Econometrics III
Assignment Part IV

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Contents

```
# load packages
if(!require(pacman)){install.packages("pacman")}

p_load(devtools,tidyverse,dplyr,ggplot2,latex2exp,stargazer, fixest,
    ↪   modelsummary, knitr, readr, tseries, lmtest, forecast, dynlm, vars,
    ↪   gridExtra)

dfAssign_p4 <- as.data.frame(read_csv("data/data_assign_p4.csv"))

# Encode quarters
dfAssign_p4 <-
    ↪   cbind(dfAssign_p4,c(seq(1,nrow(dfAssign_p4),length.out=nrow(dfAssign_p4))))
colnames(dfAssign_p4) <- c("obs", "CONS", "INC", "TIME")
```

We are always more interested in estimating ADL(1,1) instead of 1st diff ADL(1,1) because
we are not able to say anything about the long run equilibrium in case the 1st diff are used
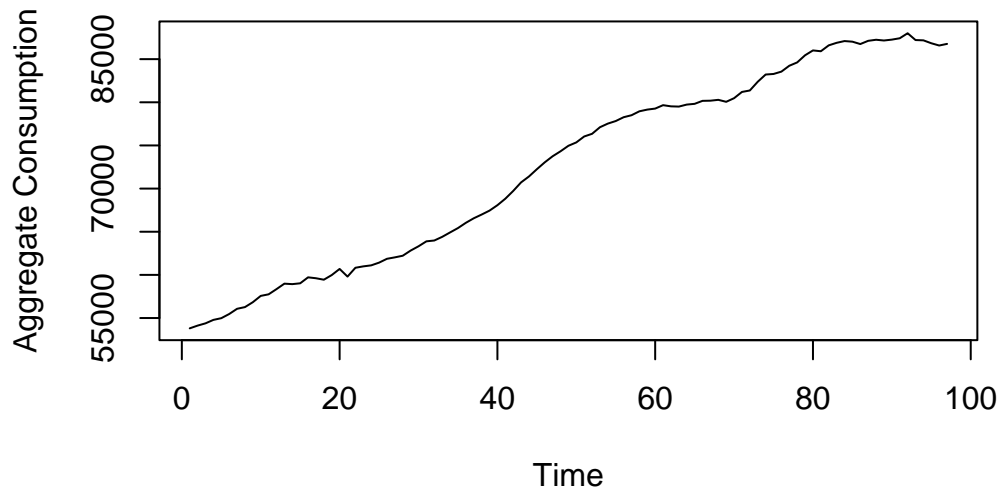
1 Question 1

```
plot.ts(dfAssign_p4$CONS, main="Quarterly Aggregate Consumption since
    ↪   1988 Q1", ylab="Aggregate Consumption")
```
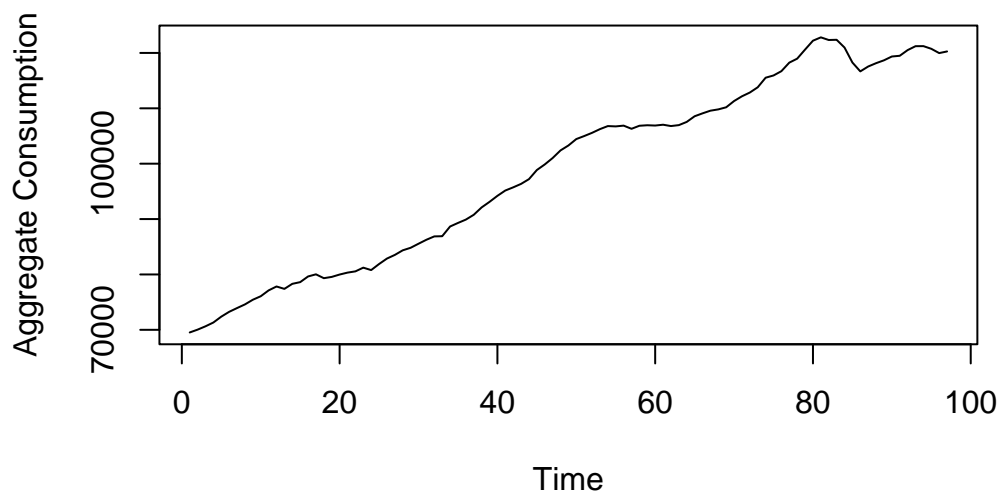
Quarterly Aggregate Consumption since 1988 Q1


```
plot.ts(dfAssign_p4$INC, main="Quarterly Aggregate Consumption since
↪   1988 Q1", ylab="Aggregate Consumption")
```
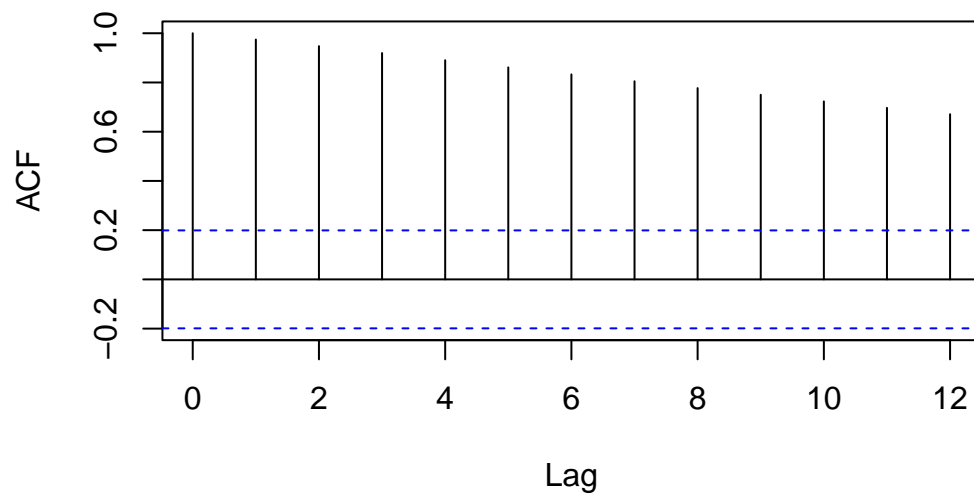
Quarterly Aggregate Consumption since 1988 Q1

