
## Process variance (ve): 0.6008013
## Pointwise prior variance (sigma2): 0.7539711
## Number of populations: 1
## In-sample R-squared: 0.619075
## Out-of-sample R-squared: 0.08933031
```

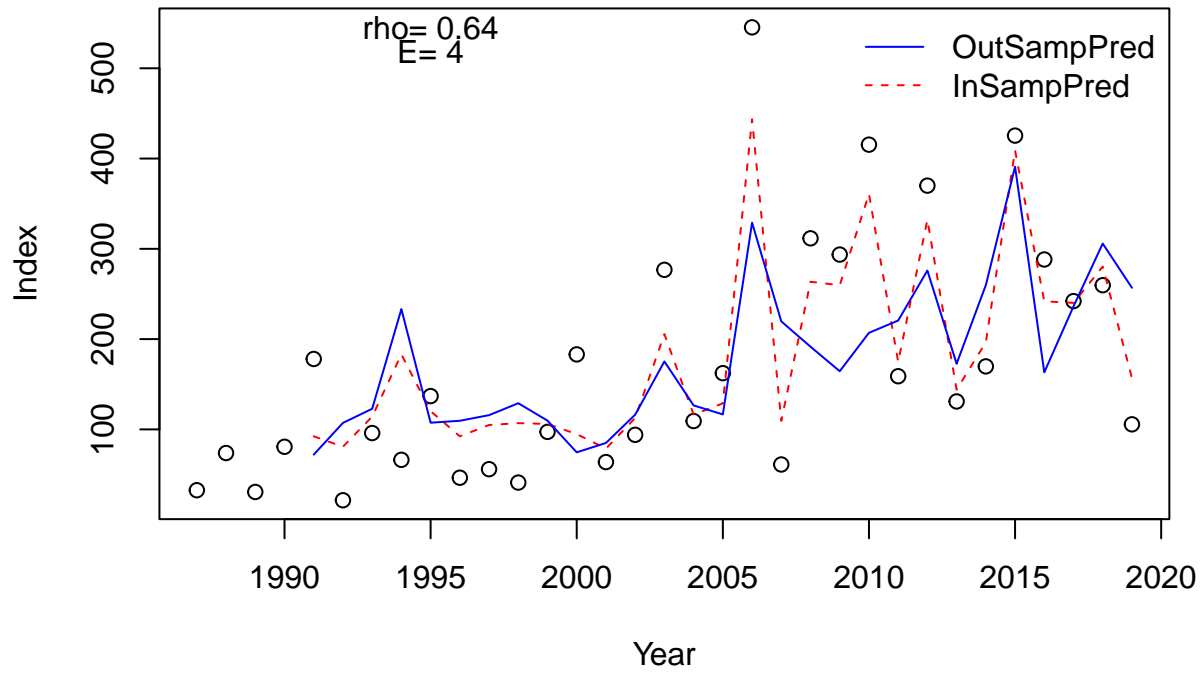**zone_14**


```
## Number of predictors: 4
## Length scale parameters:
##       predictor posteriormode
## phi1   Index_1        0.34932
## phi2   Index_2        0.02785
## phi3   Index_3        0.72361
## phi4   Index_4        0.19930
## Process variance (ve): 0.3133454
## Pointwise prior variance (sigma2): 1.146686
## Number of populations: 1
## In-sample R-squared: 0.8485981
## Out-of-sample R-squared: 0.4014389
```
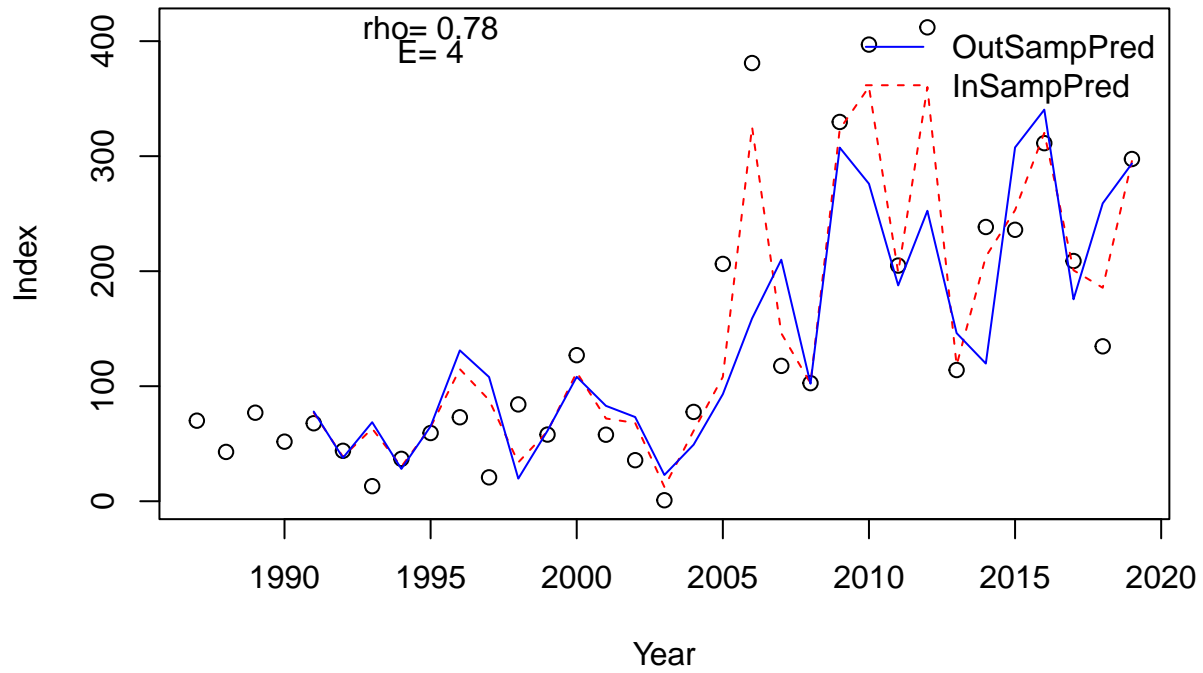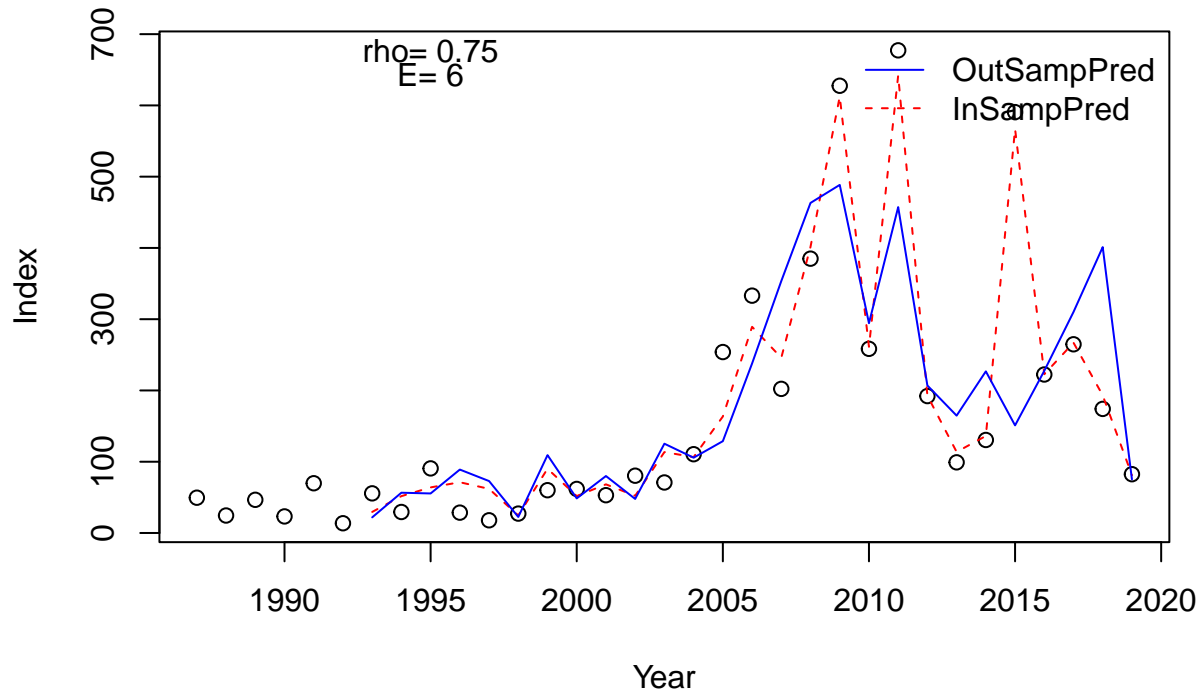
