

Sesion 10 - Taller / Tarea 01

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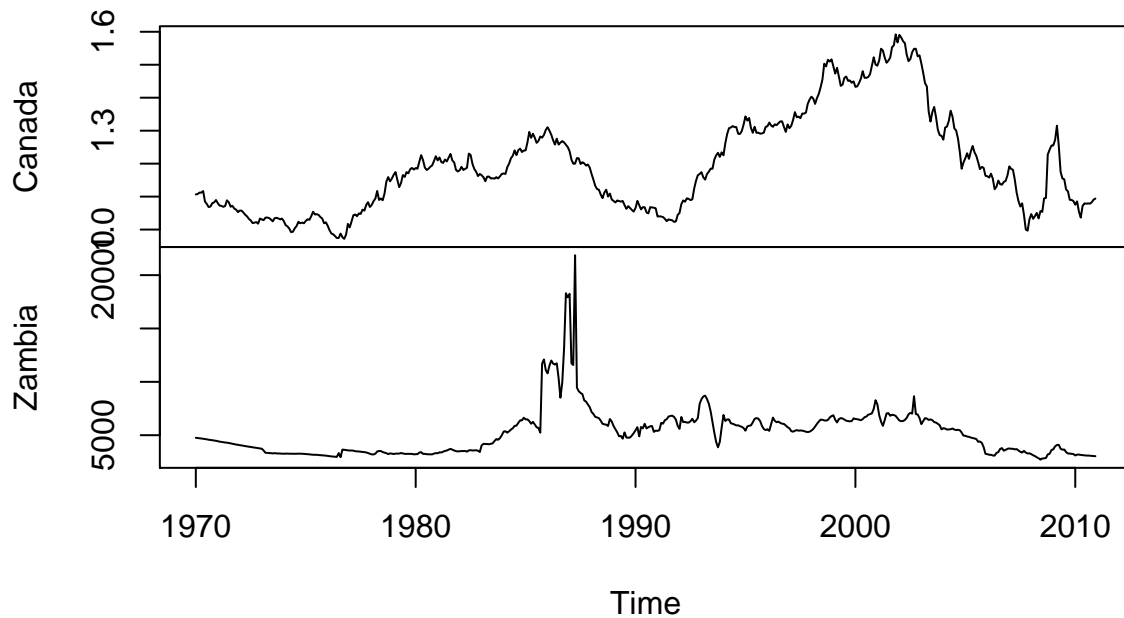
Datos

```
data <- read.csv("est46114_s06_data.csv")  
data <- as.data.frame(data)  
data <- as.matrix(data)
```

```
T <- nrow(data); p <- ncol(data)-2
```

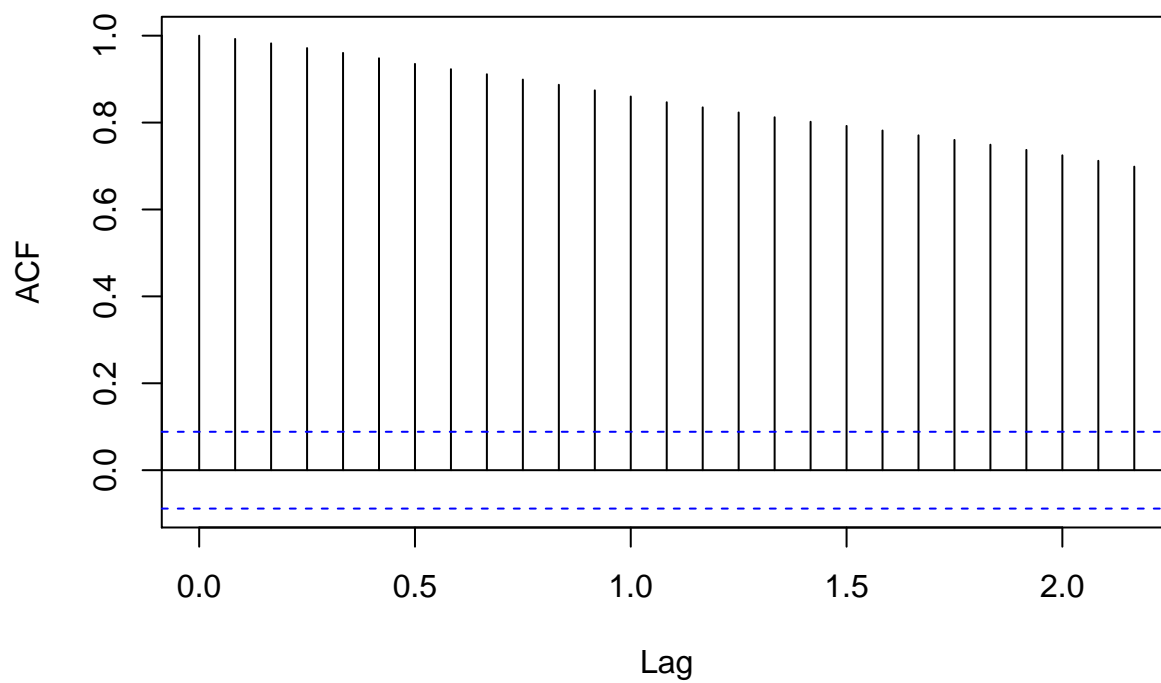
```
datats <- ts(data[,c(3,p+2)],start=c(1970, 1), end=c(2010, 12), frequency=12)  
plot(datats)
```

