

Ejercicio 3

Curso: Econometría II

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```
base <- read_excel("pib_fbkf_chile.xlsx", skip = 2)
colnames(base) <- c("Periodo", "fbcf", "PIB")
base$Periodo <- as.Date(base$Periodo, format="%Y-%m-%d")
```

Pregunta 1:

Creación variables logaritmicas y diferencias

```
#Var log
base <- base %>% mutate(log_PIB = log(PIB), log_fbfcf = log(fbfcf))

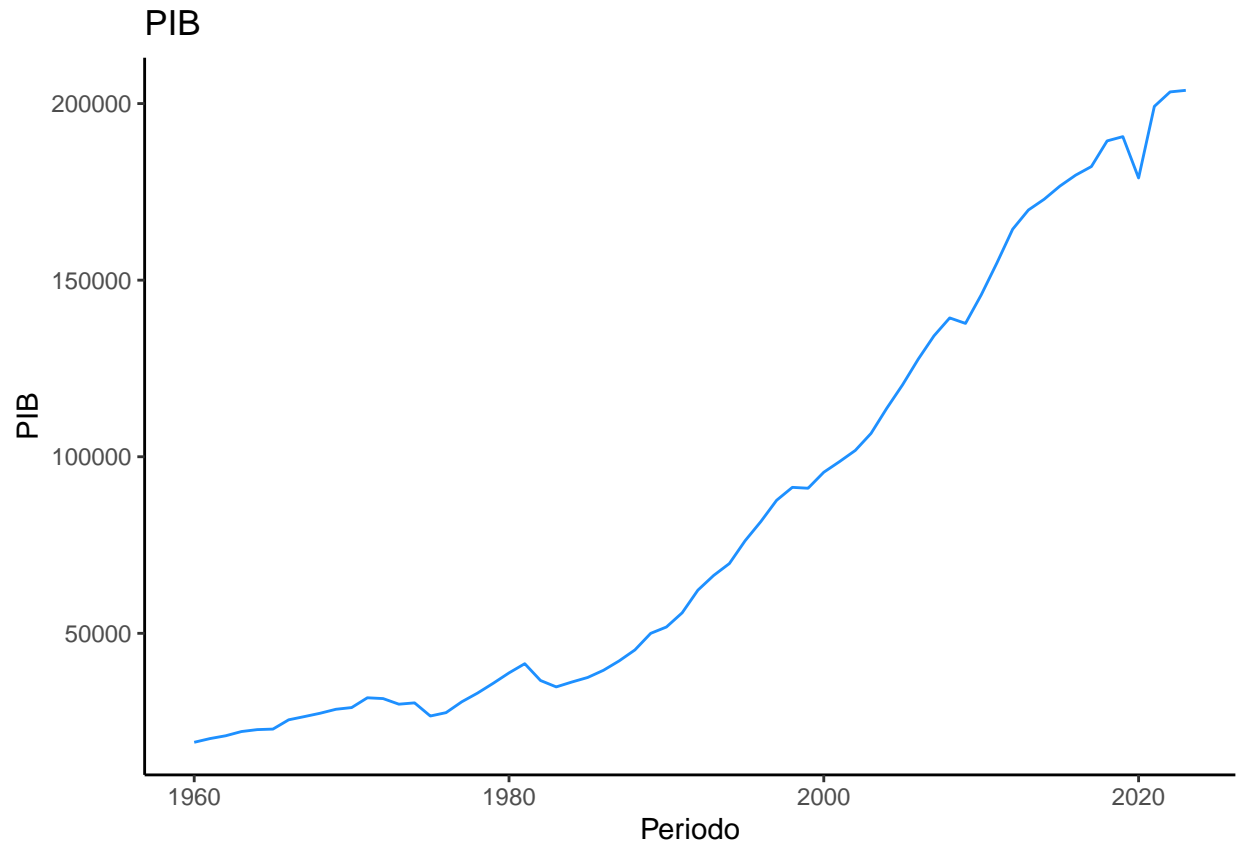
#Dif
base <- base %>% mutate(d_log_PIB = log_PIB - lag(log_PIB), d_log_fbfcf = log_fbfcf - lag(log_fbfcf))