zone_15


```
## Number of predictors: 4
## Length scale parameters:
##       predictor posteriormode
## phi1   Index_1        0.28127
## phi2   Index_2        0.00000
## phi3   Index_3        0.63402
## phi4   Index_4        0.11079
## Process variance (ve): 0.1730958
## Pointwise prior variance (sigma2): 1.567012
## Number of populations: 1
## In-sample R-squared: 0.9201883
## Out-of-sample R-squared: 0.6062706
```
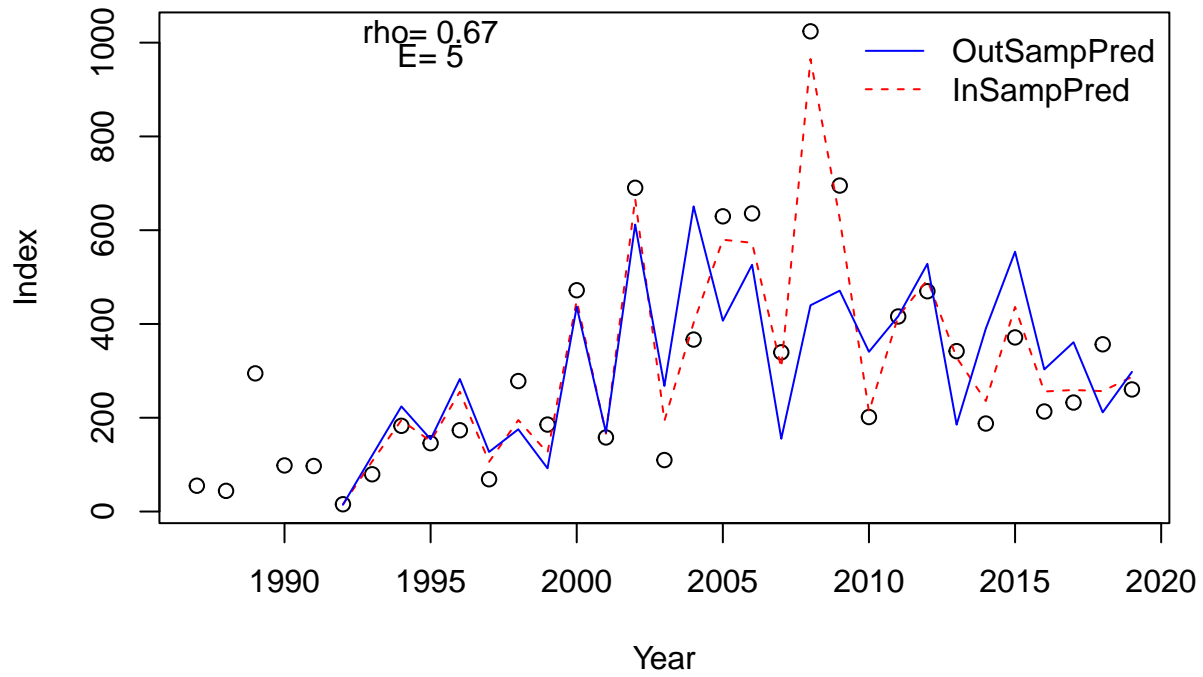
zone_16


```
## Number of predictors: 6
## Length scale parameters:
##       predictor posteriormode
## phi1   Index_1       0.31722
## phi2   Index_2       0.00000
## phi3   Index_3       0.25295
## phi4   Index_4       0.60063
## phi5   Index_5       0.00000
## phi6   Index_6       0.14455
## Process variance (ve): 0.07881043
## Pointwise prior variance (sigma2): 1.725277
## Number of populations: 1
## In-sample R-squared: 0.9730583
## Out-of-sample R-squared: 0.5585426
```
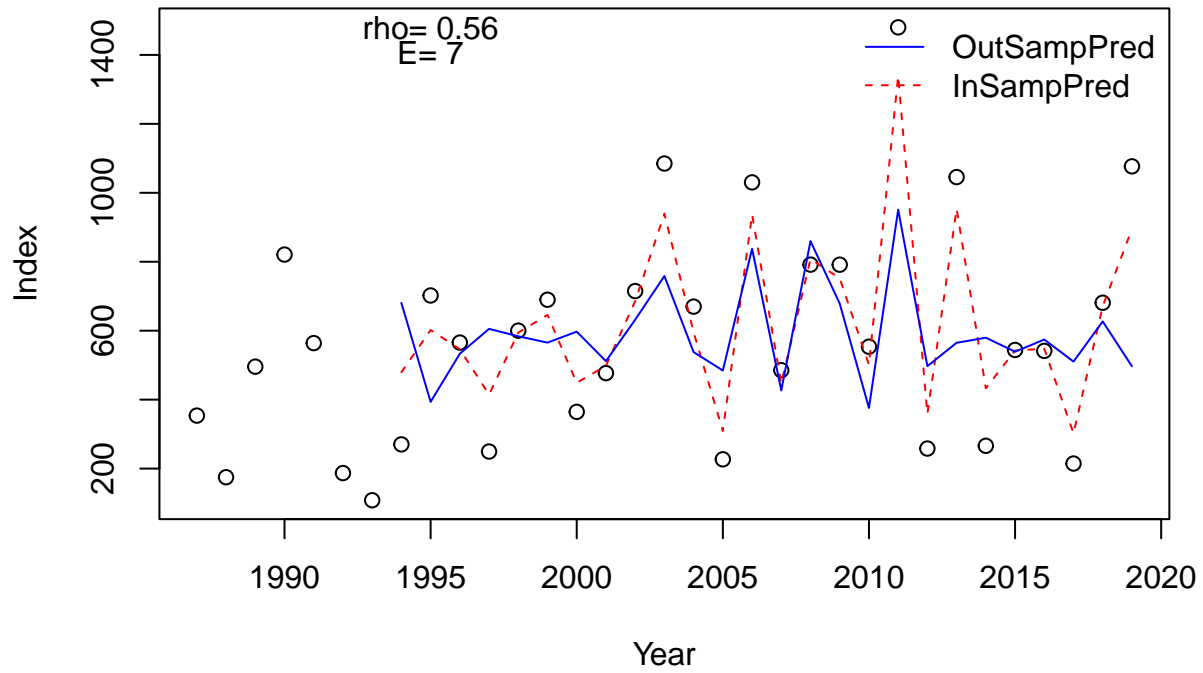
zone_17

rho= 0.75
E= 6

OutSampPred
InSampPred

```
## Number of predictors: 5
## Length scale parameters:
##       predictor posteriormode
## phi1   Index_1      0.00000
## phi2   Index_2      0.49538
## phi3   Index_3      0.26984
## phi4   Index_4      0.00000
## phi5   Index_5      0.37100
## Process variance (ve): 0.1255613
## Pointwise prior variance (sigma2): 1.587305
## Number of populations: 1
## In-sample R-squared: 0.9549289
## Out-of-sample R-squared: 0.445493
```