datats



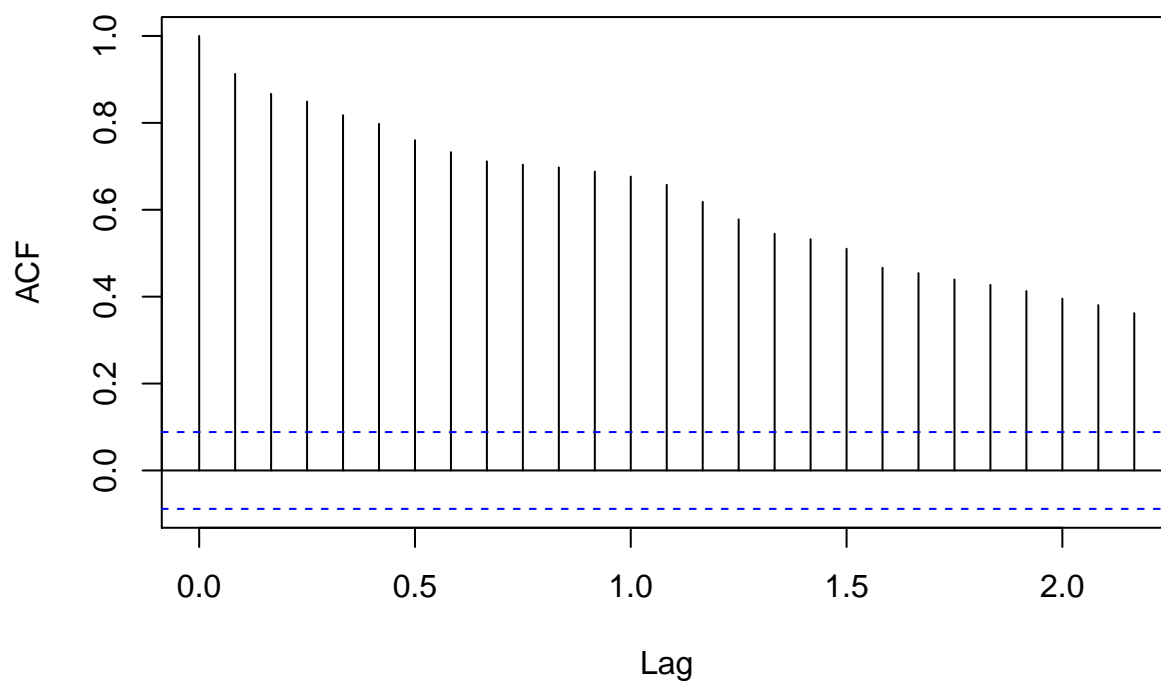
```
acf(datats[, "Canada"])
```

Series datats[, "Canada"]



```
acf(datats[, "Zambia"])
```

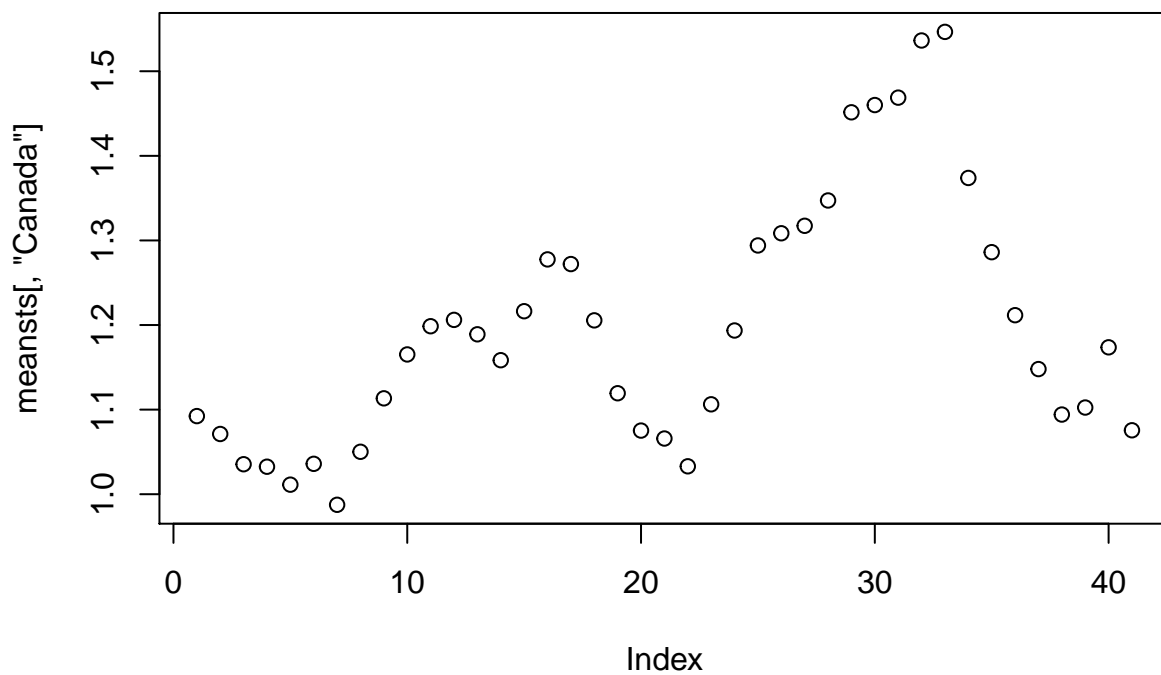
Series datats[, "Zambia"]



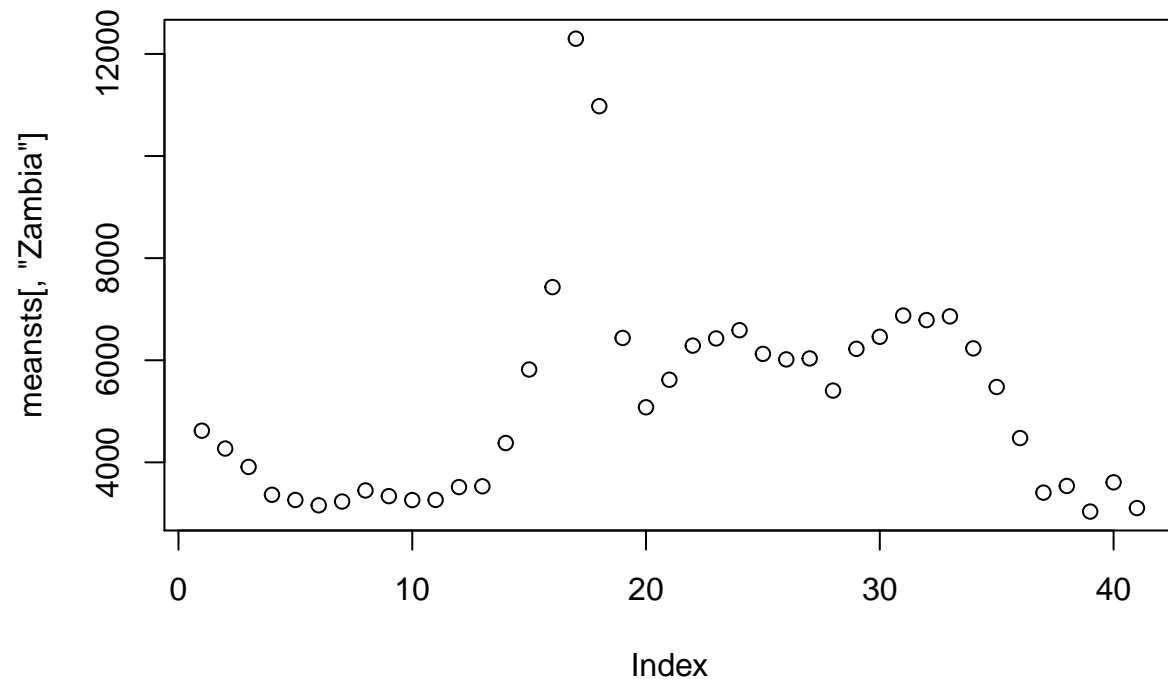
Medias dinamicas

```
datats <- ts(data[,3:(p+2)],start=c(1970, 1), end=c(2010, 12), frequency=12)
Y <- T/12
years <- seq(1970,2010,1)
meansts <- NA * datats[c(1:41),]
t <- 1
for(t in 1:Y){
  meansts[t, ] <- colMeans(data[which(data[, "Year"]==years[t]),3:(p+2)])
}
```

```
plot(meansts[, "Canada"])
```



```
plot(meansts[, "Zambia"])
```