head(base)
```

```
## # A tibble: 6 x 7
##   Periodo      fbcf      PIB log_PIB log_fbfcf d_log_PIB d_log_fbfcf
##   <date>      <dbl>   <dbl>   <dbl>   <dbl>      <dbl>      <dbl>
## 1 1960-01-01 2667. 19142.    9.86    7.89      NA          NA
## 2 1961-01-01 2702. 20199.    9.91    7.90    0.0537    0.0128
## 3 1962-01-01 3033. 20993.    9.95    8.02    0.0386    0.116
## 4 1963-01-01 3481. 22187.   10.0    8.16    0.0553    0.138
## 5 1964-01-01 3283. 22733.   10.0    8.10    0.0243   -0.0587
## 6 1965-01-01 3084. 22885.   10.0    8.03    0.00669  -0.0623
```

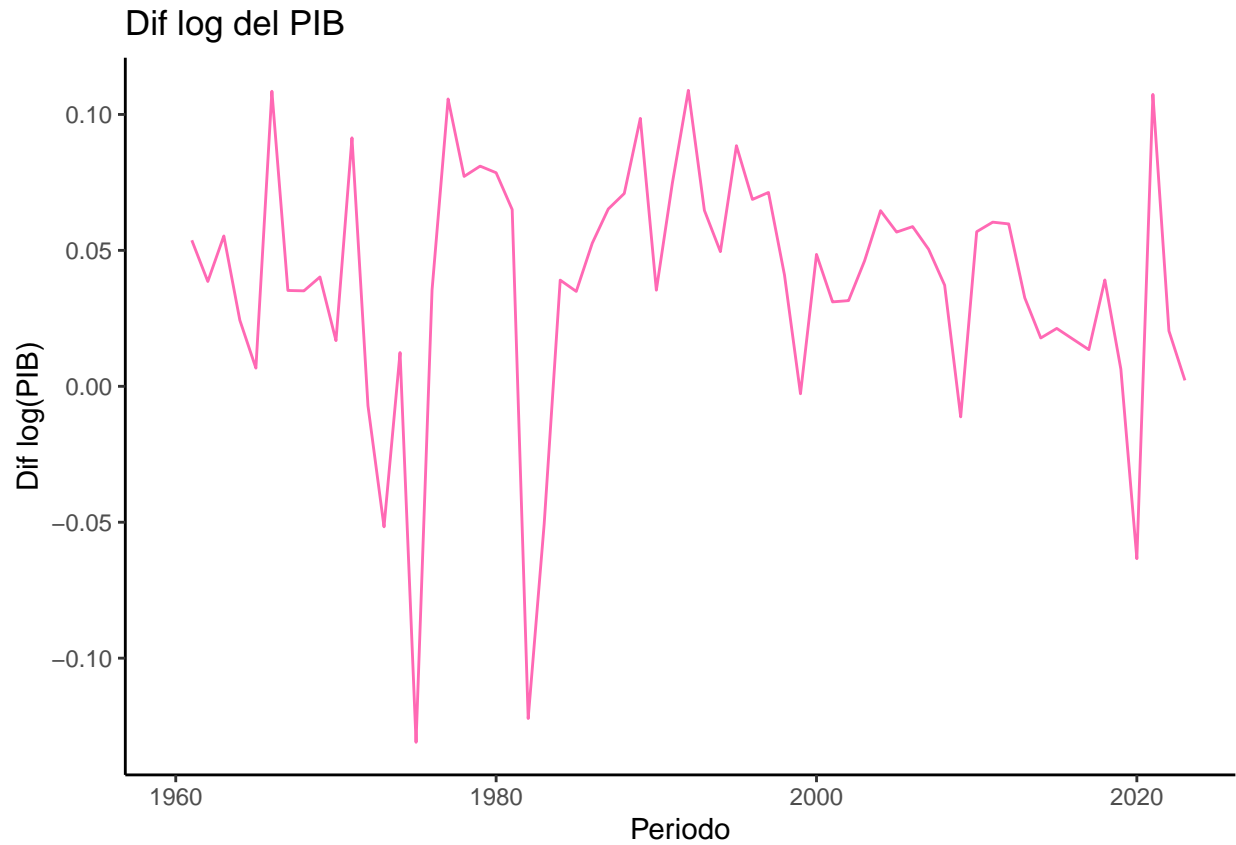
Gráficos