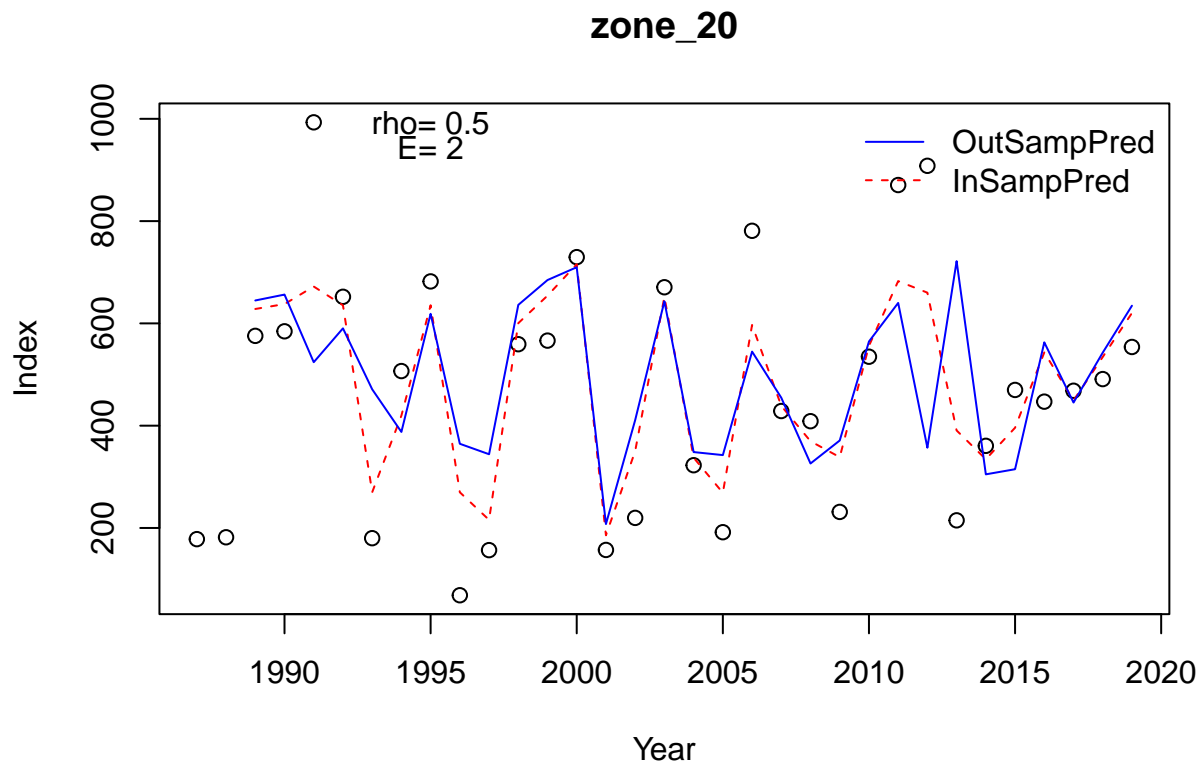
zone_18


```
## Number of predictors: 7
## Length scale parameters:
##       predictor posteriormode
## phi1   Index_1       0.00000
## phi2   Index_2       0.71915
## phi3   Index_3       0.00020
## phi4   Index_4       0.00000
## phi5   Index_5       0.26964
## phi6   Index_6       0.06148
## phi7   Index_7       0.42580
## Process variance (ve): 0.2947778
## Pointwise prior variance (sigma2): 1.280607
## Number of populations: 1
## In-sample R-squared: 0.9033646
## Out-of-sample R-squared: 0.2785952
```

zone_19

rho= 0.56
E= 7

○ OutSampPred
--- InSampPred

Index

1400
1000
600
200

1990 1995 2000 2005 2010 2015 2020

Year

```
## Number of predictors: 2
## Length scale parameters:
##      predictor posteriormode
## phi1   Index_1       1.91785
## phi2   Index_2       0.10787
## Process variance (ve): 0.3948644
## Pointwise prior variance (sigma2): 1.989729
## Number of populations: 1
## In-sample R-squared: 0.7636575
## Out-of-sample R-squared: 0.2410362
```

zone_20


```
## Number of predictors: 3
## Length scale parameters:
##      predictor posteriormode
## phi1  Index_1       0.04350
## phi2  Index_2       0.58178
## phi3  Index_3       0.29741
## Process variance (ve): 0.6536136
## Pointwise prior variance (sigma2): 0.7921047
## Number of populations: 1
## In-sample R-squared: 0.5111786
## Out-of-sample R-squared: 0.1383327
```

zone_21