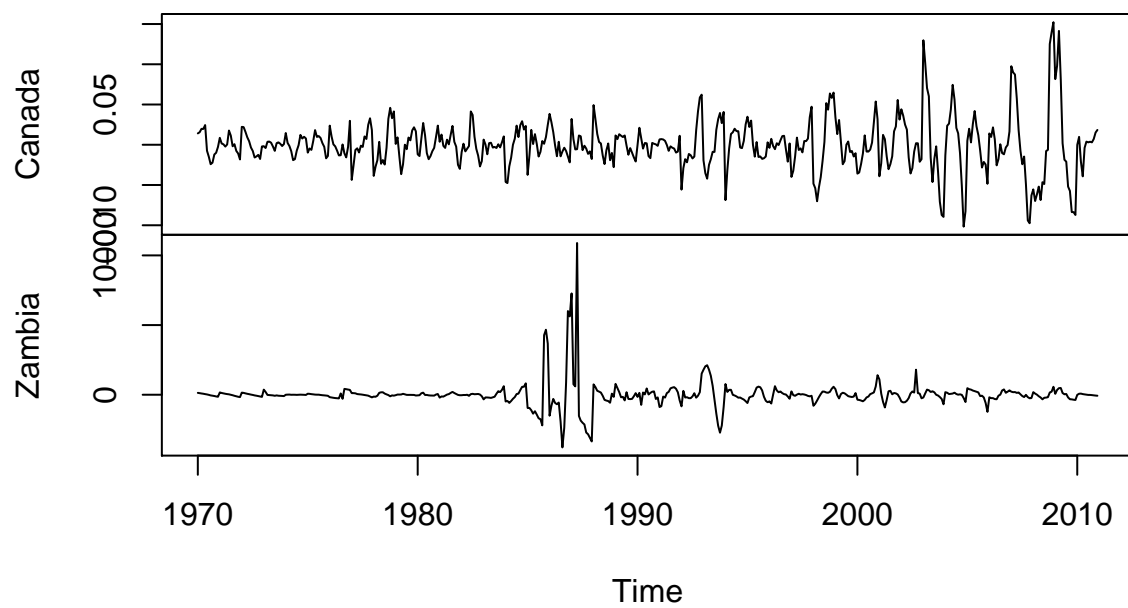
Centros

```
rep.row<-function(x,n){
  matrix(rep(x,each=n),nrow=n)
}
rep.col<-function(x,n){
  matrix(rep(x,each=n), ncol=n, byrow=TRUE)
}
```

```
datatsc <- datats
t <- 1
for(t in 1:Y){
  datatsc[which(data[, "Year"]==years[t]),] <- datats[which(data[, "Year"]==years[t]),] - rep.row(meansts
```