```
ggplot(base, aes(x = Periodo)) +
  geom_line(aes(y = PIB), color = "dodgerblue") +
  labs(title = "PIB", x = "Periodo", y = "PIB") +
  theme_classic()
```

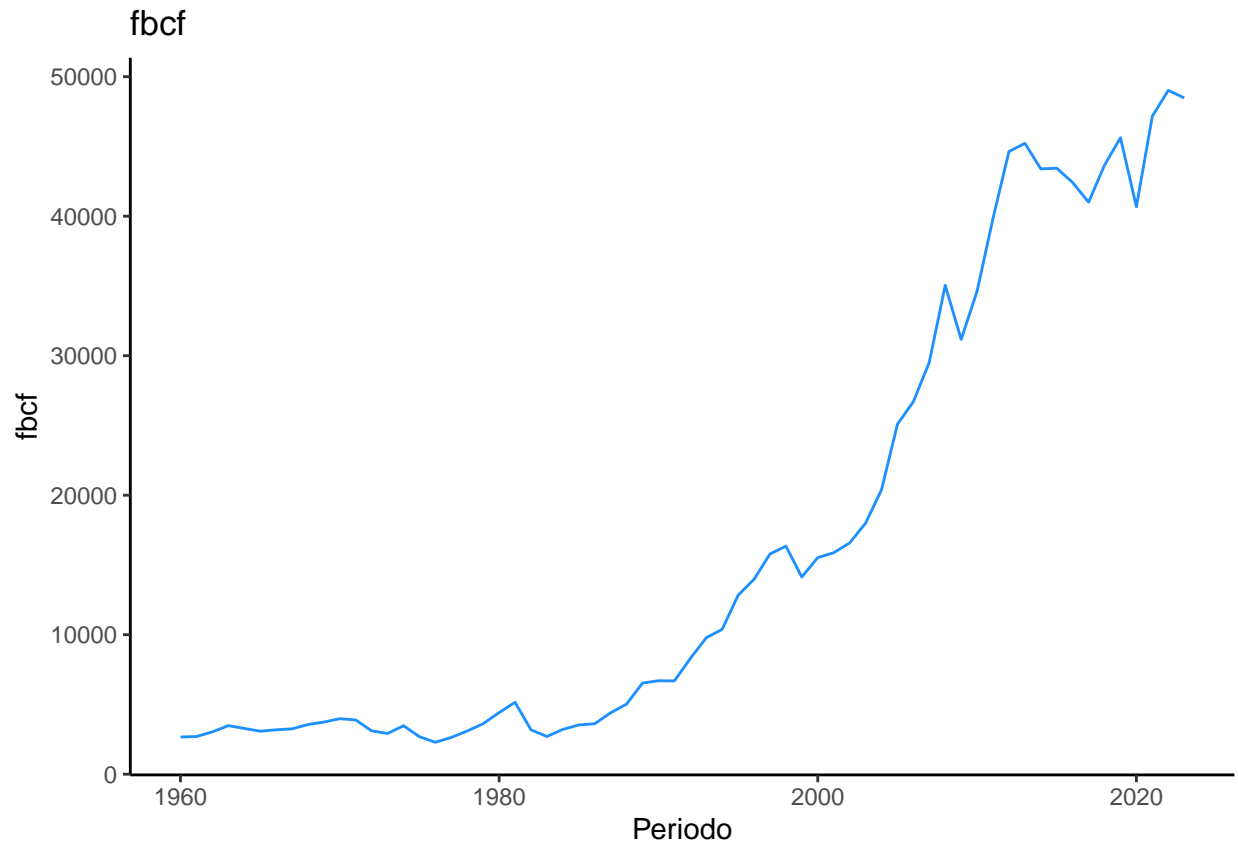