The two plots above show the shape of the quarterly aggregate consumption and quarterly aggregate income in the Netherlands.
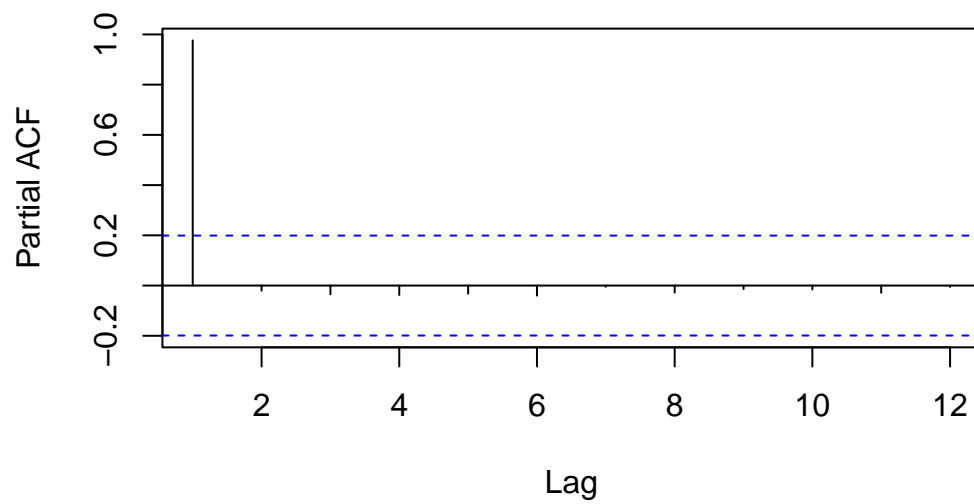
```
acf(dfAssign_p4$CONS,12,pl=T)
```