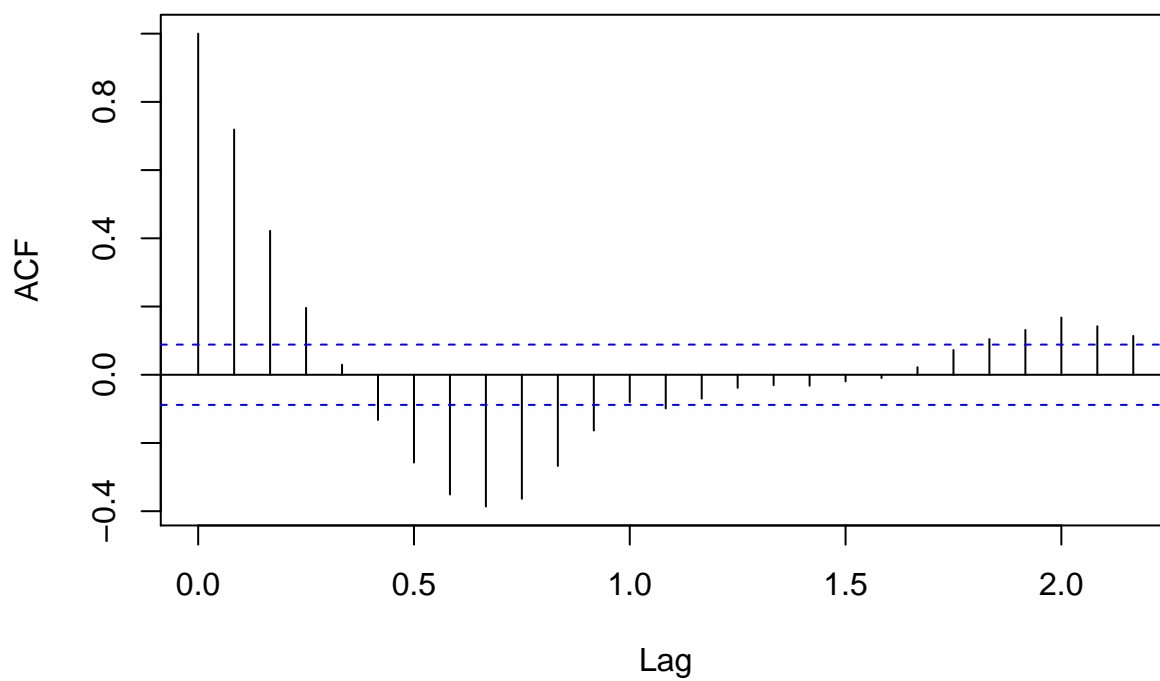
```
plot(datatsc[,c("Canada", "Zambia")])
```

datatssc[, c("Canada", "Zambia")]



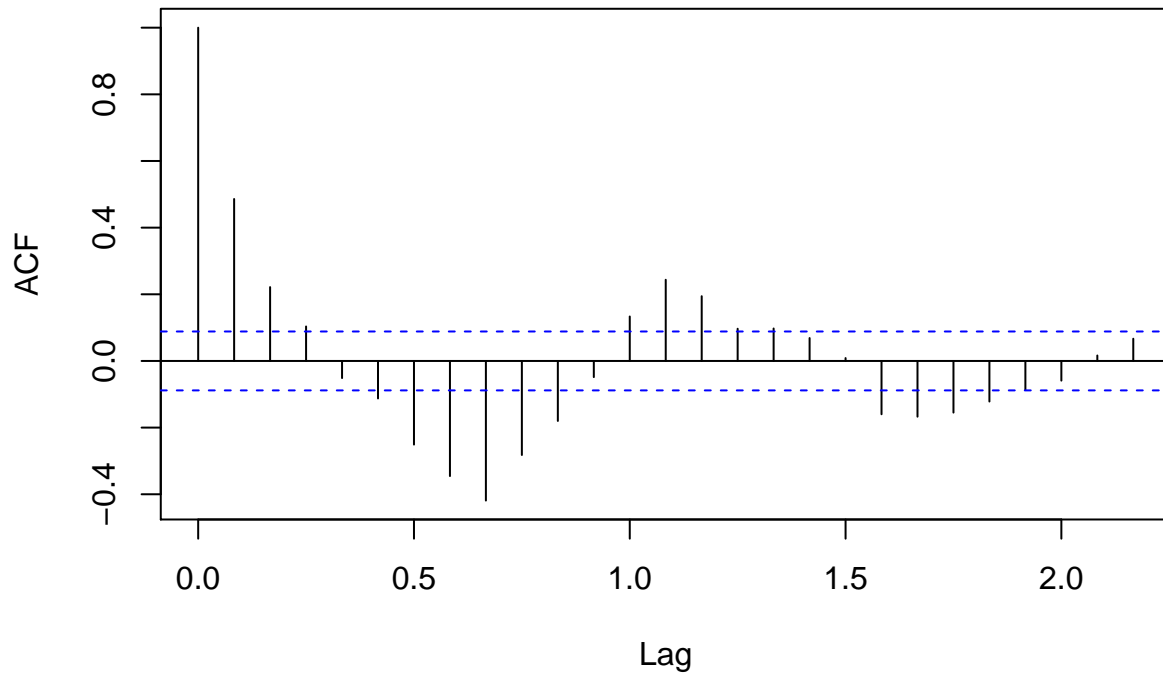
```
acf(datatssc[, "Canada"])
```

Series datatssc[, "Canada"]



```
acf(datatssc[, "Zambia"])
```

Series datatssc[, "Zambia"]



```
scatter.smooth(datatssc[,c("Canada", "Zambia")])
```