```
ggplot(base, aes(x = Periodo)) +  
  geom_line(aes(y = d_log_PIB), color = "hotpink") +  
  labs(title = "Dif log del PIB", x = "Periodo", y = "Dif log(PIB)") +  
  theme_classic()
```

```
## Warning: Removed 1 row containing missing values or values outside the scale range  
## ('geom_line()').
```



```
ggplot(base, aes(x = Periodo)) +  
  geom_line(aes(y = fbpcf), color = "dodgerblue") +  
  labs(title = "fbpcf", x = "Periodo", y = "fbpcf") +  
  theme_classic()
```



```
ggplot(base, aes(x = Periodo)) +  
  geom_line(aes(y = d_log_fbcf), color = "hotpink") +  
  labs(title = "Dif log de la fbcf", x = "Periodo", y = "Dif log(fbcf)") +  
  theme_classic()
```

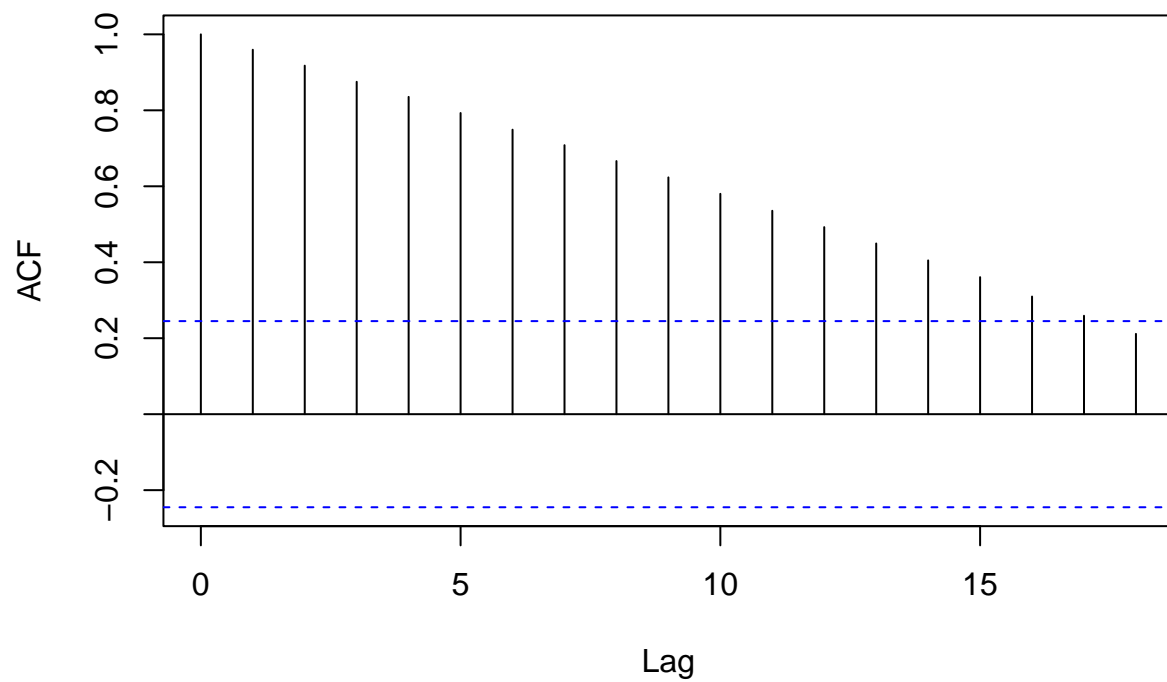
```
## Warning: Removed 1 row containing missing values or values outside the scale range  
## ('geom_line()').
```



Funciones de Autocorrelación

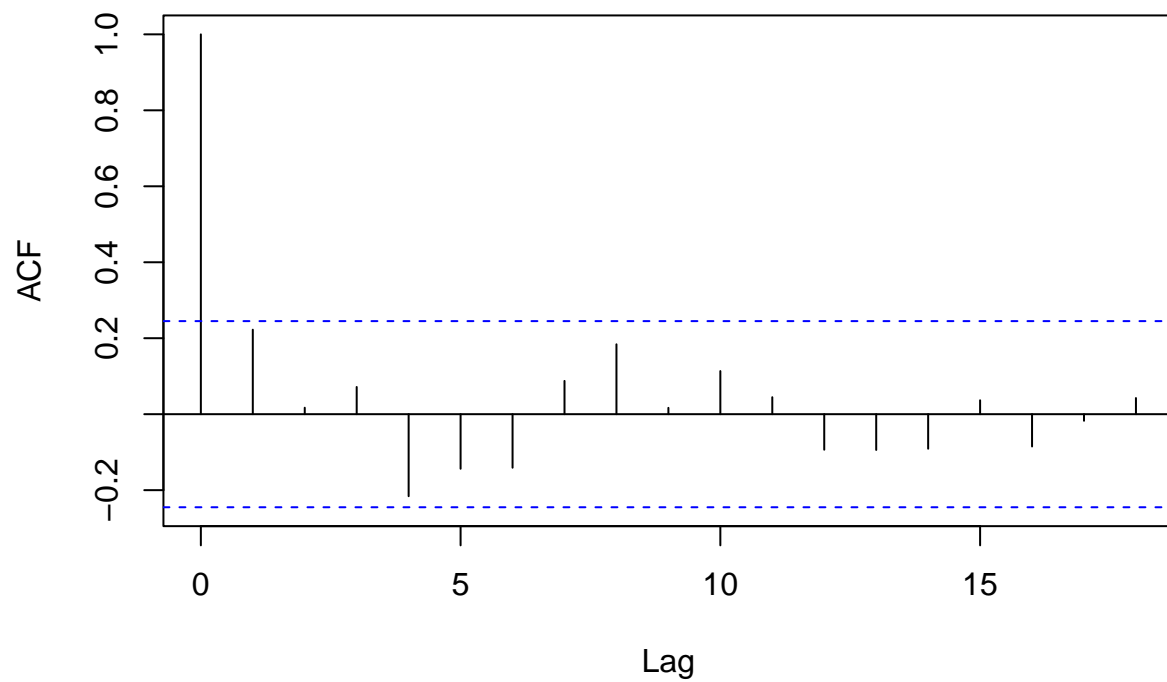
```
acf(base$log_PIB, main = "Función de Autocorrelación del log(PIB)")
```

Función de Autocorrelación del log(PIB)