Series dfAssign_p4$CONS


```
acf(dfAssign_p4$INC,12,pl=T)
```
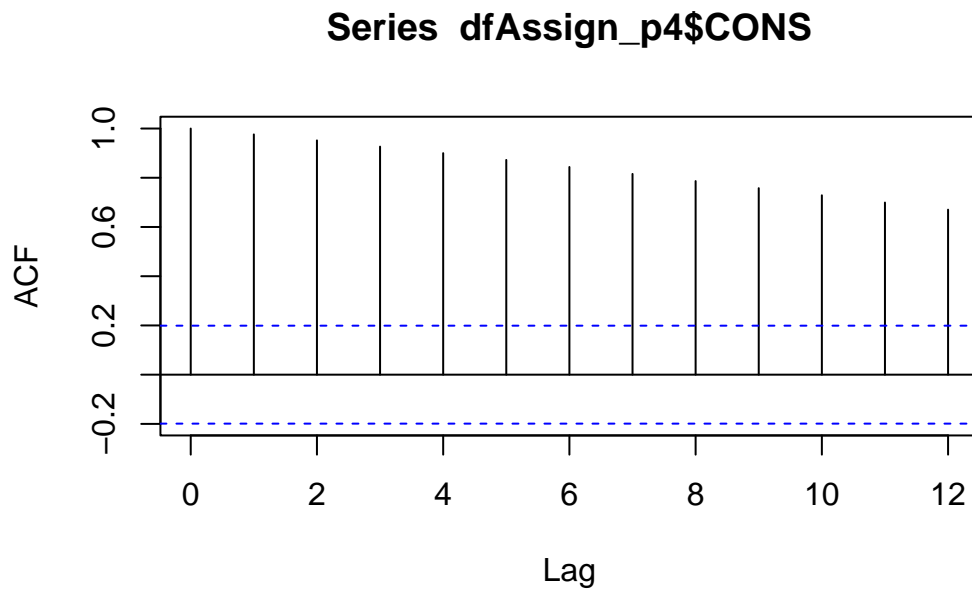
Series dfAssign_p4$INC


```
pacf(dfAssign_p4$CONS,12,pl=T)
```

Series dfAssign_p4$CONS

5

```
pacf(dfAssign_p4$INC,12,pl=T)
```

Series dfAssign_p4$INC
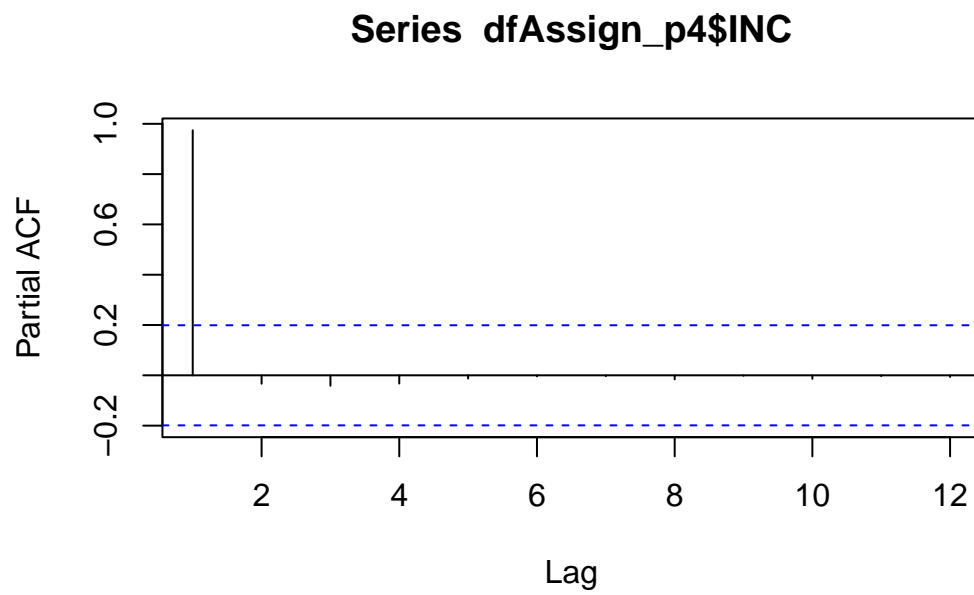
From the ACF and PACF

2 Question 2

3 Question 3

4 Question 4

5 Question 5

6 Question 6

7 Question 7

8 Question 8