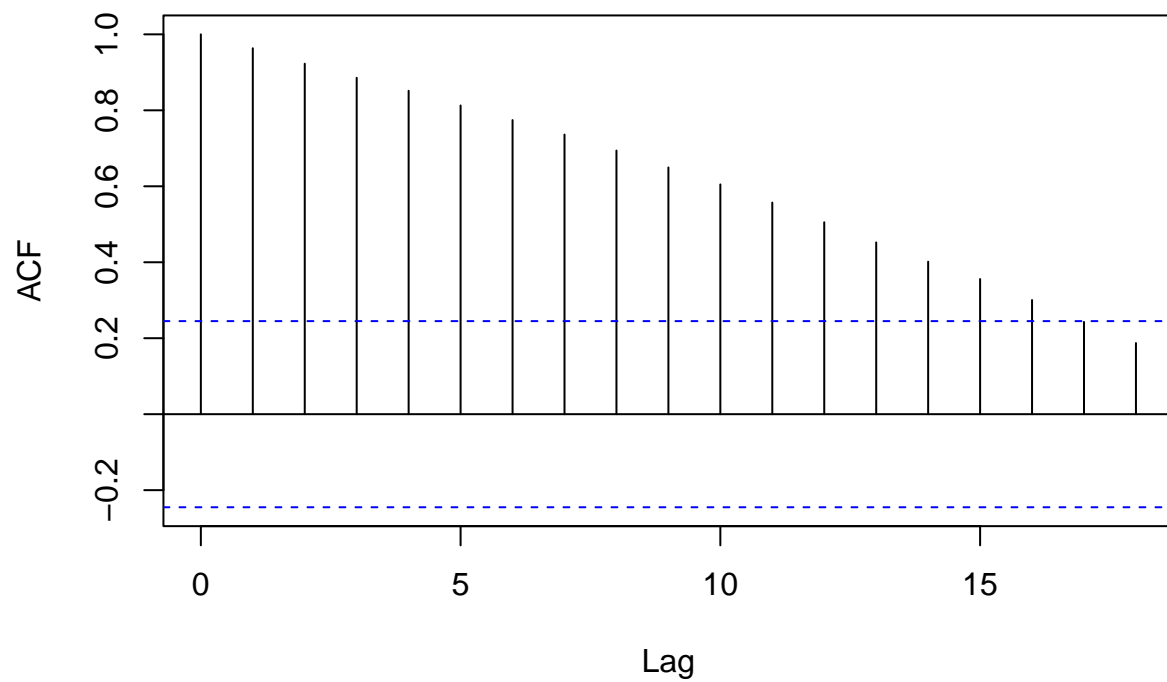
```
acf(base$d_log_PIB, main = "Función de Autocorrelación de Dif log(PIB)", na.action = na.
```

Función de Autocorrelación de Dif log(PIB)



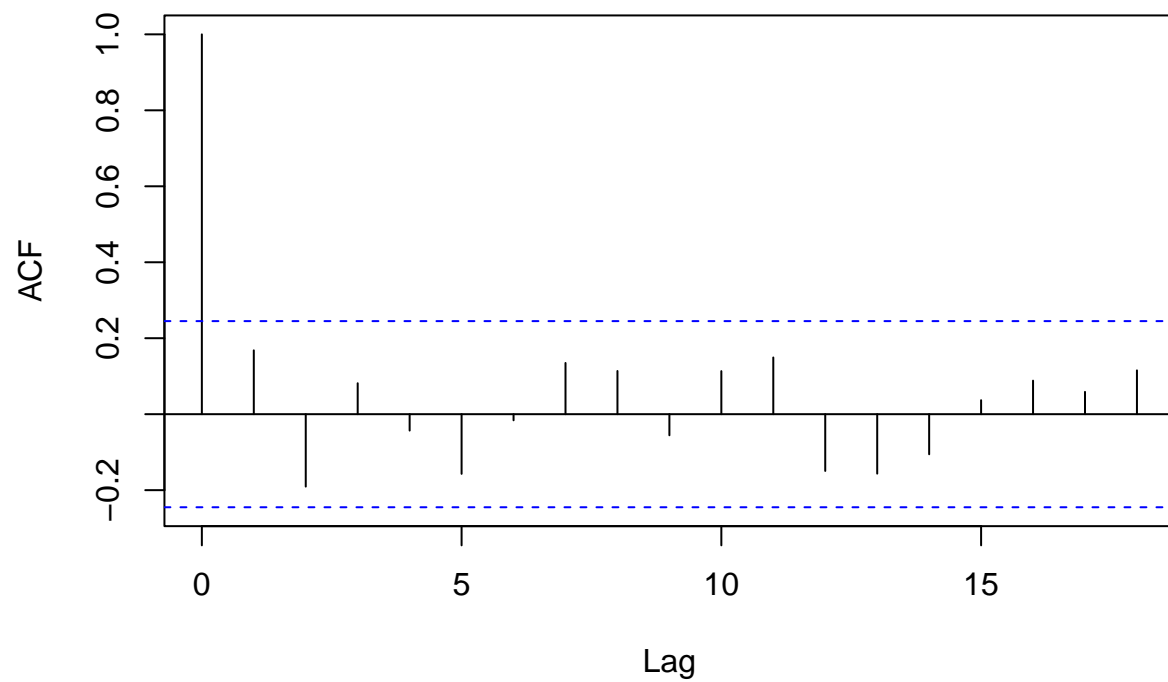
```
acf(base$log_fbcf, main = "Función de Autocorrelación del log(FBCF)")
```

Función de Autocorrelación del log(FBCF)



```
acf(base$d_log_fbcf, main = "Función de Autocorrelación de Dif log(FBCF)", na.action = na)
```


Función de Autocorrelación de Dif log(FBCF)



Pregunta 2: