

Descritivas

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```
# Importando bibliotecas
```

```
library(tidyr)  
library(dplyr)
```

```
##
```

```
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
```

```
##
```

```
## filter, lag
```

```
## The following objects are masked from 'package:base':
```

```
##
```

```
## intersect, setdiff, setequal, union
```

```
library(readxl)  
library(ggplot2)
```

```
# baixar a base dos Tigres
```

```
caminho <- "C:/Users/jcase/OneDrive/Joao/Insper/6 semestre/Problemas em Economia/Econometria/Descritivas"
```

```
tratados <- read_excel(caminho, sheet = "Dados")
```

```
# Puxar a base com essas medidas para os paises que temos dados controle
```

```
caminho <- "C:/Users/jcase/OneDrive/Joao/Insper/6 semestre/Problemas em Economia/Econometria/Descritivas"
```

```
controles <- read_excel(caminho, sheet = "Dados")
```

```
# Descritivas dos paises controles
```

```
paises_unicos <- unique(controles$exporter_iso3)
```

```
for (pais in paises_unicos) {
```

```
  dados_pais <- filter(controles, exporter_iso3 == pais)
```

```

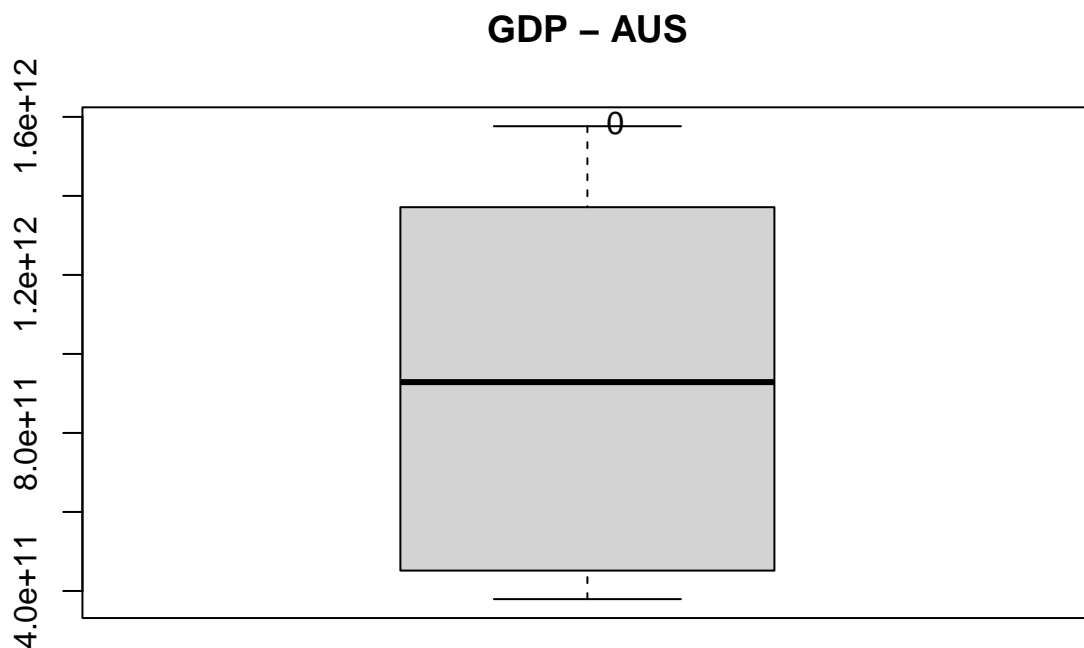
variaveis_numericas <- dados_pais %>% select(GDP, dot_L, unemployment)

resultados2 <- data.frame(Variavel = character(0), Min = numeric(0), Q1 = numeric(0), Mediana = numeric(0), Q3 = numeric(0), Max = numeric(0))

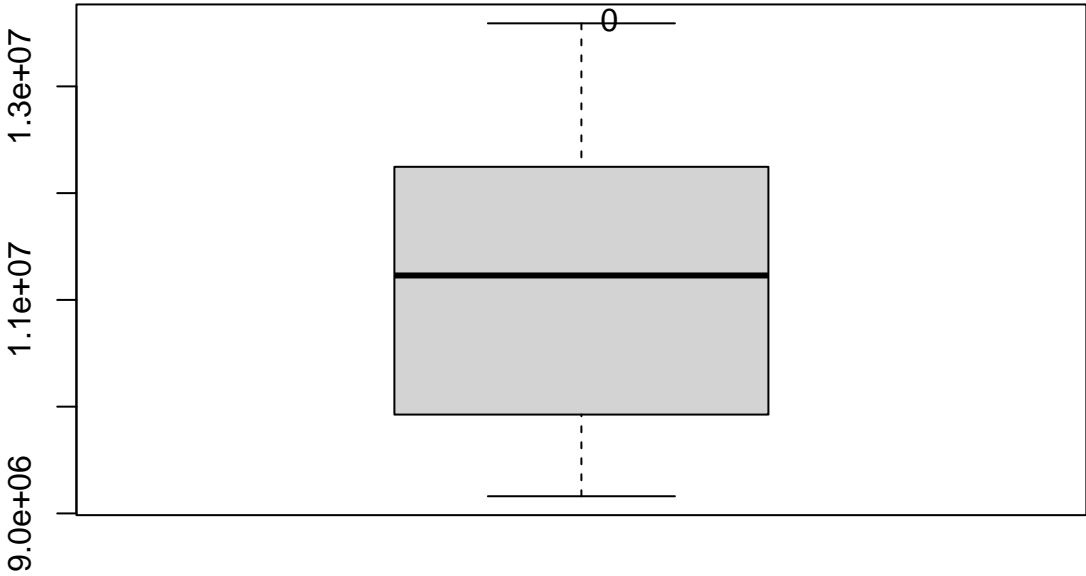
for (coluna in colnames(variaveis_numericas)) {
  quantis <- quantile(variaveis_numericas[[coluna]], c(0, 0.25, 0.5, 0.75, 1))
  min_valor <- min(variaveis_numericas[[coluna]])
  max_valor <- max(variaveis_numericas[[coluna]])
  iqr <- quantis[4] - quantis[2]
  limite_inferior <- quantis[2] - 1.5 * iqr
  limite_superior <- quantis[4] + 1.5 * iqr
  outliers <- length(variaveis_numericas[[coluna]][variaveis_numericas[[coluna]] >= limite_superior | variaveis_numericas[[coluna]] <= limite_inferior])

  resultados2 <- rbind(resultados2, data.frame(Variavel = coluna, Min = min_valor, Q1 = quantis[2], Mediana = quantis[3], Q3 = quantis[4], Max = max_valor, outliers = outliers))
}

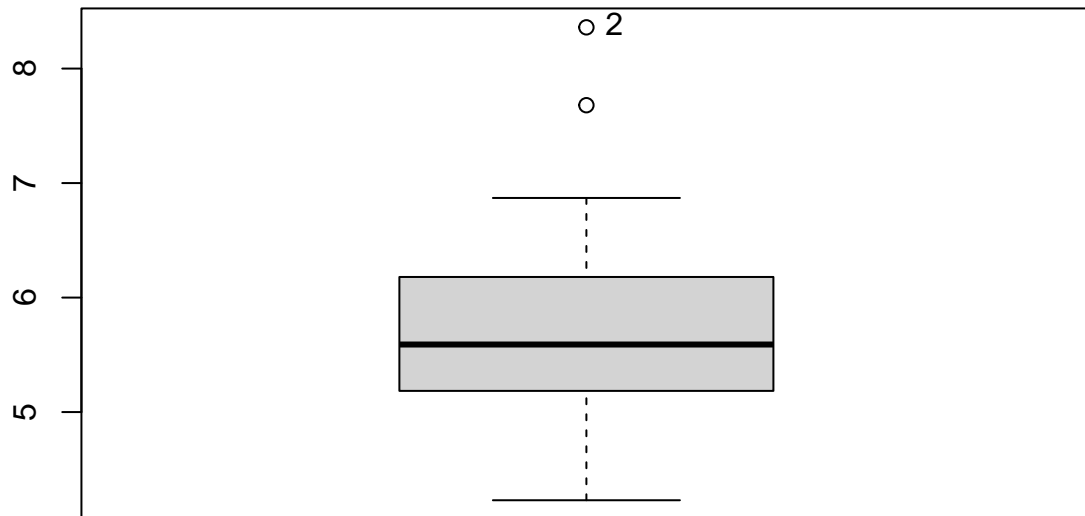
```



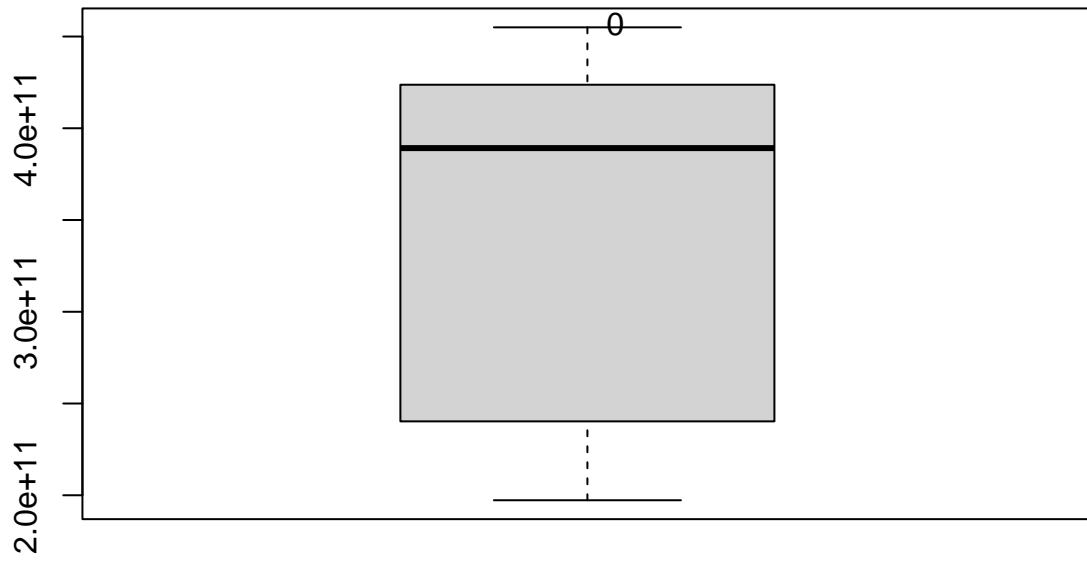
dot_L - AUS



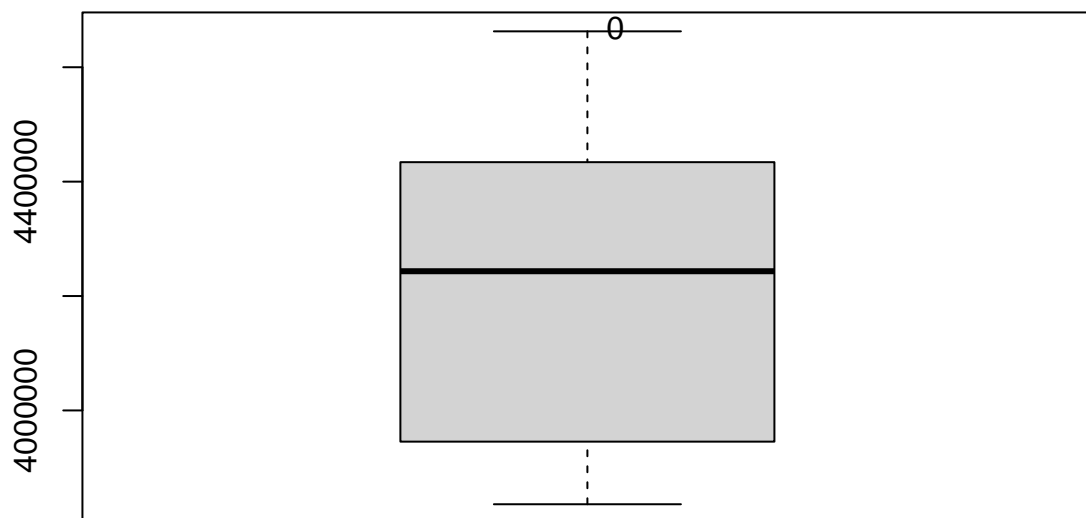
unemployment – AUS



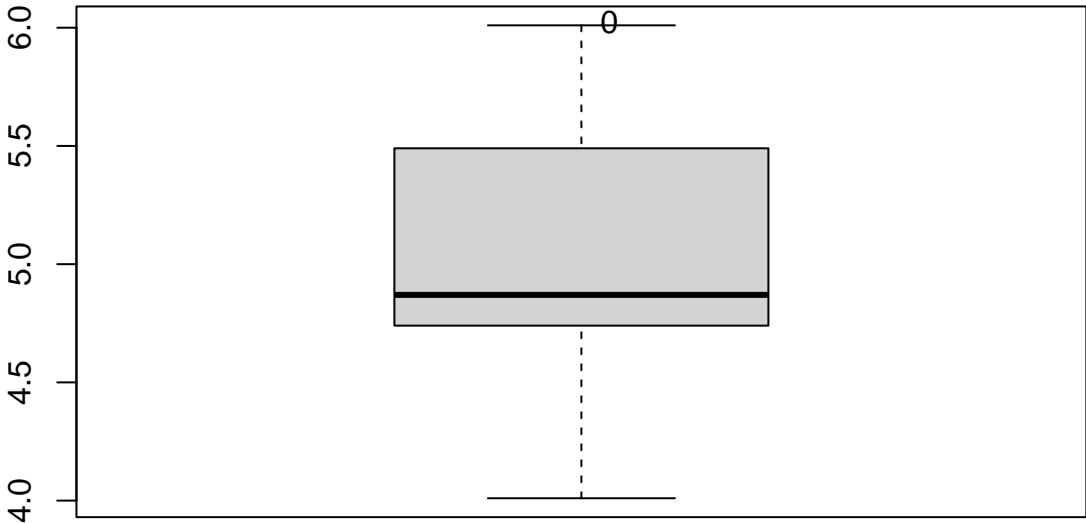
GDP – AUT



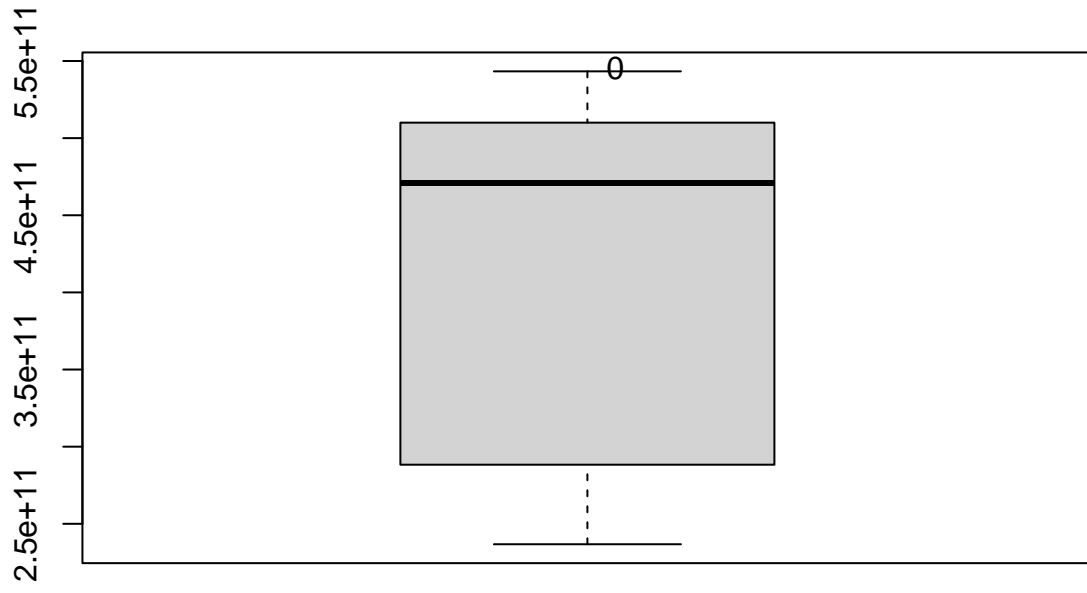
dot_L - AUT



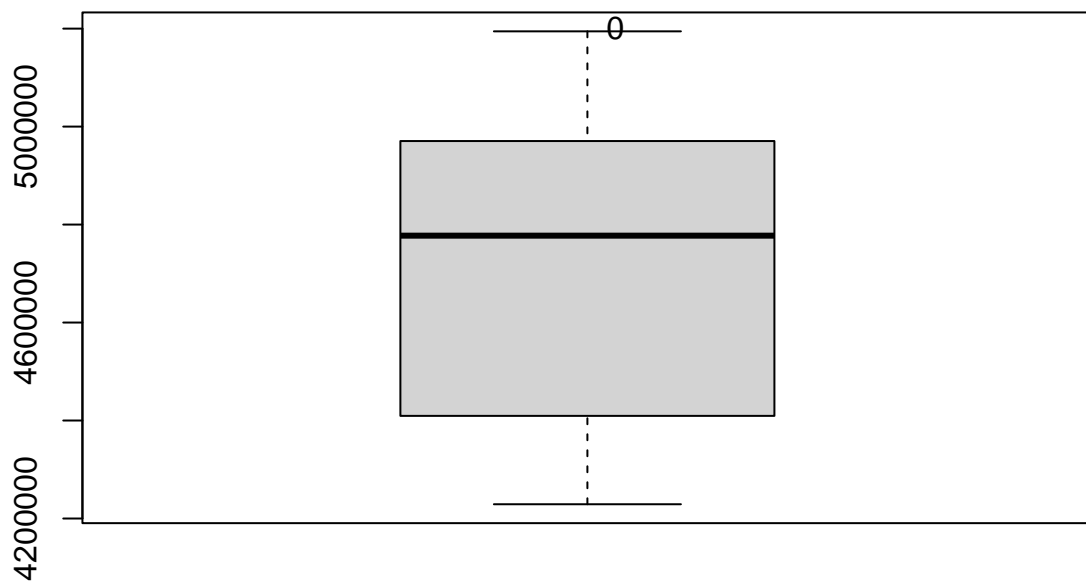
unemployment – AUT



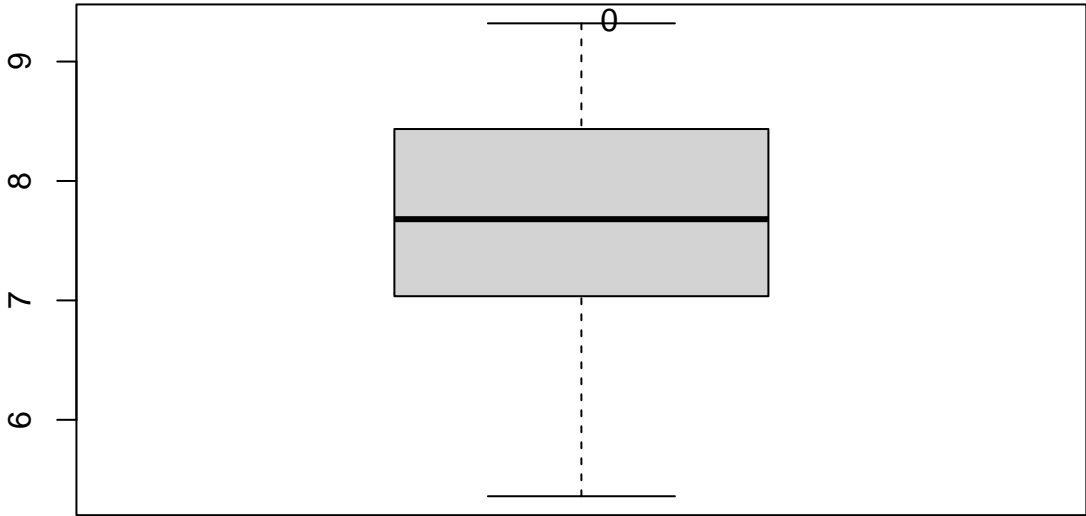
GDP – BEL



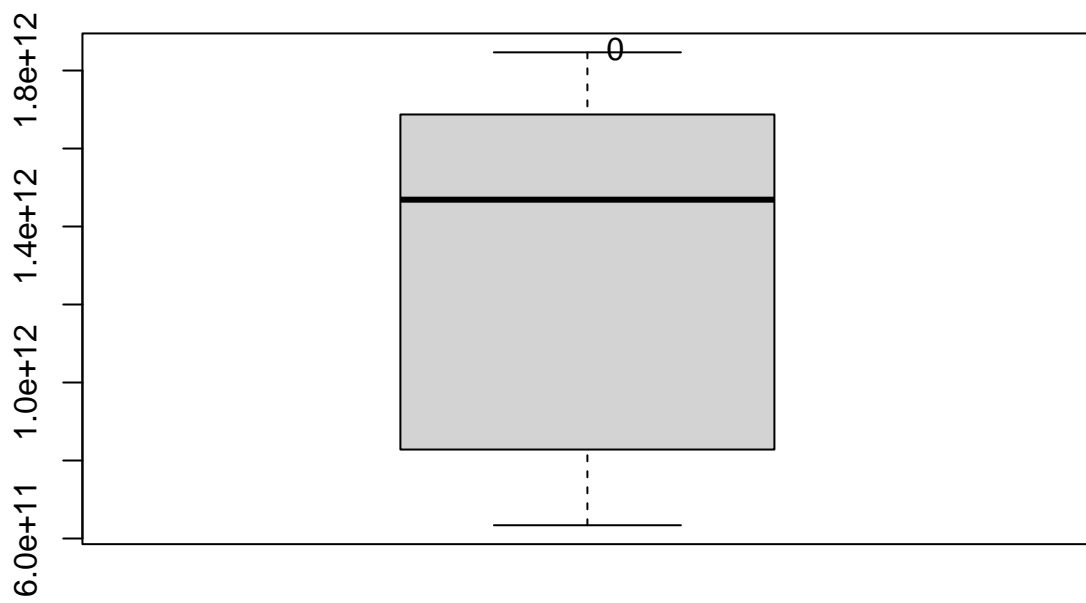
dot_L - BEL

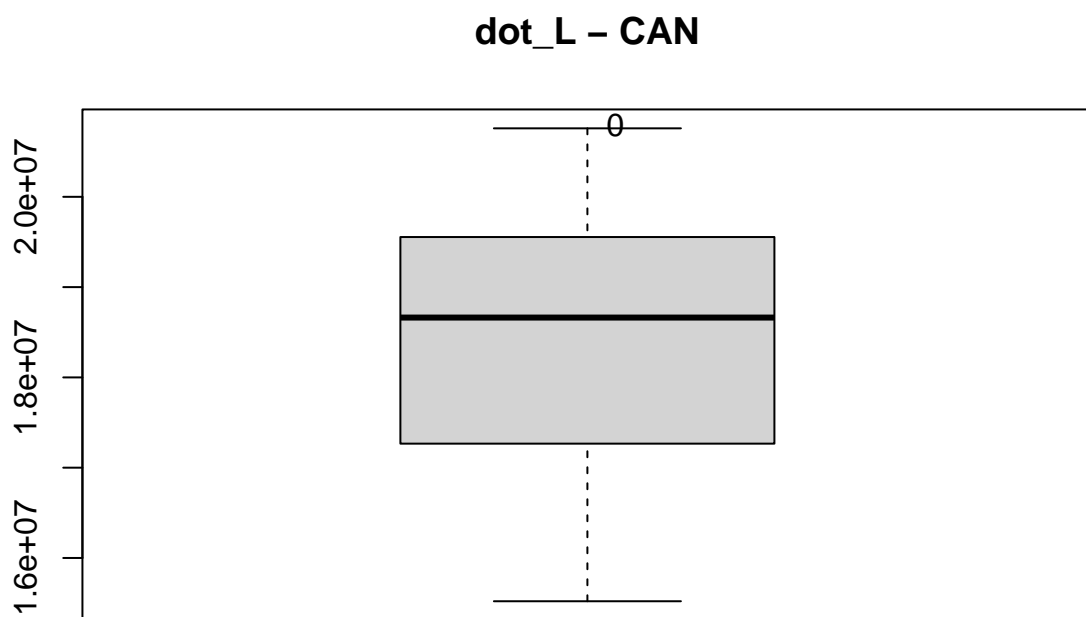


unemployment – BEL

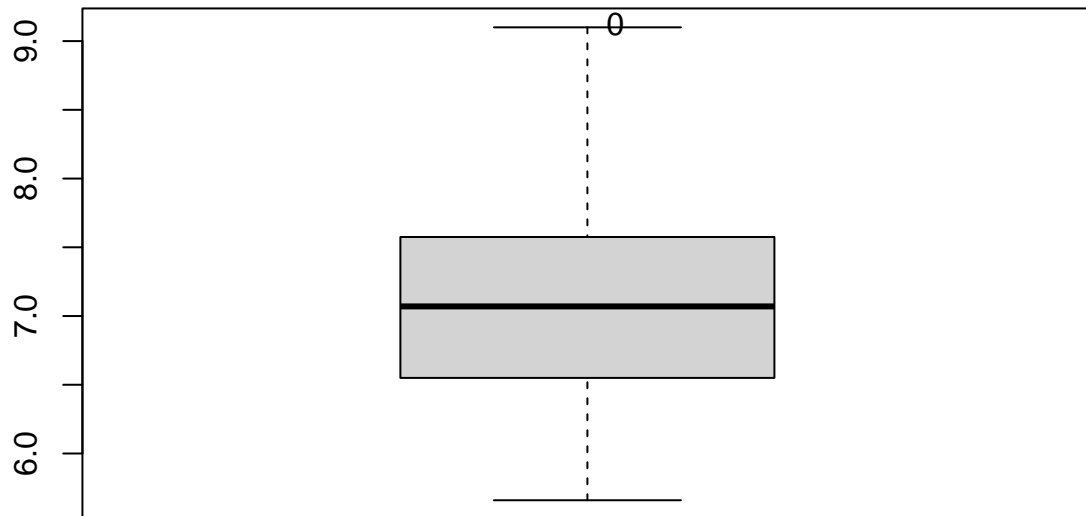


GDP – CAN

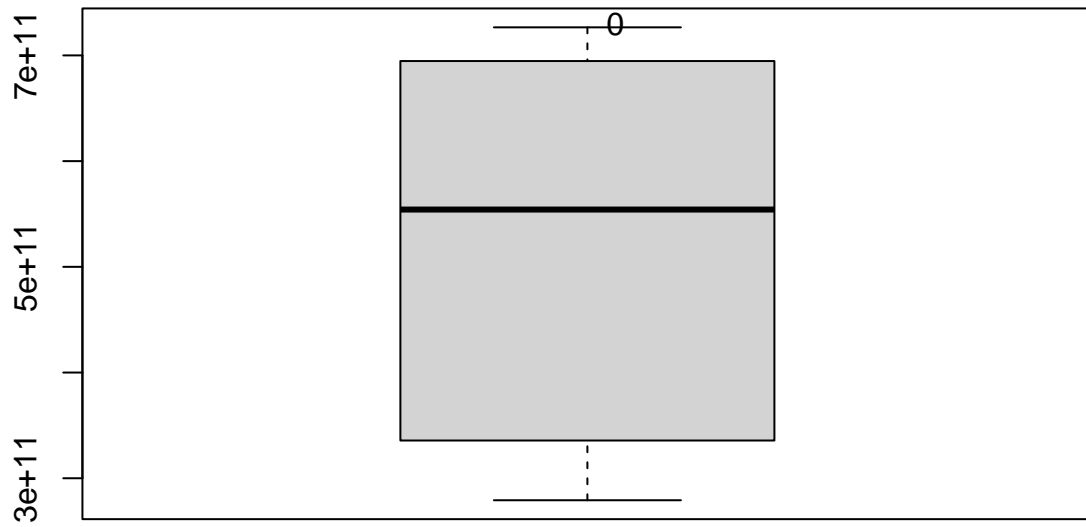




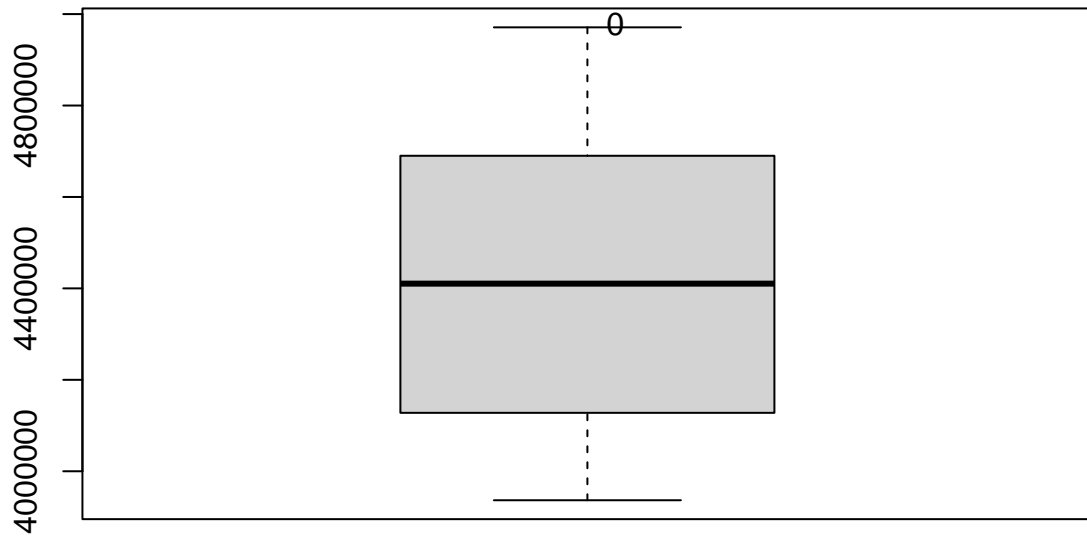
unemployment – CAN

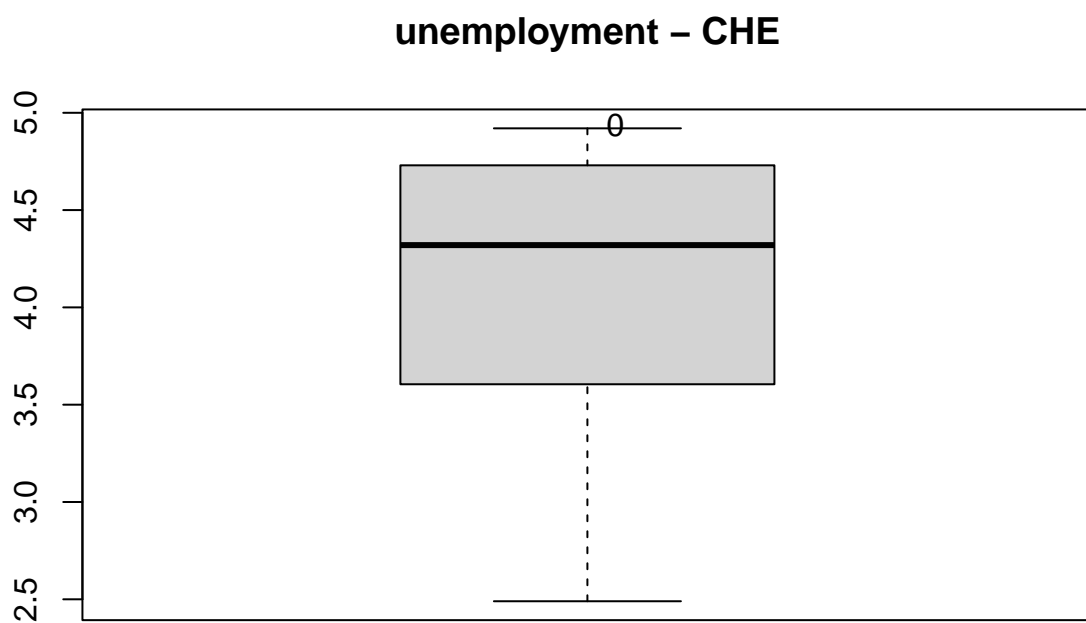


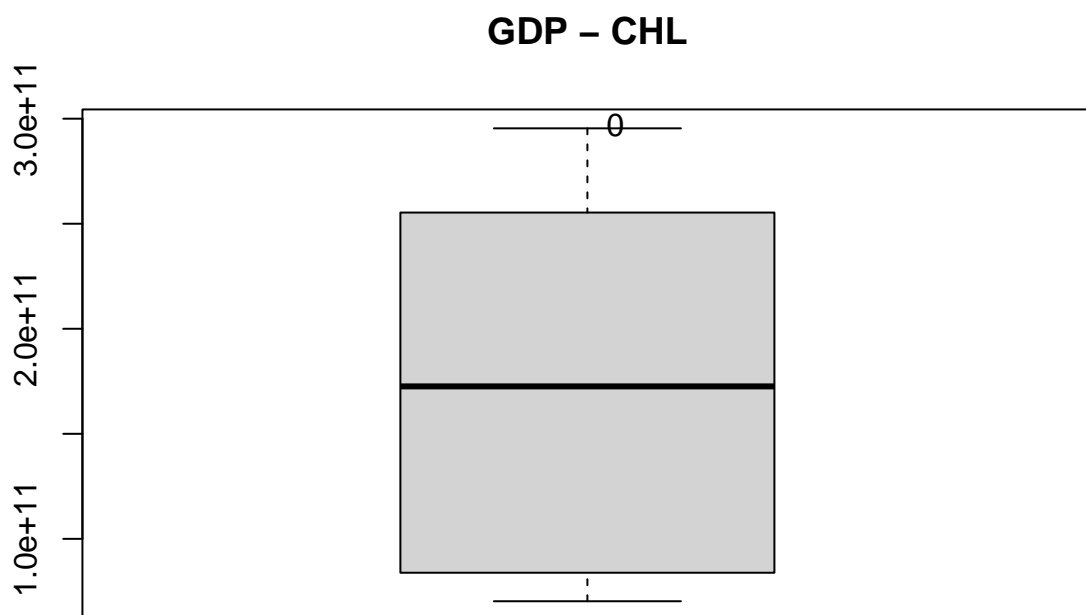
GDP – CHE



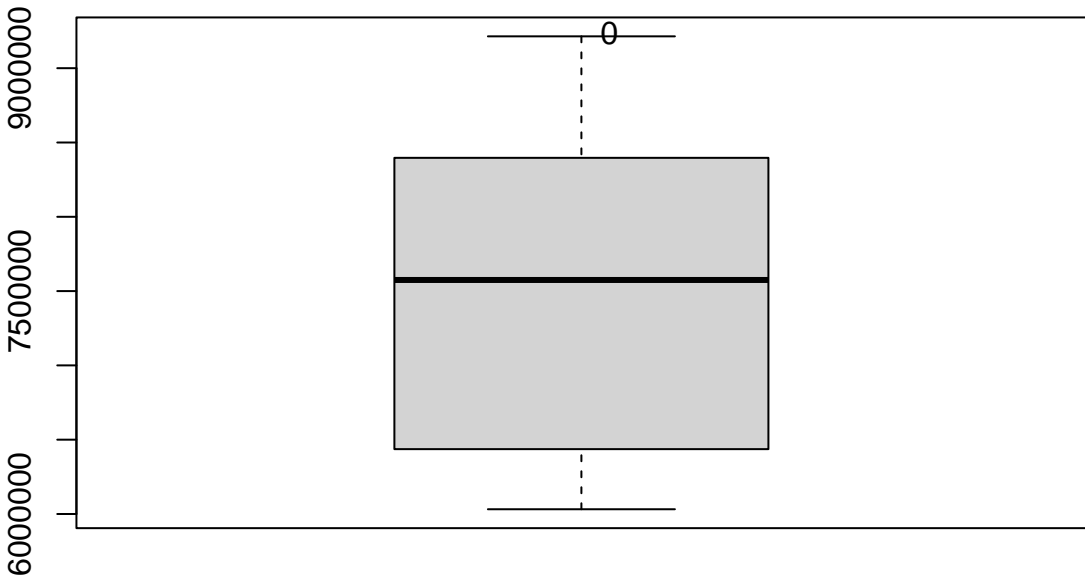
dot_L - CHE



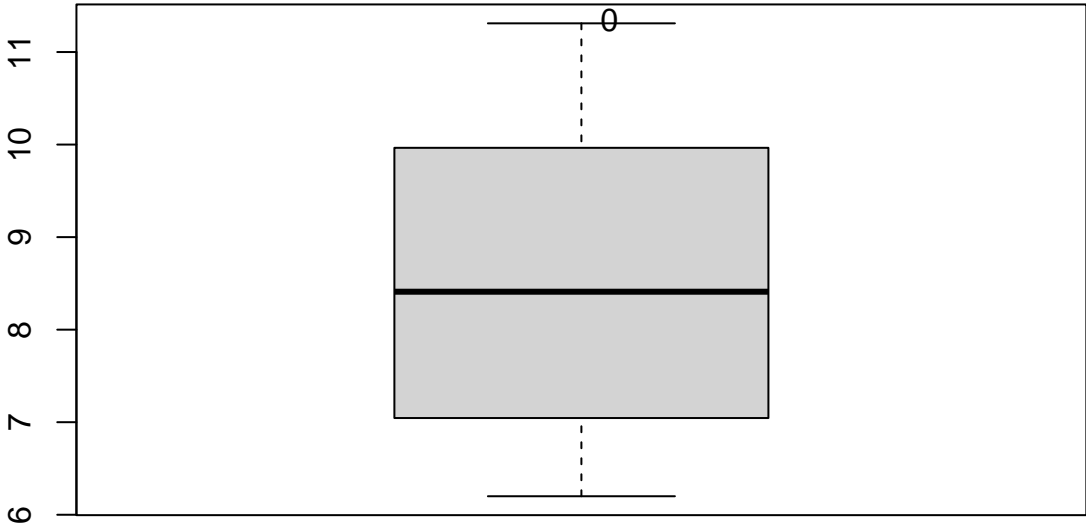




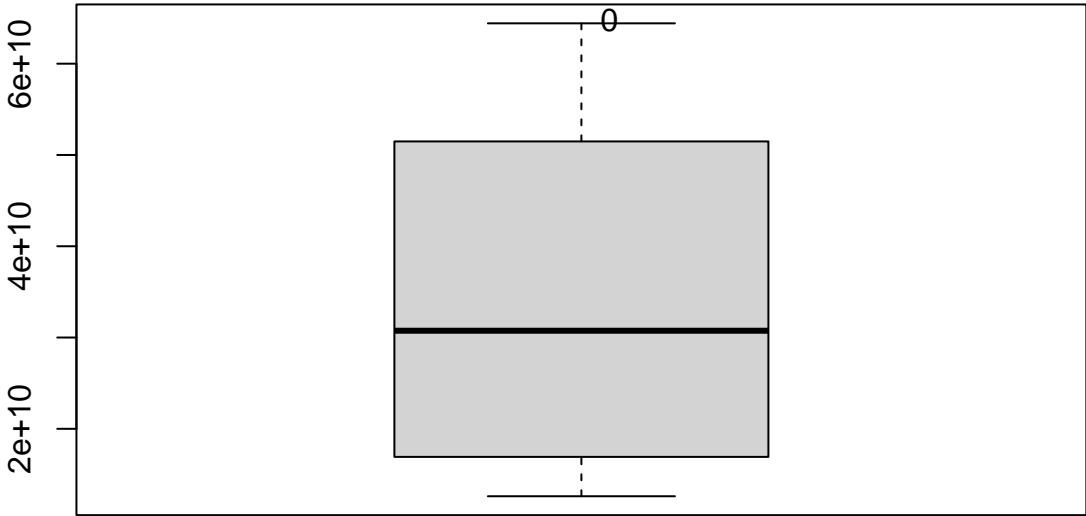
dot_L - CHL



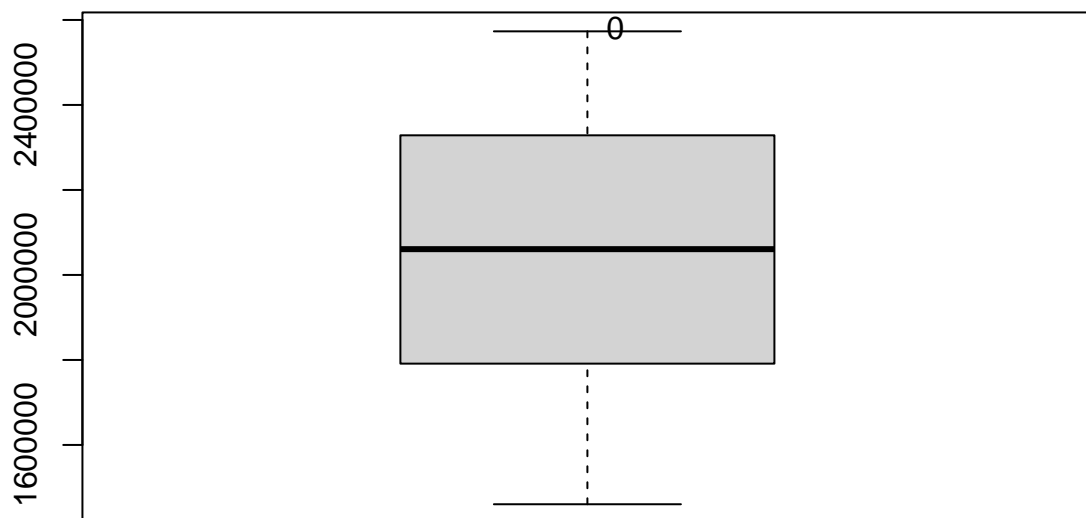
unemployment – CHL



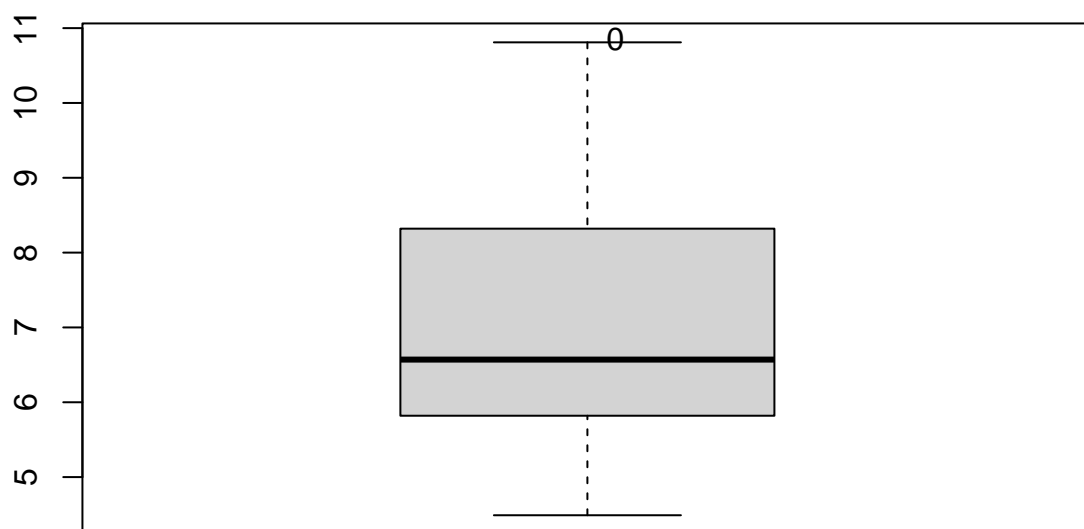
GDP – CRI



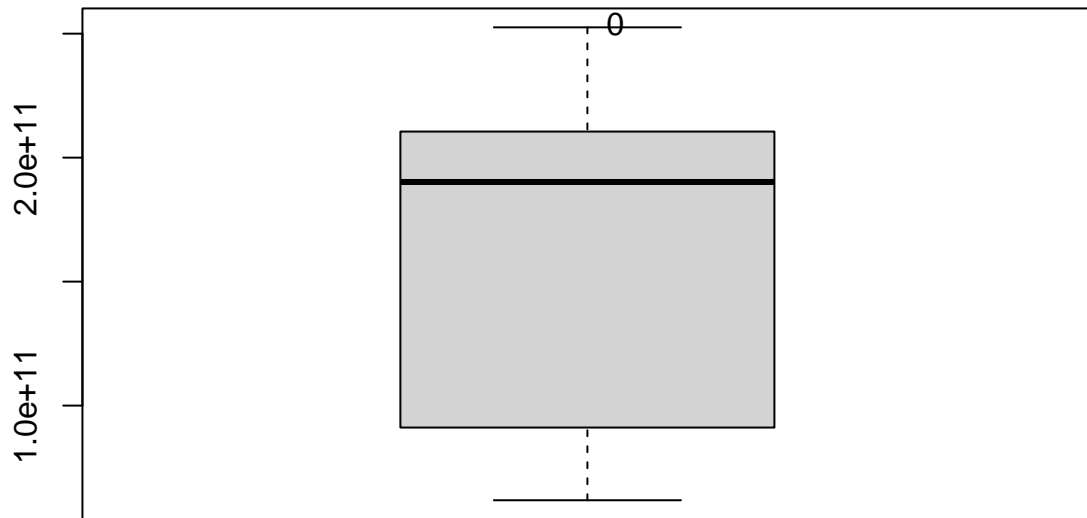
dot_L - CRI



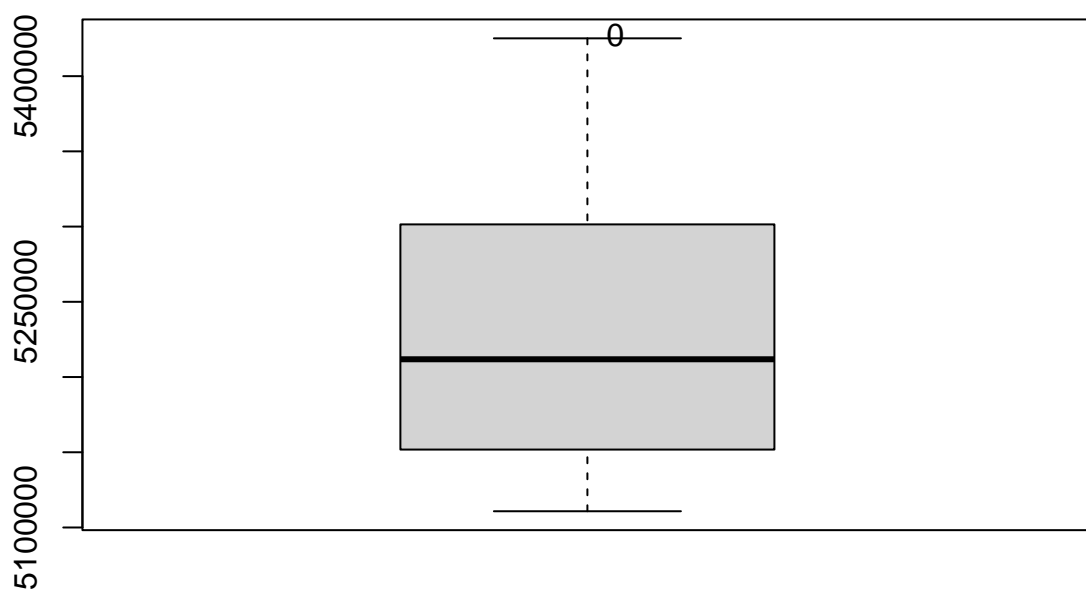
unemployment – CRI



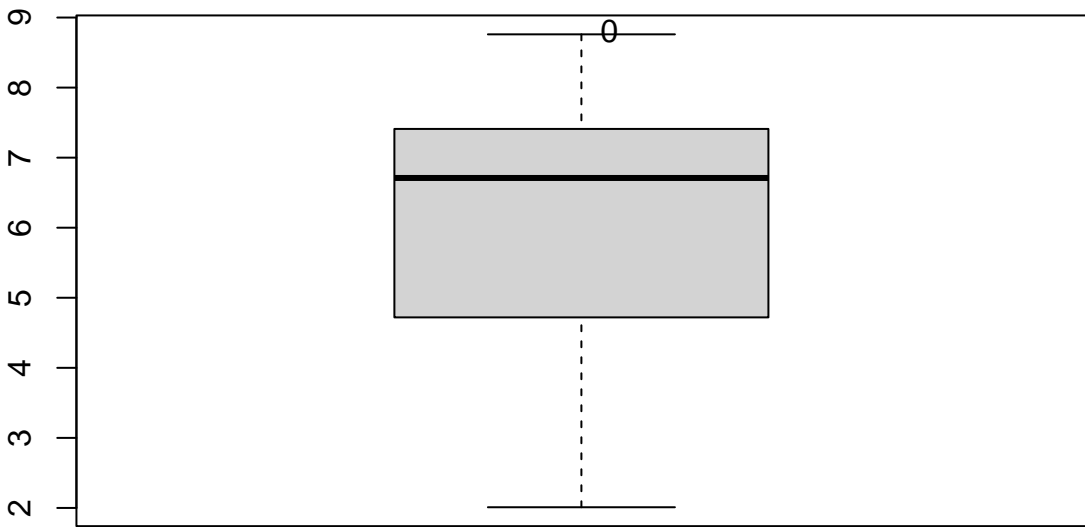
GDP – CZE

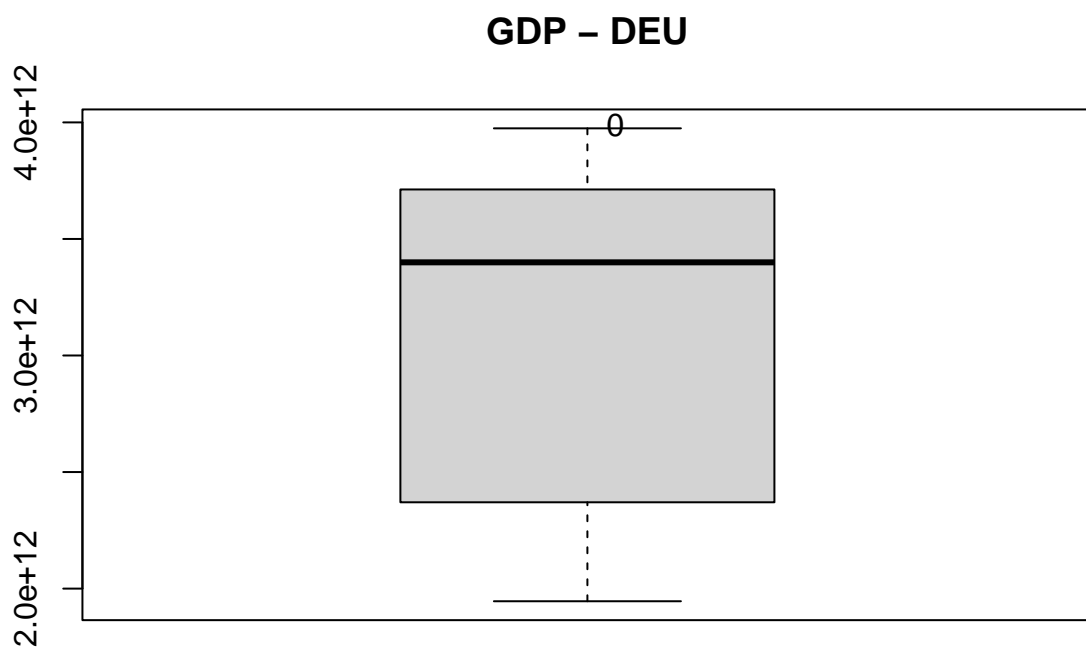


dot_L - CZE

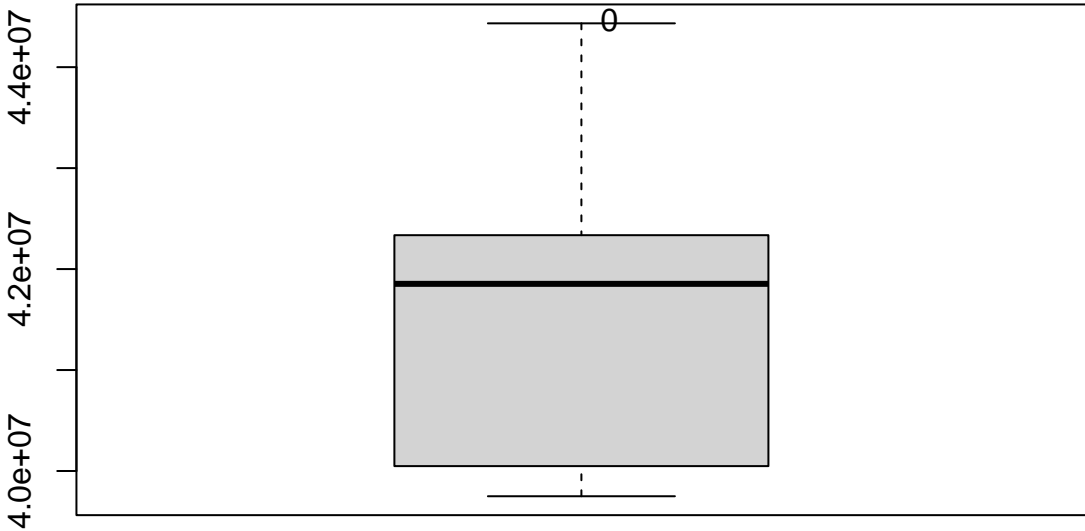


unemployment – CZE

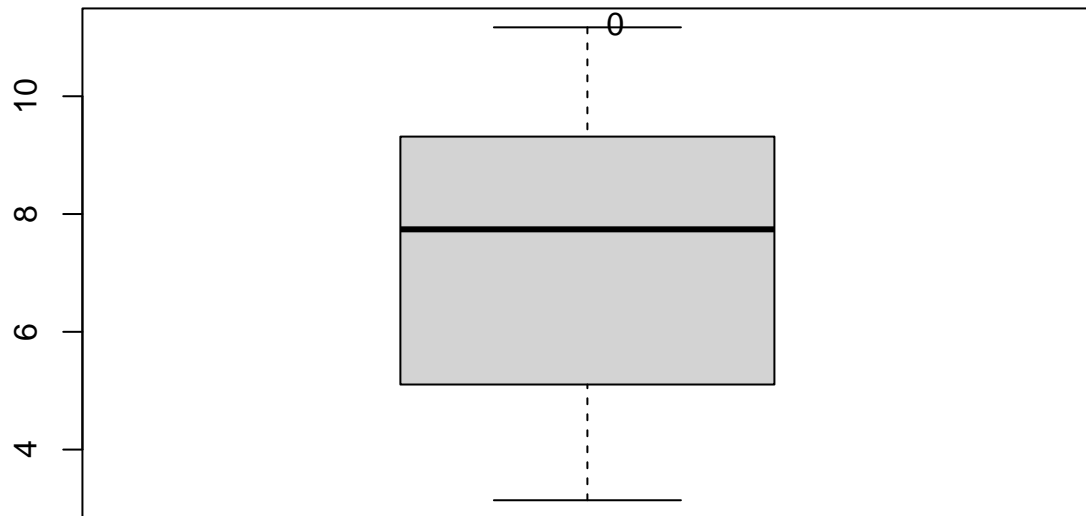




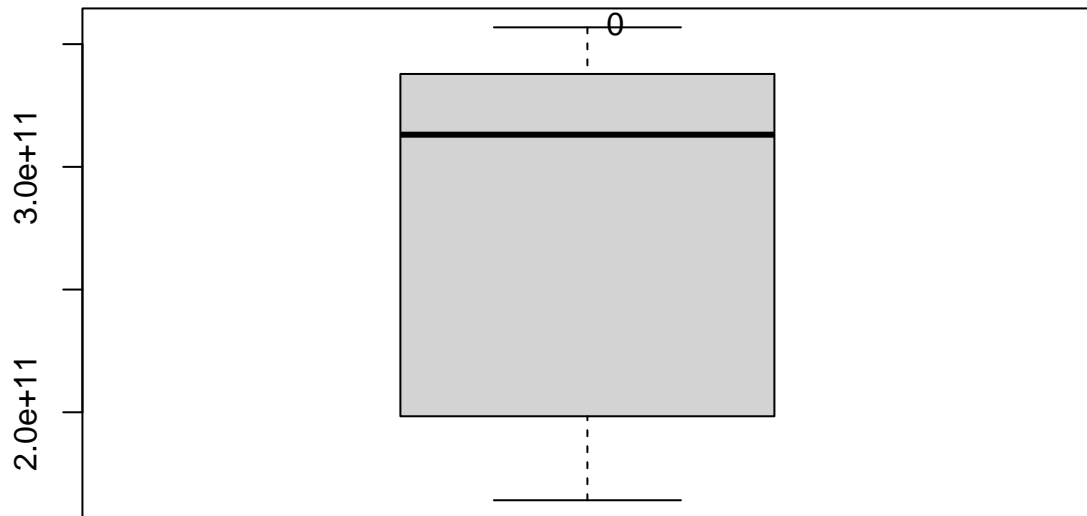
dot_L - DEU



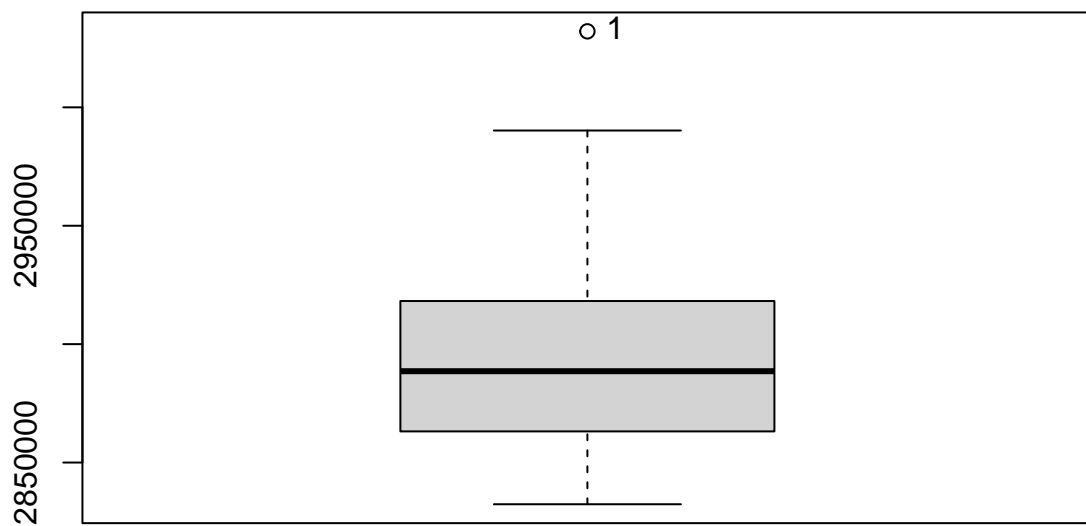
unemployment – DEU



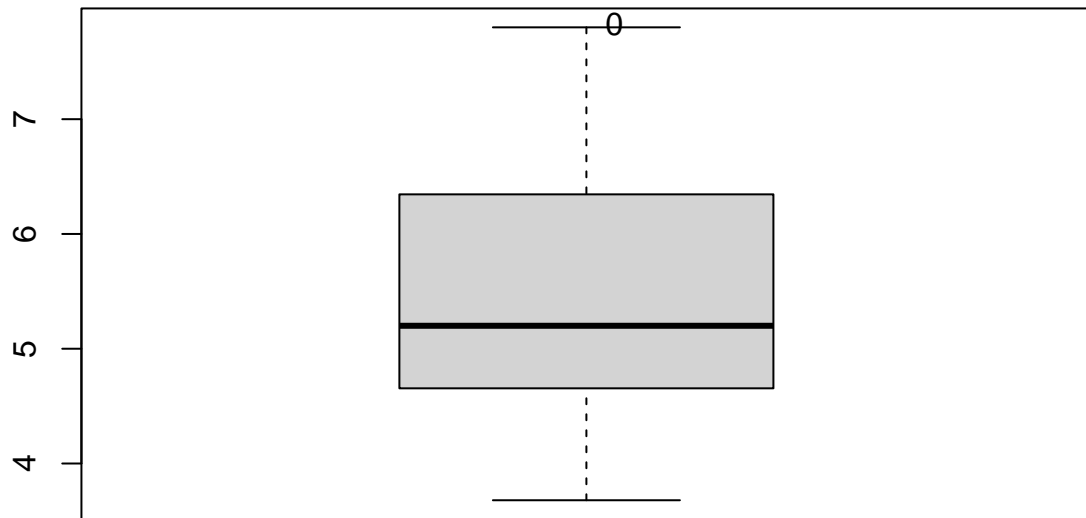
GDP – DNK



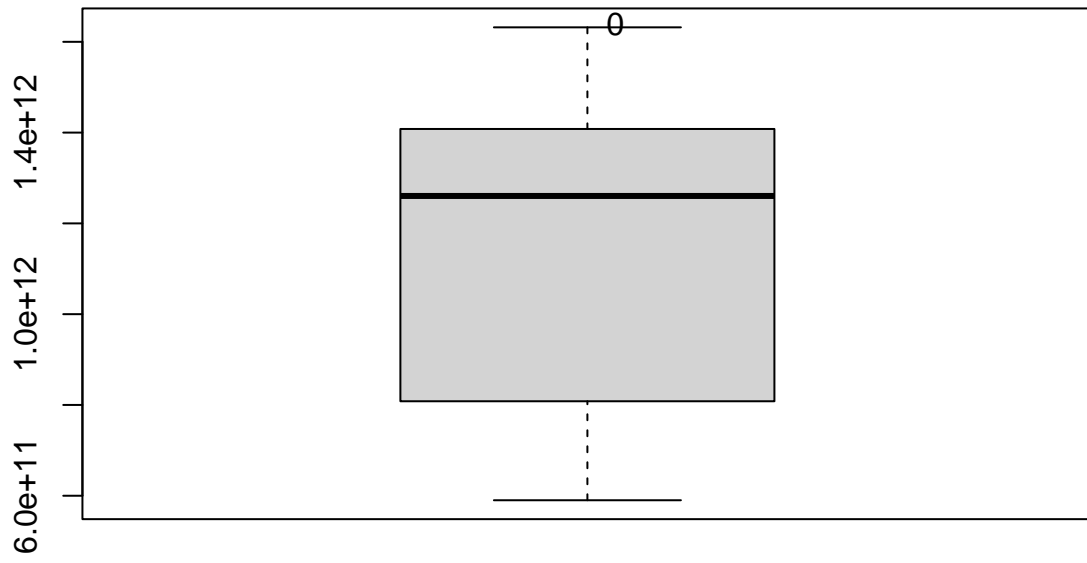
dot_L – DNK



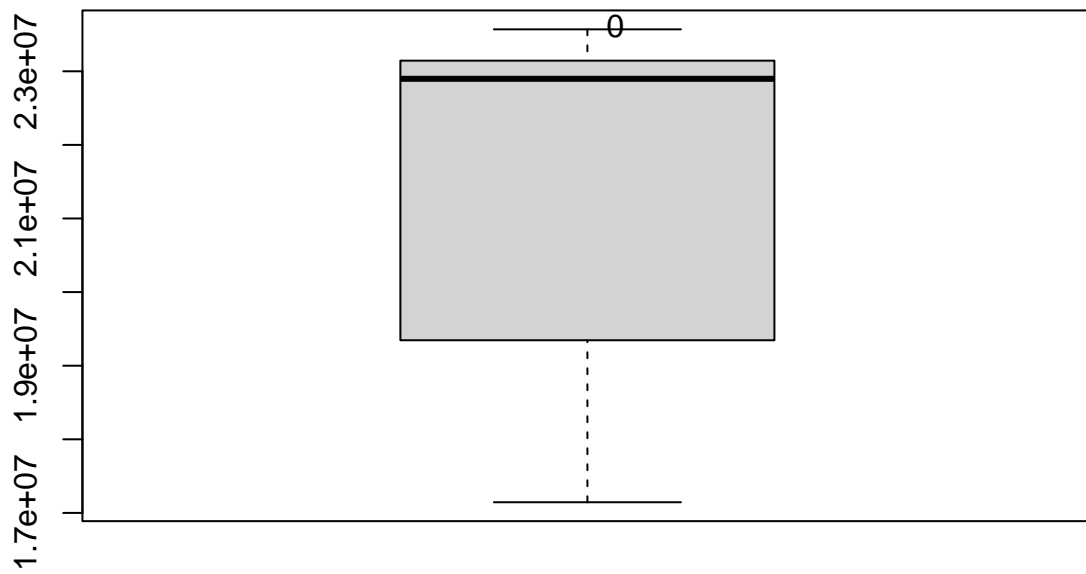
unemployment – DNK



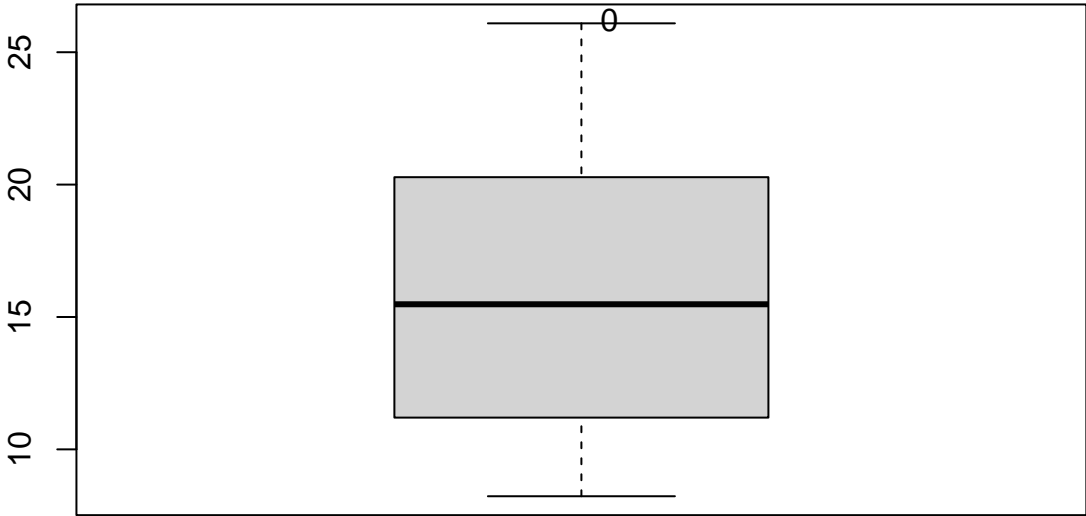
GDP – ESP



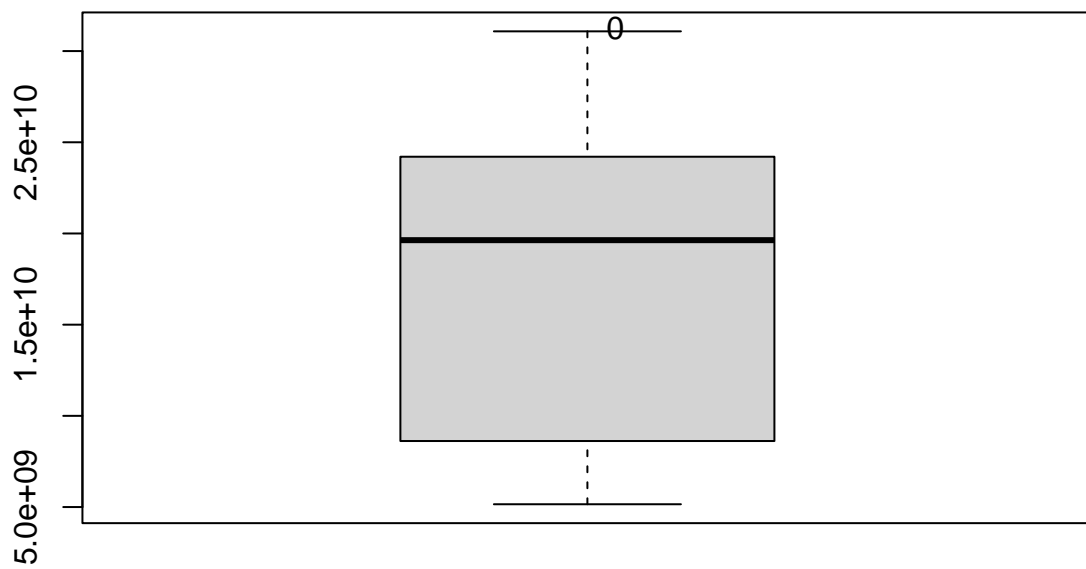
dot_L - ESP



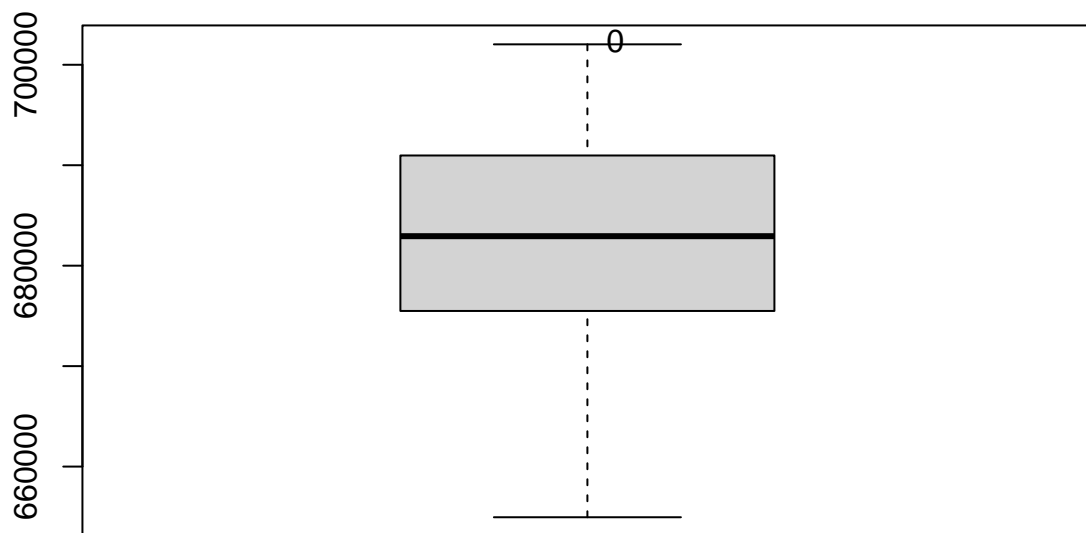
unemployment – ESP



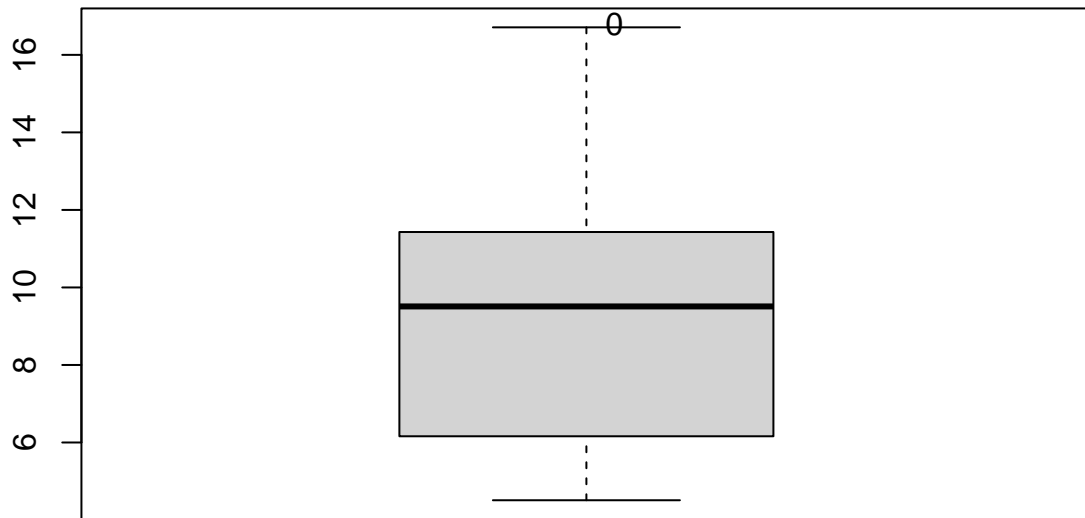
GDP – EST



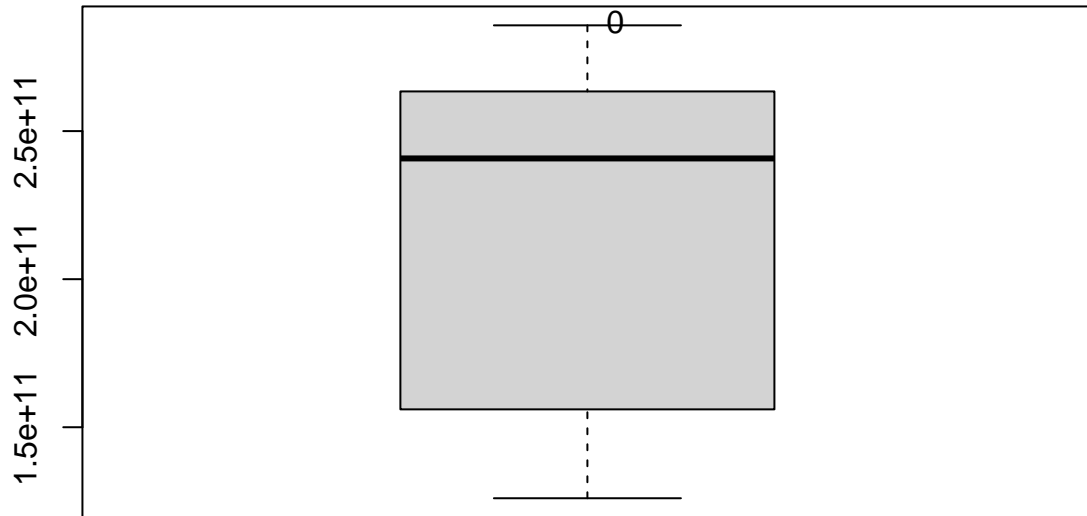
dot_L - EST



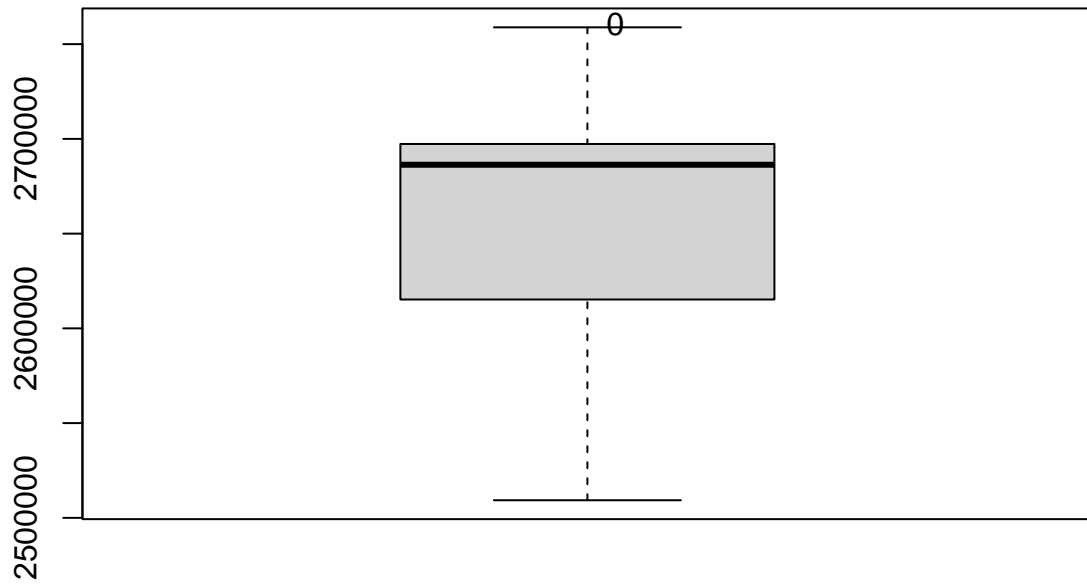
unemployment – EST



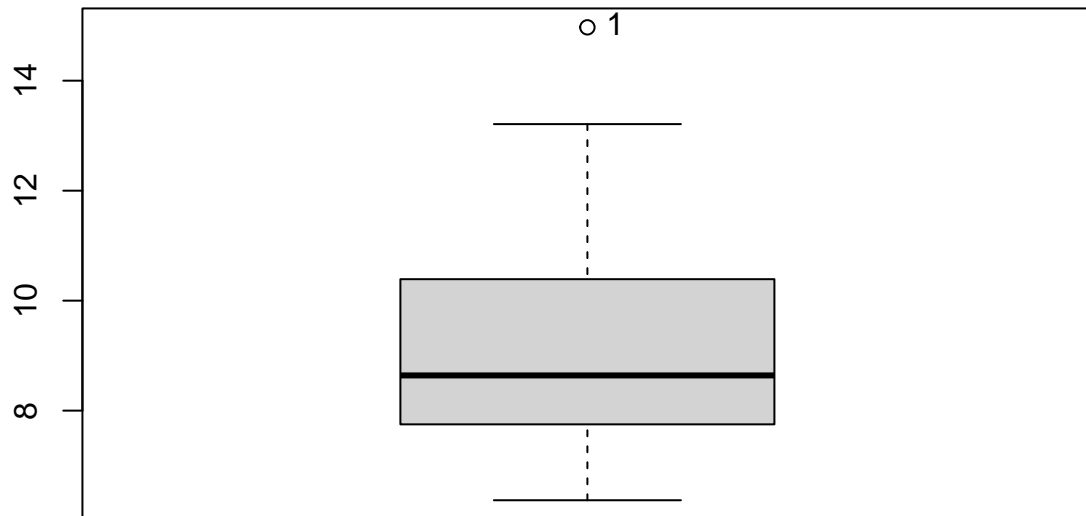
GDP - FIN



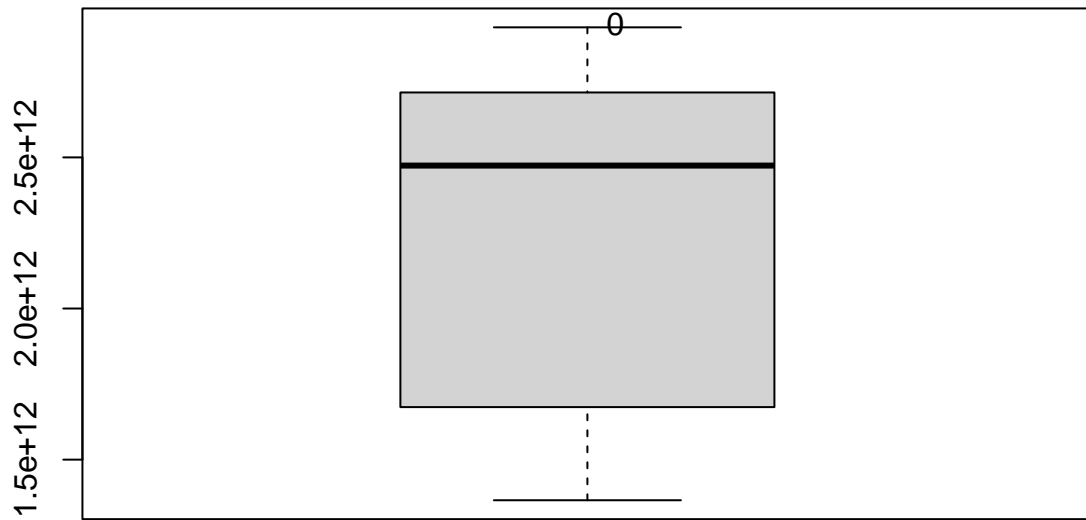
dot_L – FIN



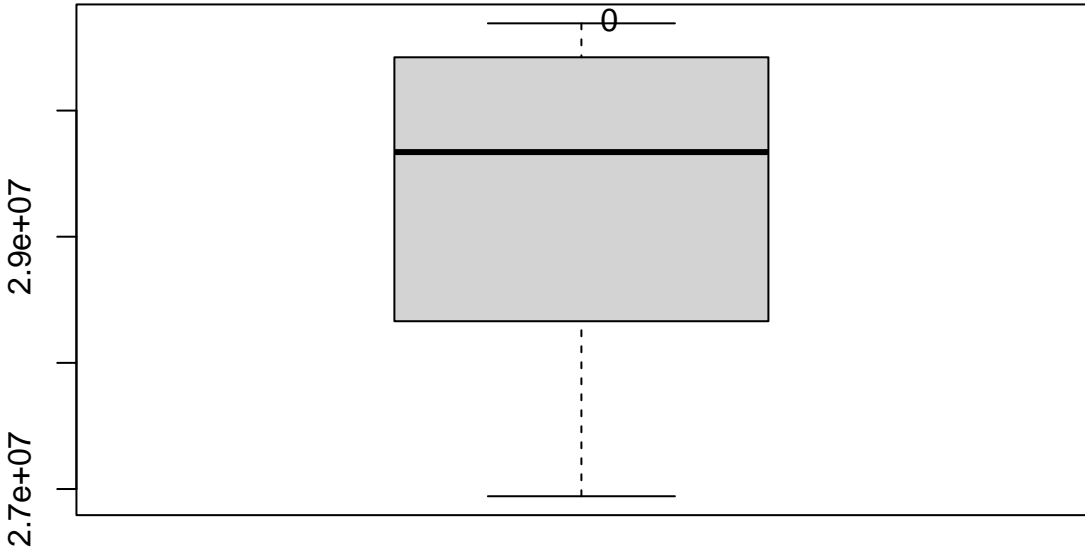
unemployment – FIN



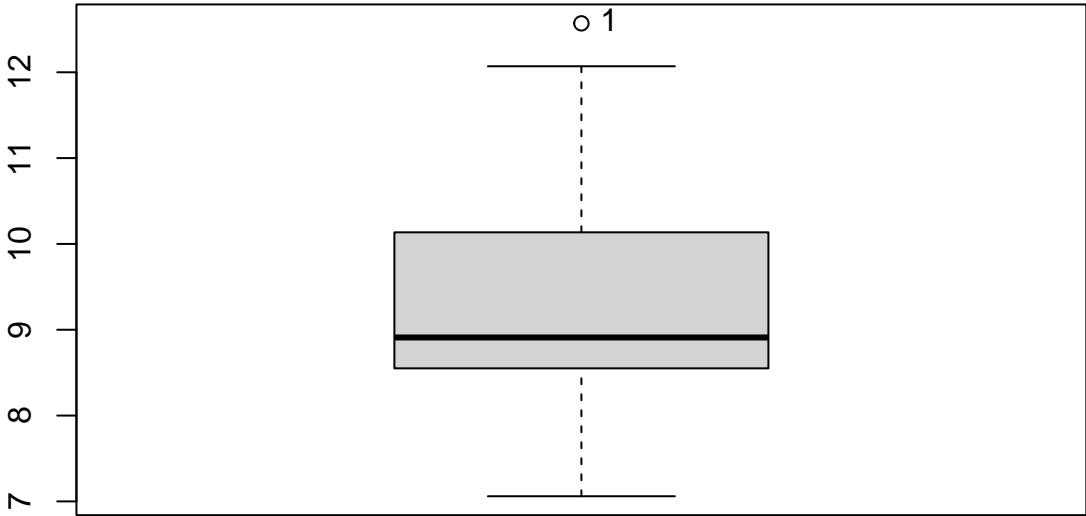
GDP – FRA



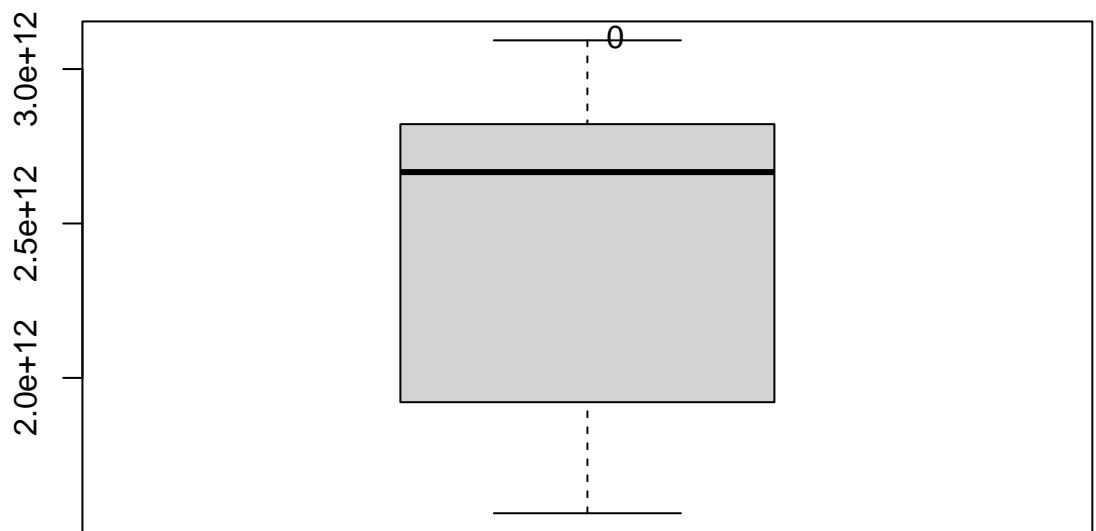
dot_L - FRA



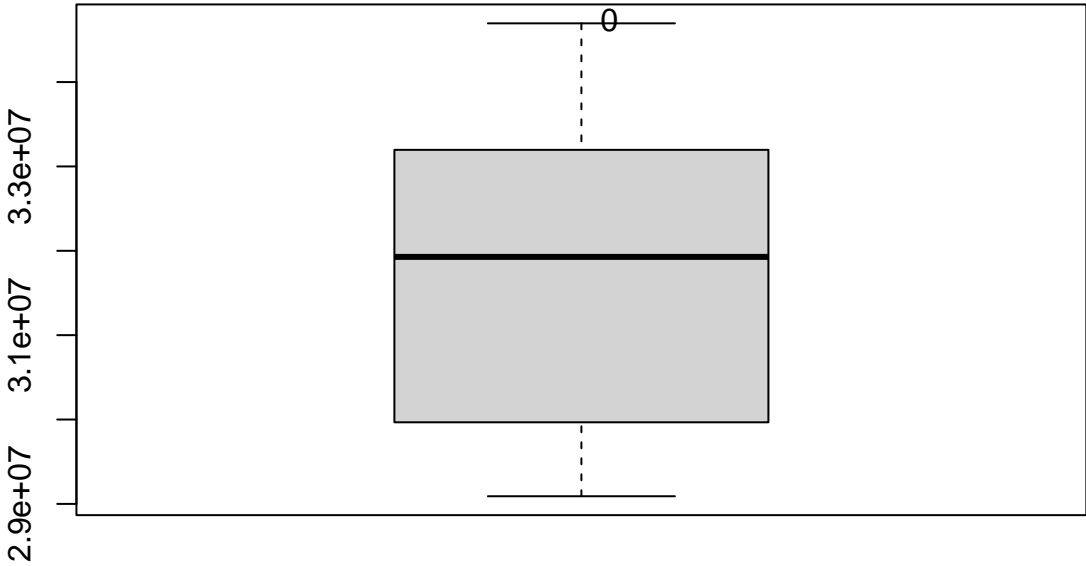
unemployment – FRA



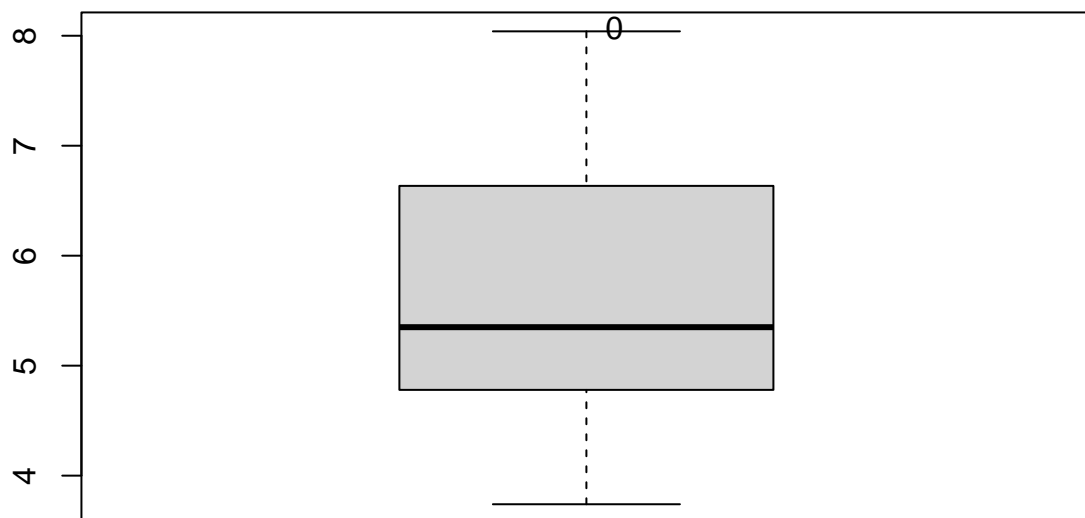
GDP – GBR



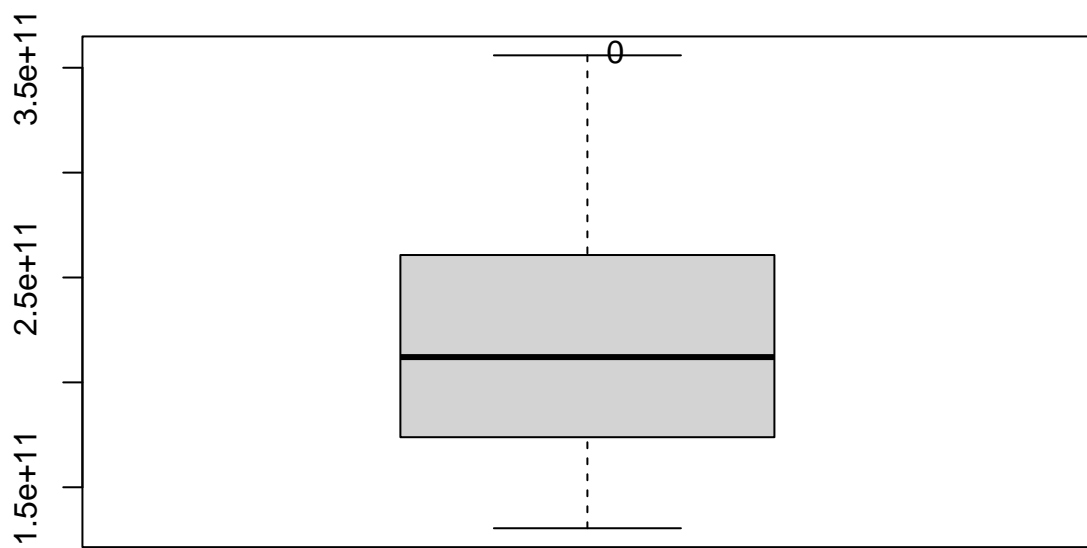
dot_L - GBR



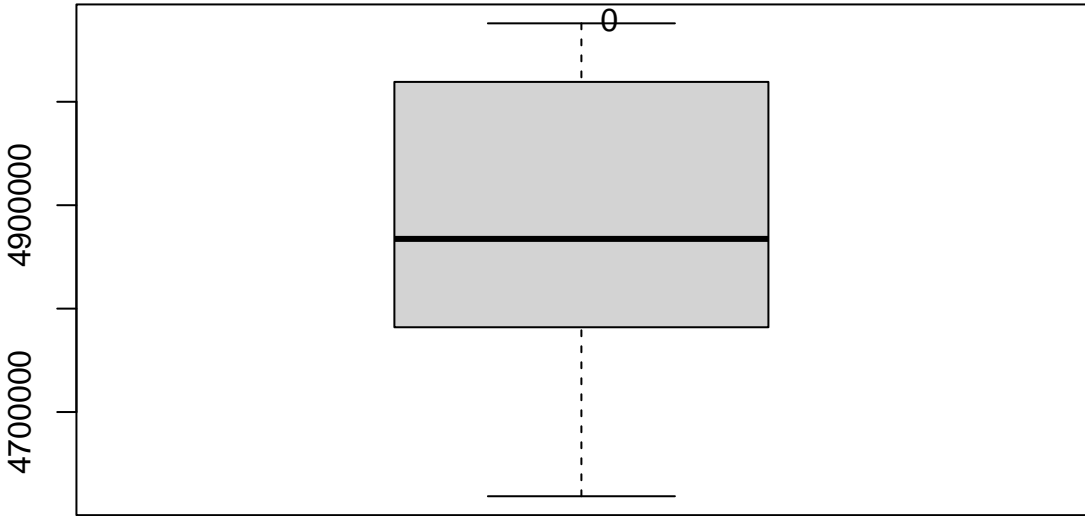
unemployment – GBR



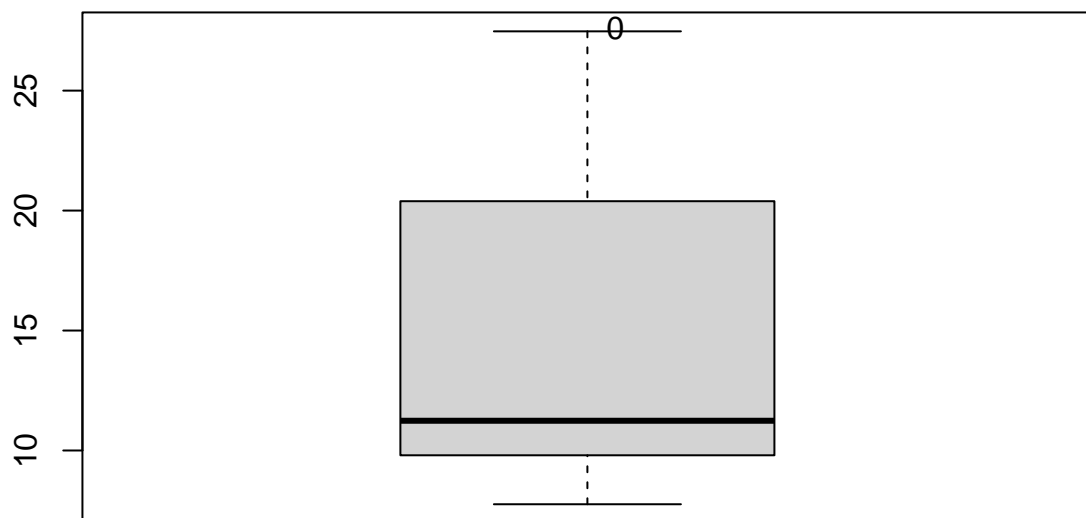
GDP – GRC



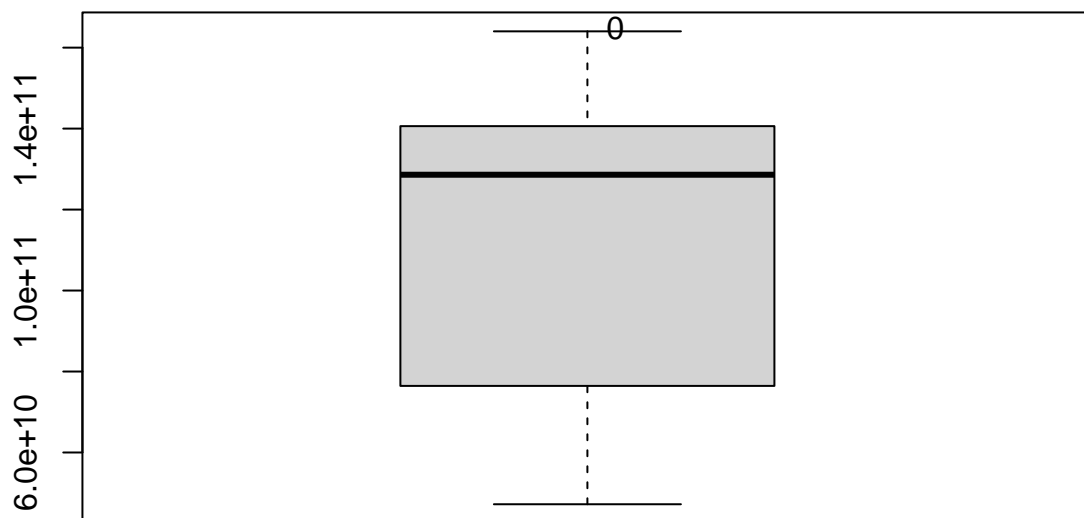
dot_L - GRC



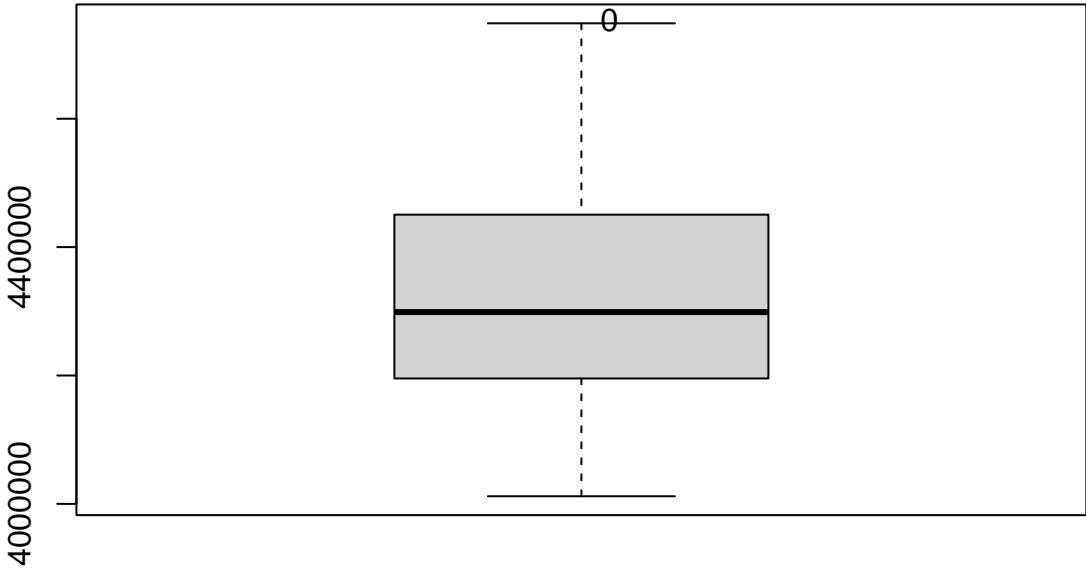
unemployment – GRC



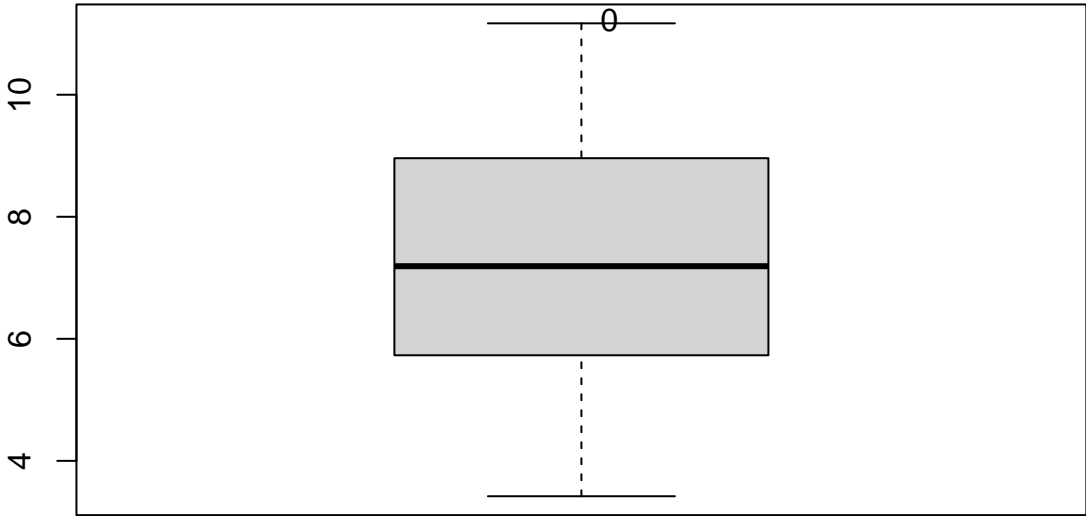
GDP – HUN

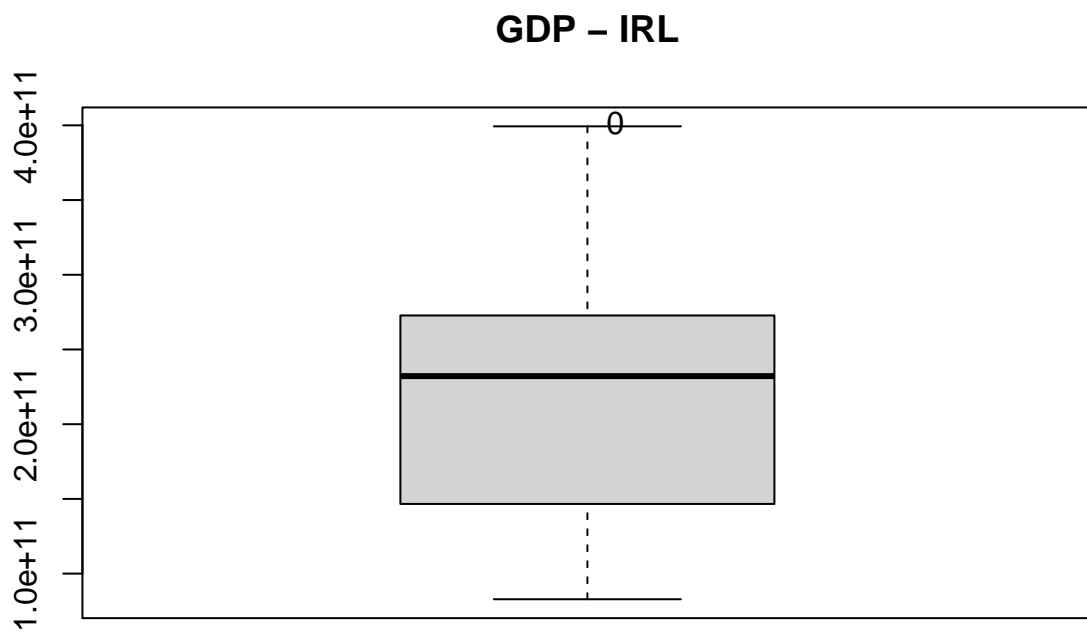


dot_L - HUN

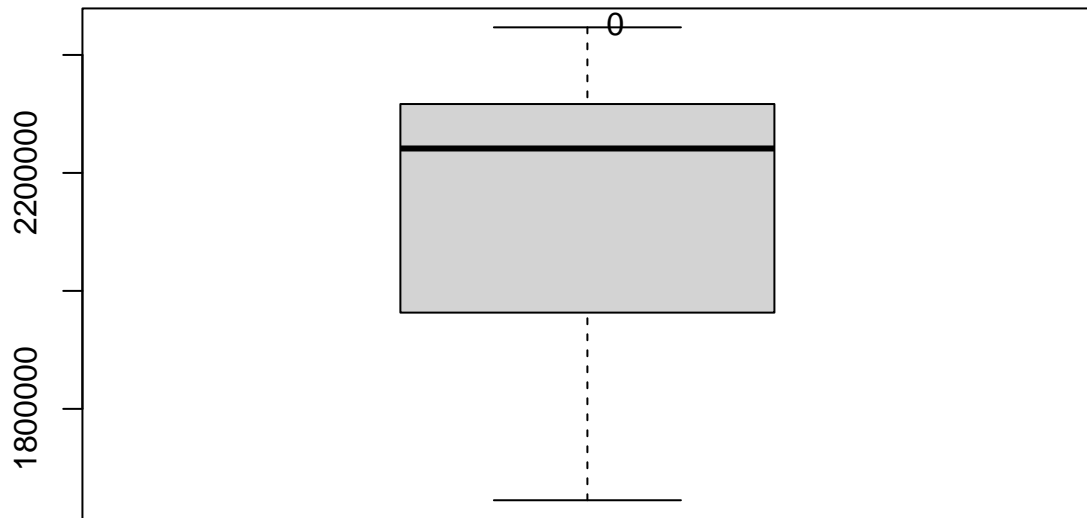


unemployment – HUN

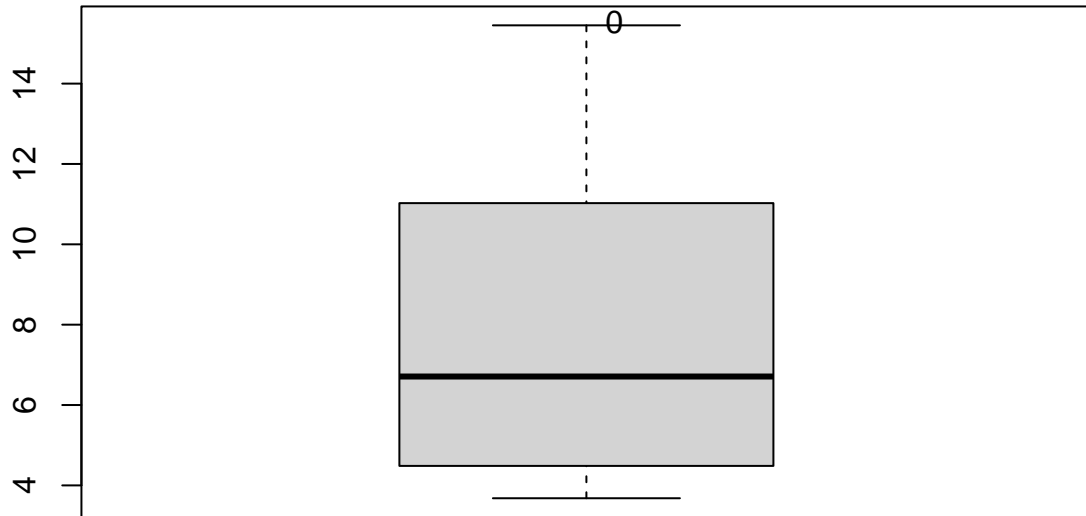




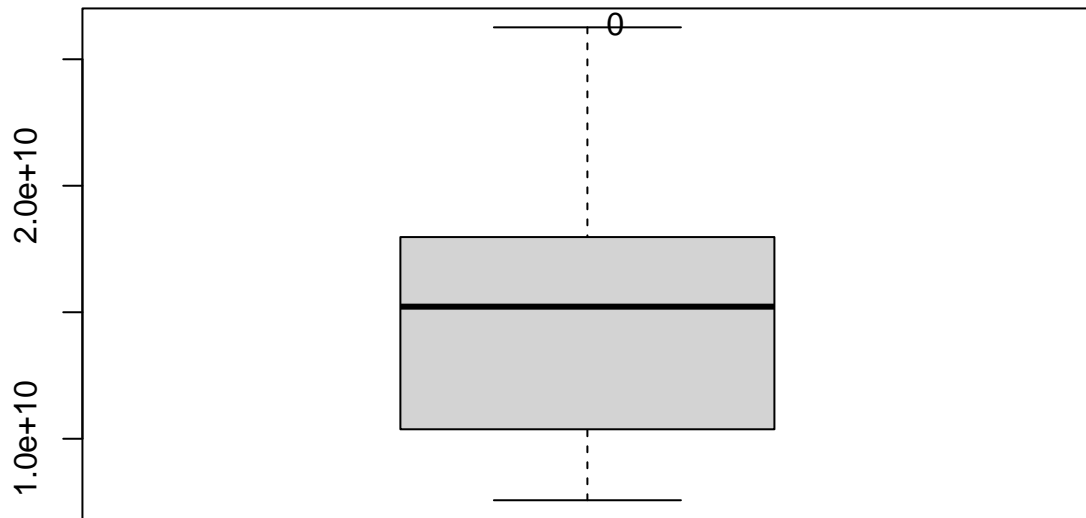
dot_L – IRL

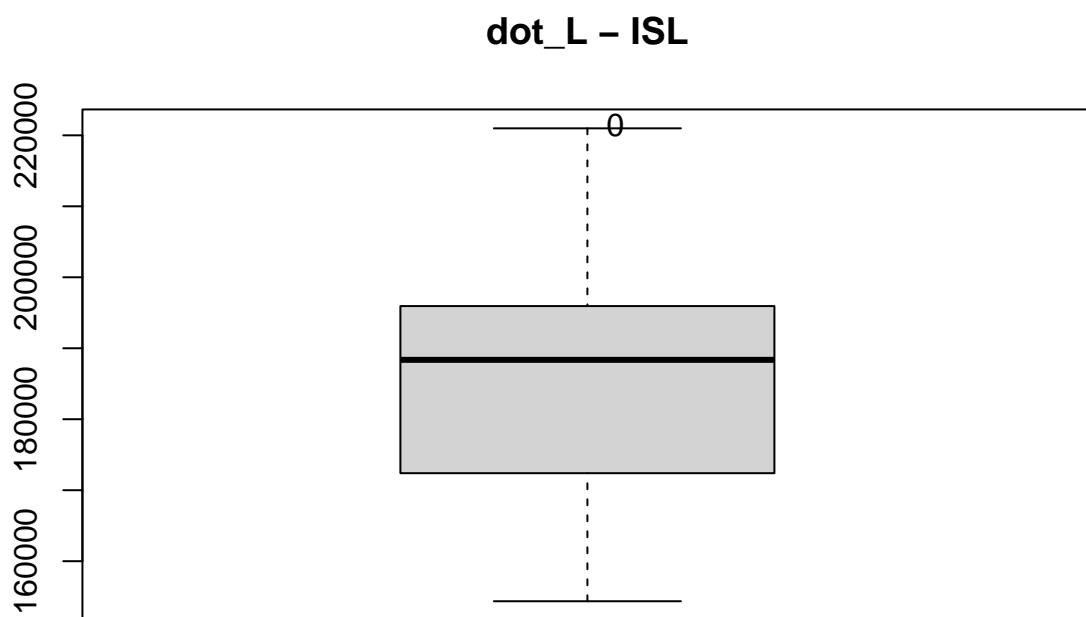


unemployment – IRL

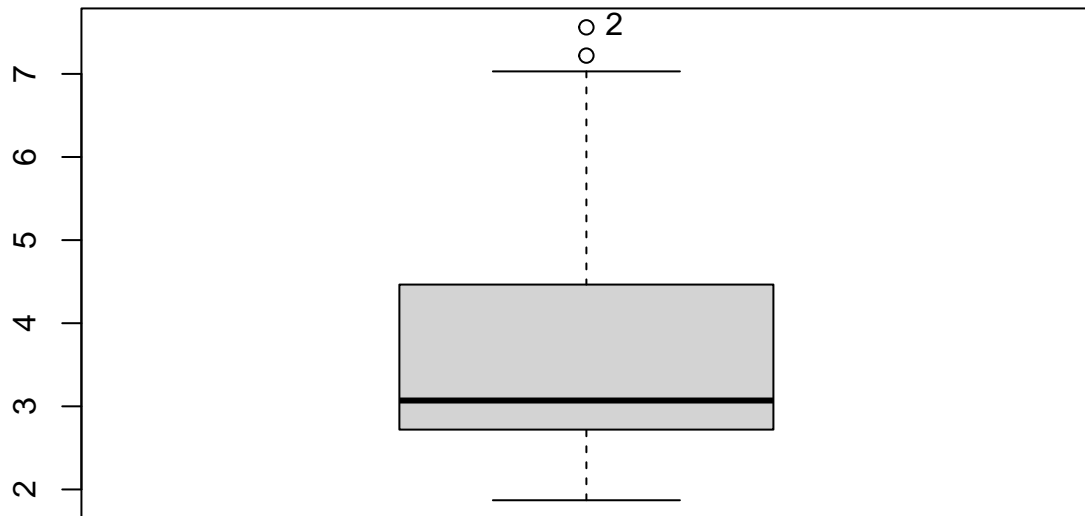


GDP - ISL

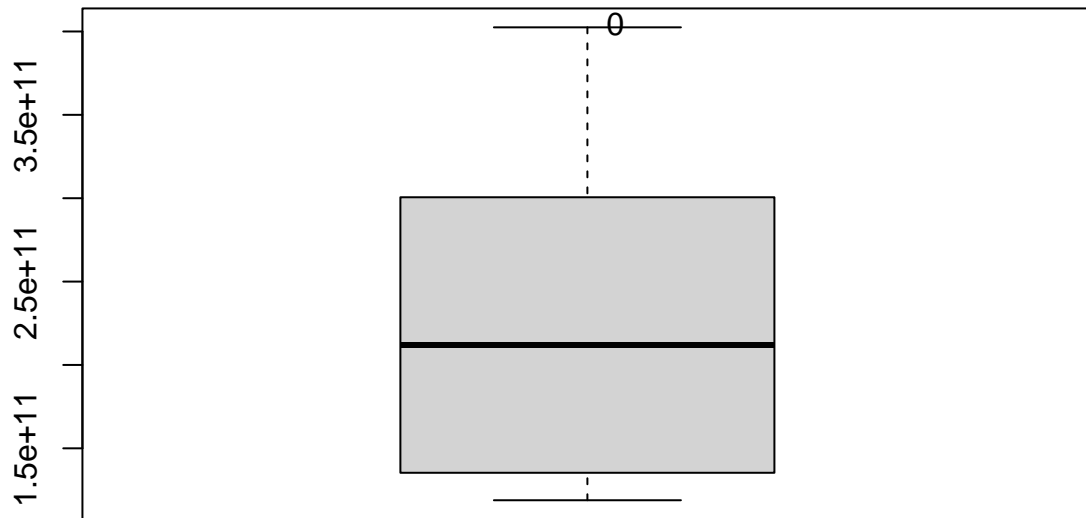




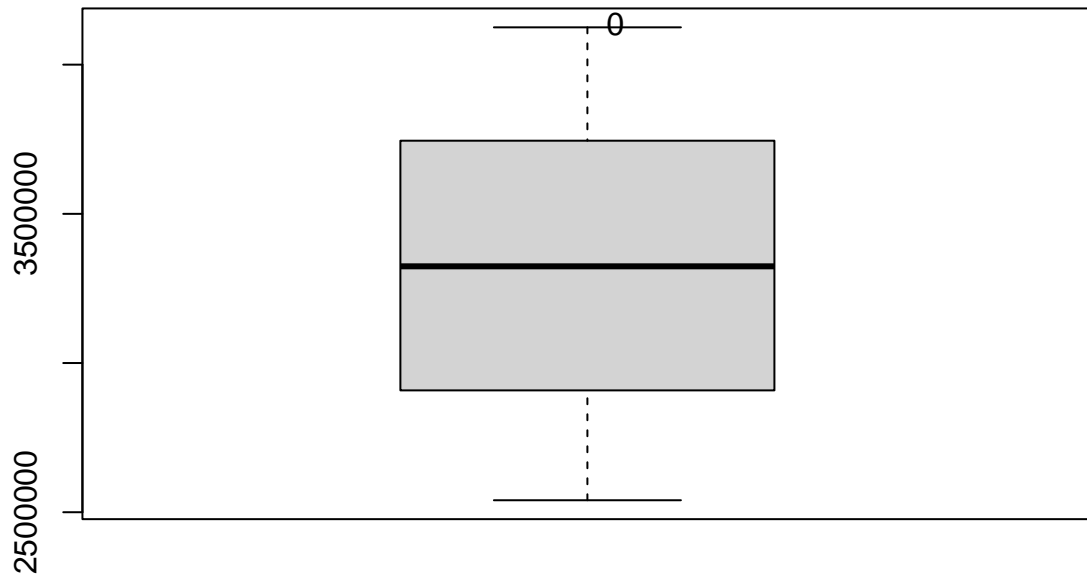
unemployment – ISL



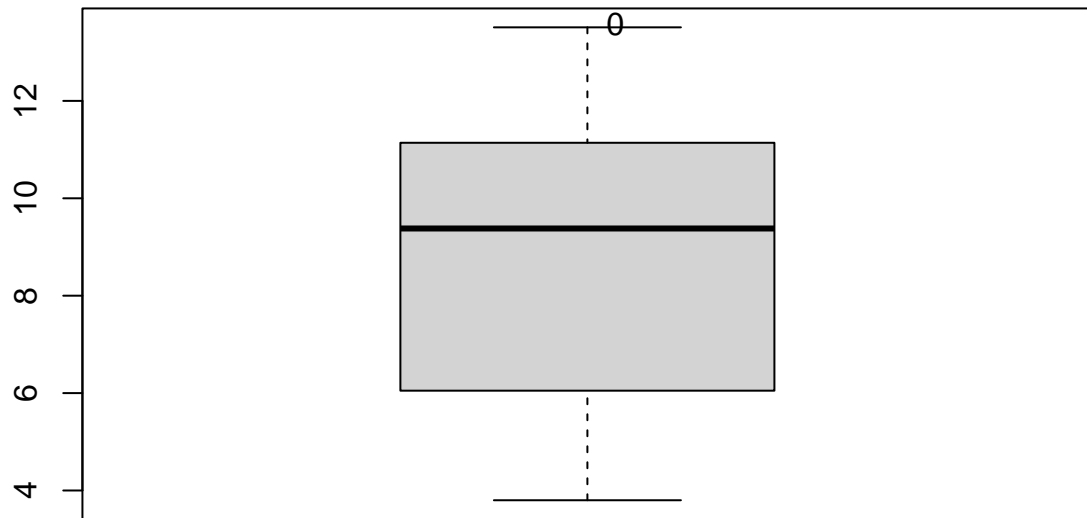
GDP - ISR

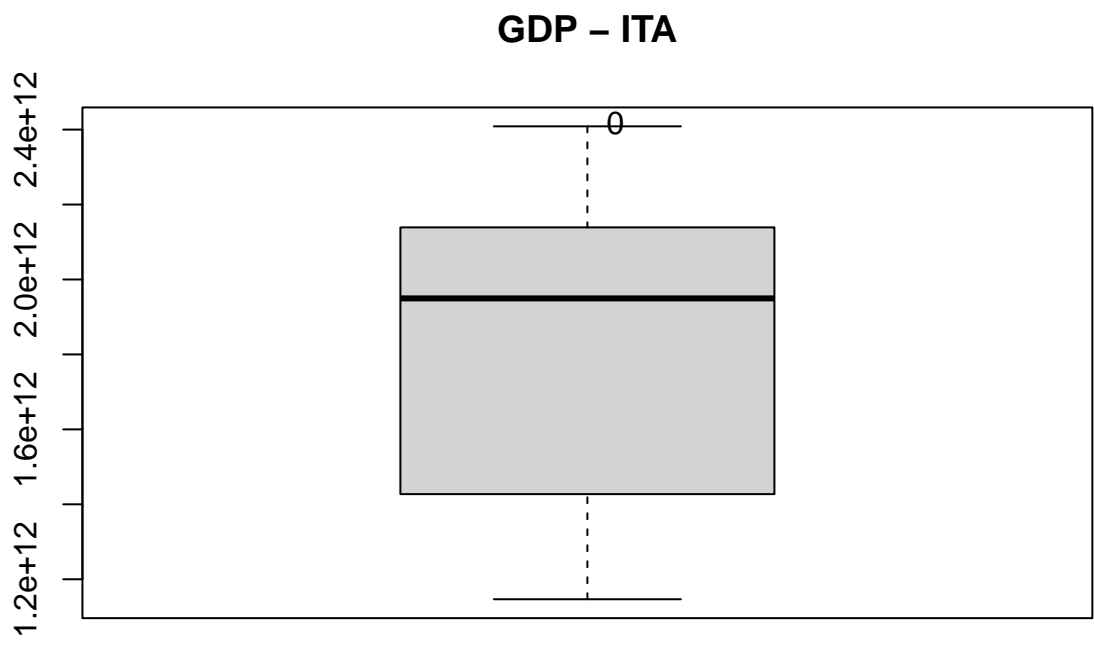


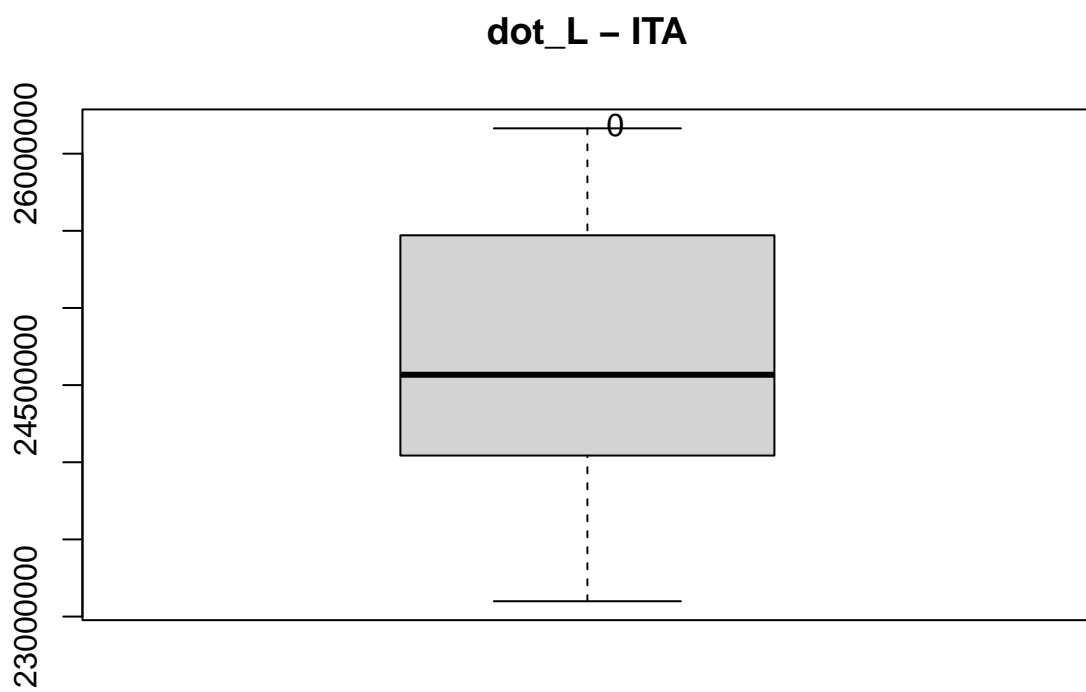
dot_L - ISR



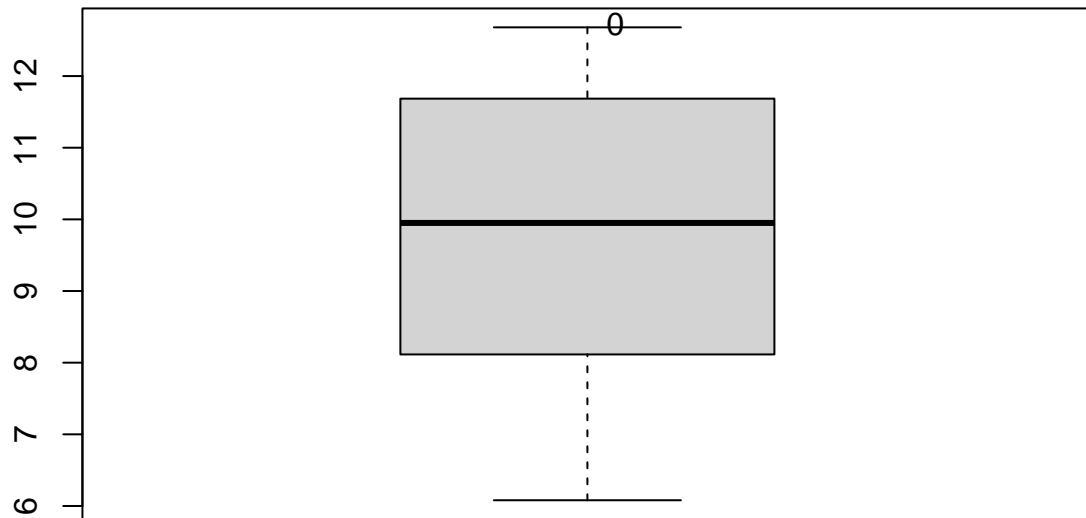
unemployment – ISR



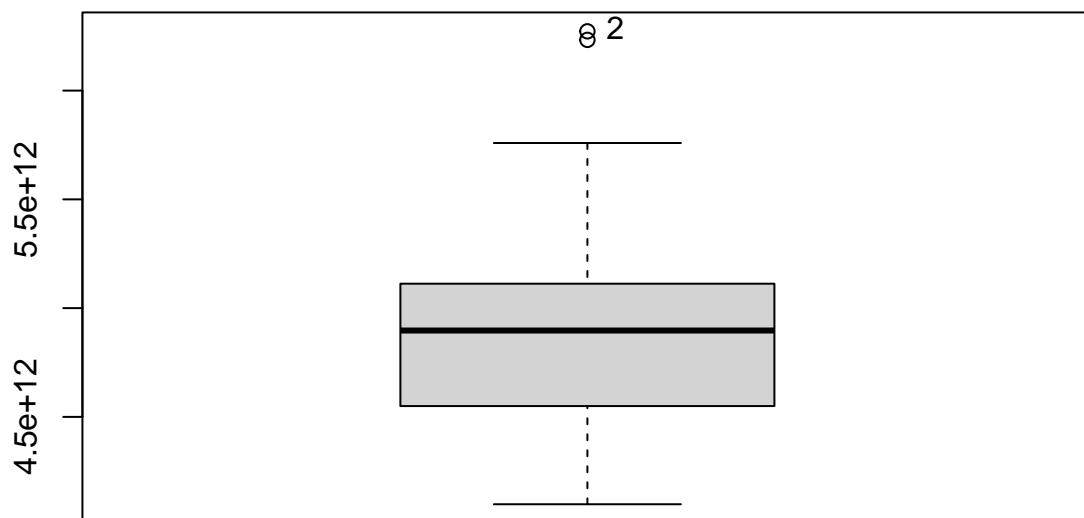




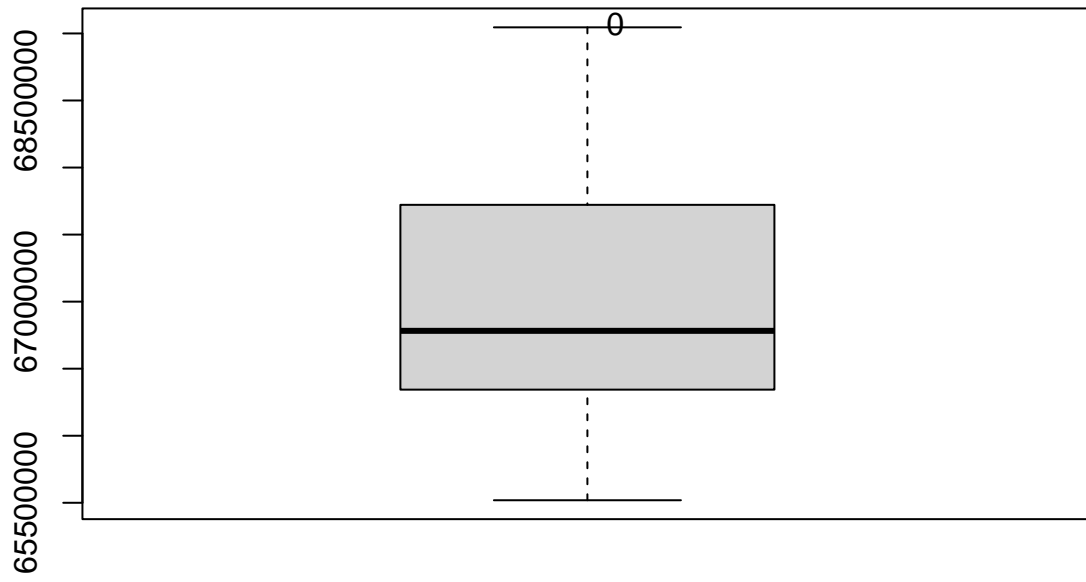
unemployment – ITA



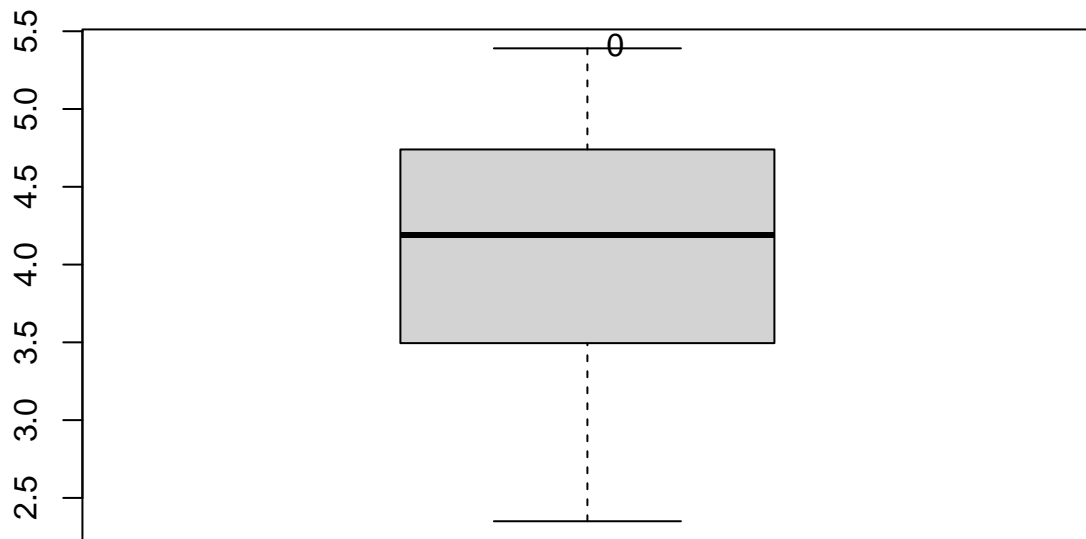
GDP – JPN



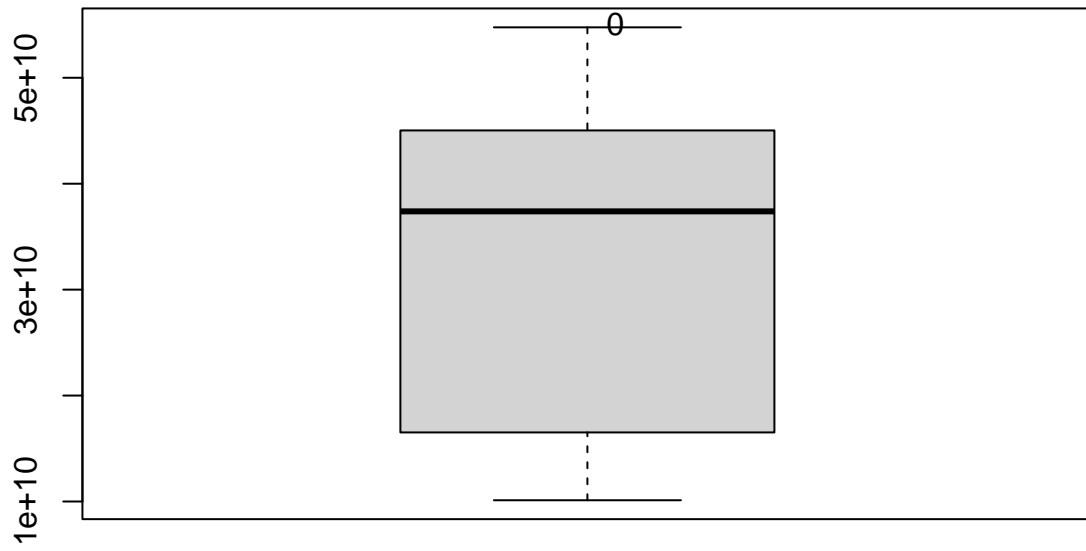
dot_L – JPN

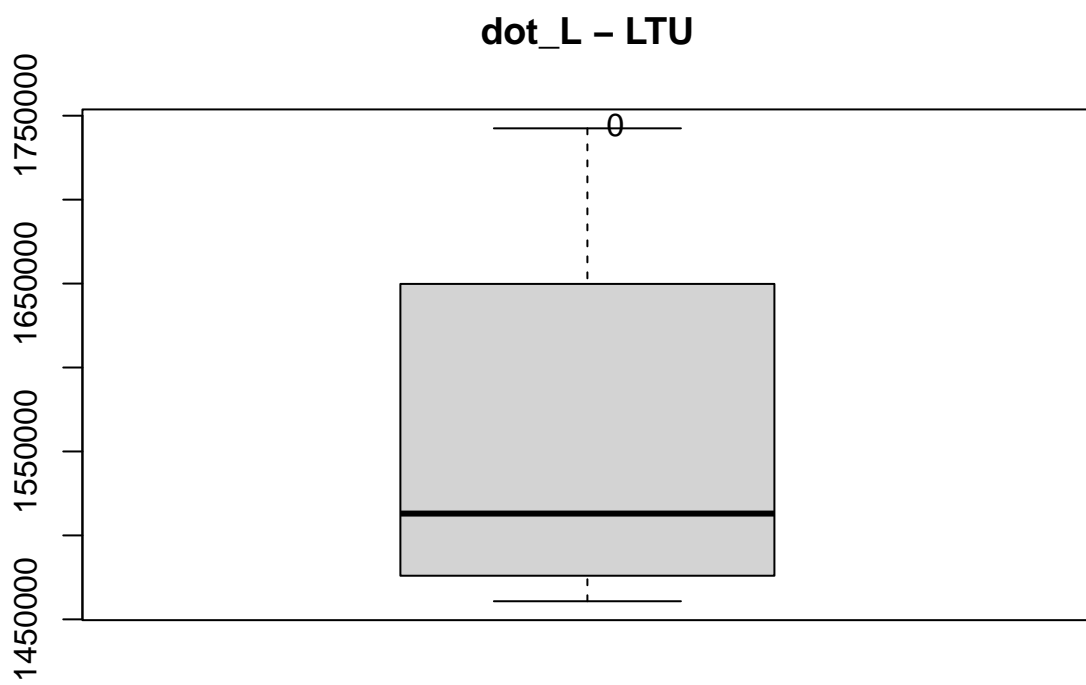


unemployment – JPN

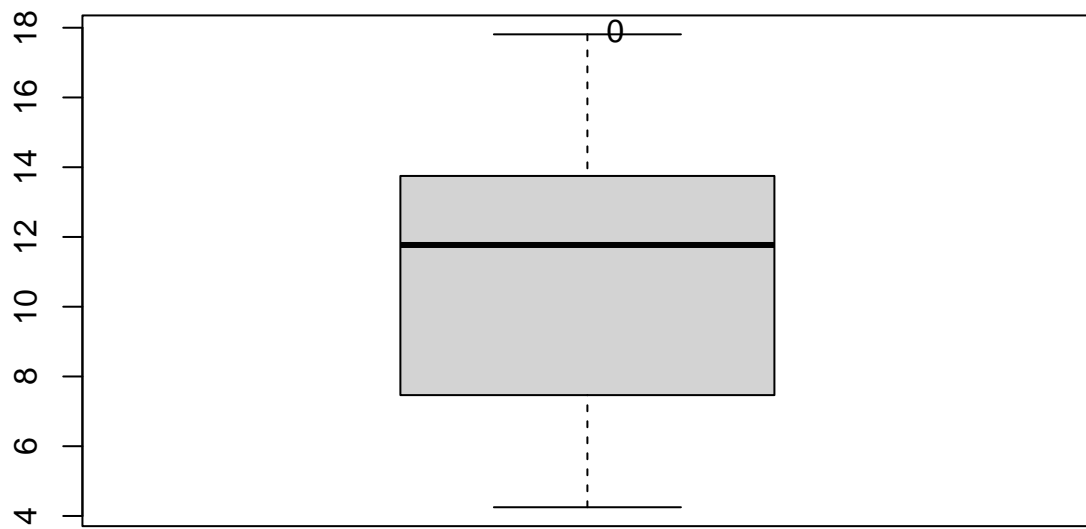


GDP – LTU

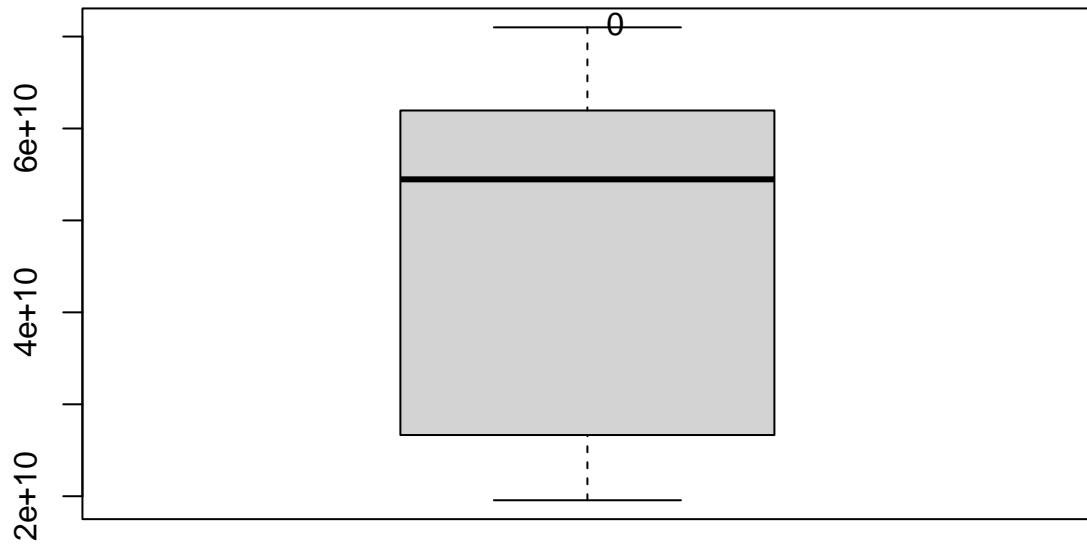




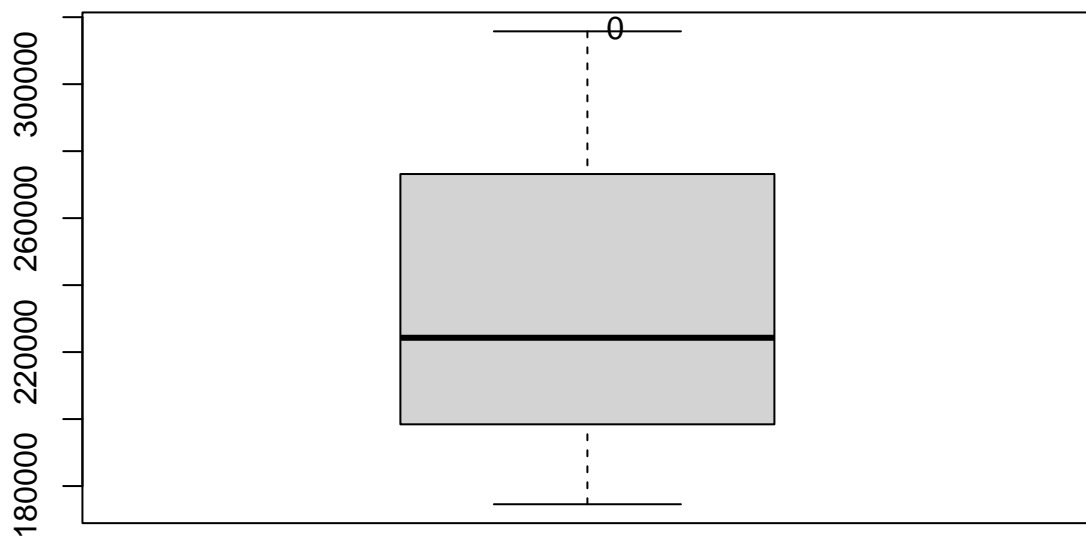
unemployment – LTU



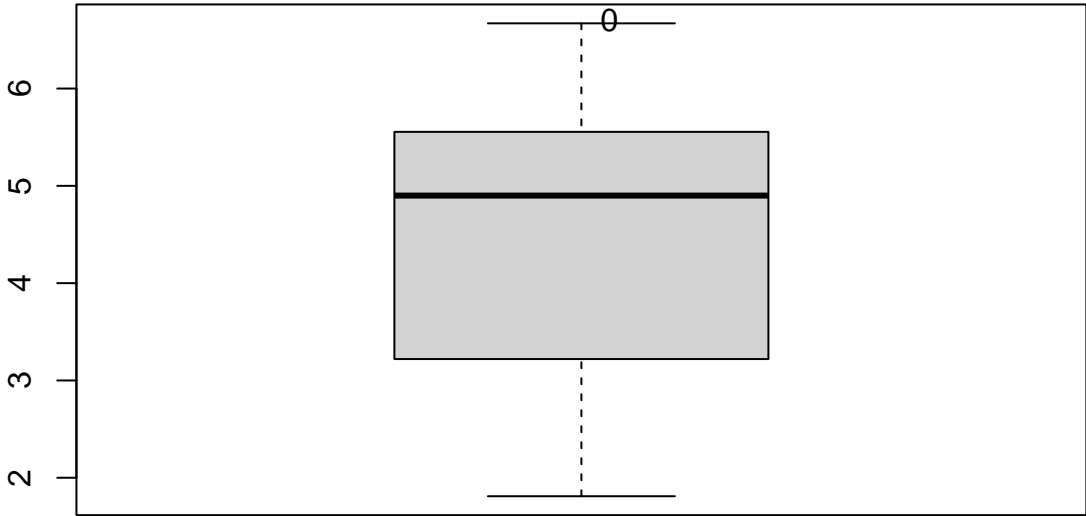
GDP – LUX



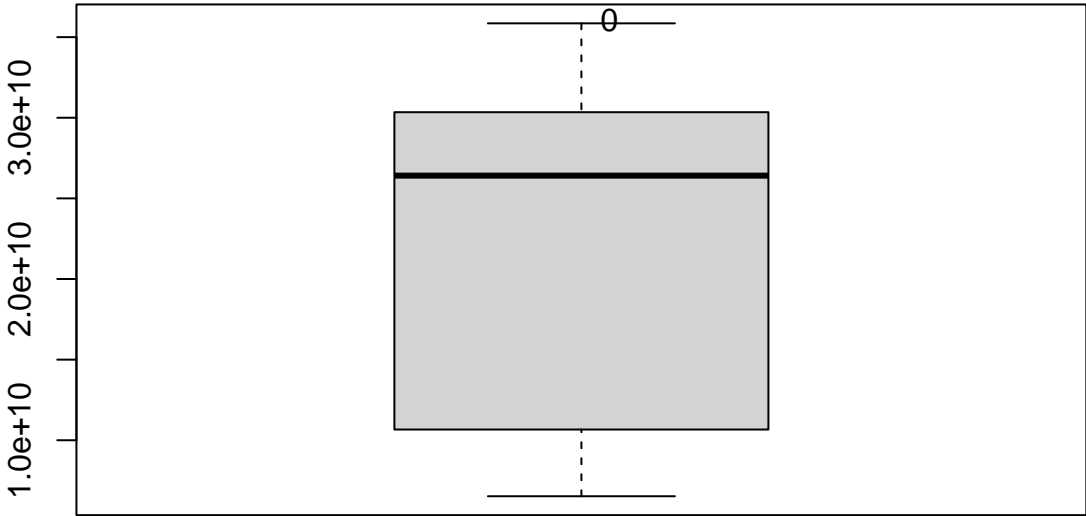
dot_L - LUX



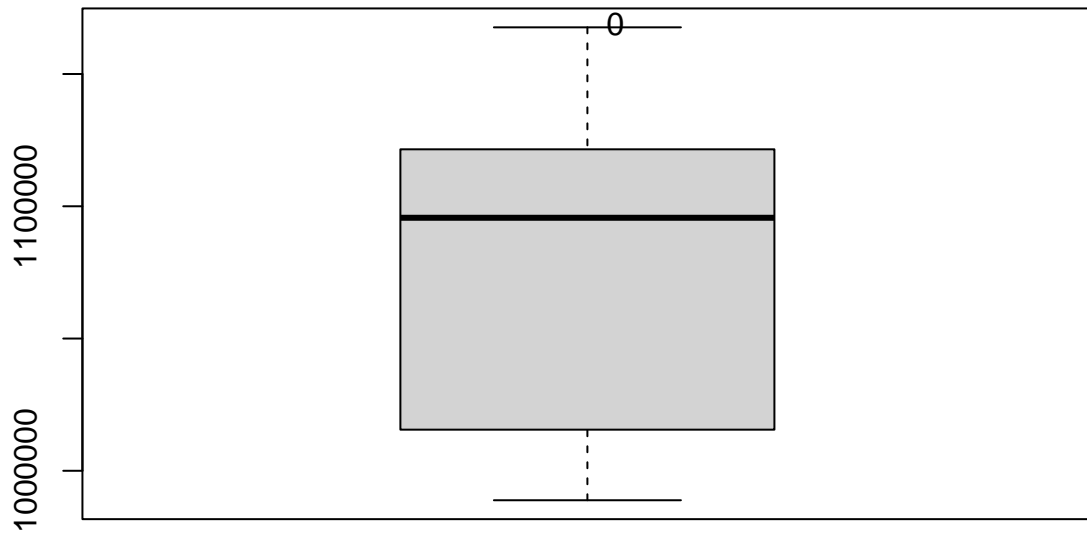
unemployment – LUX



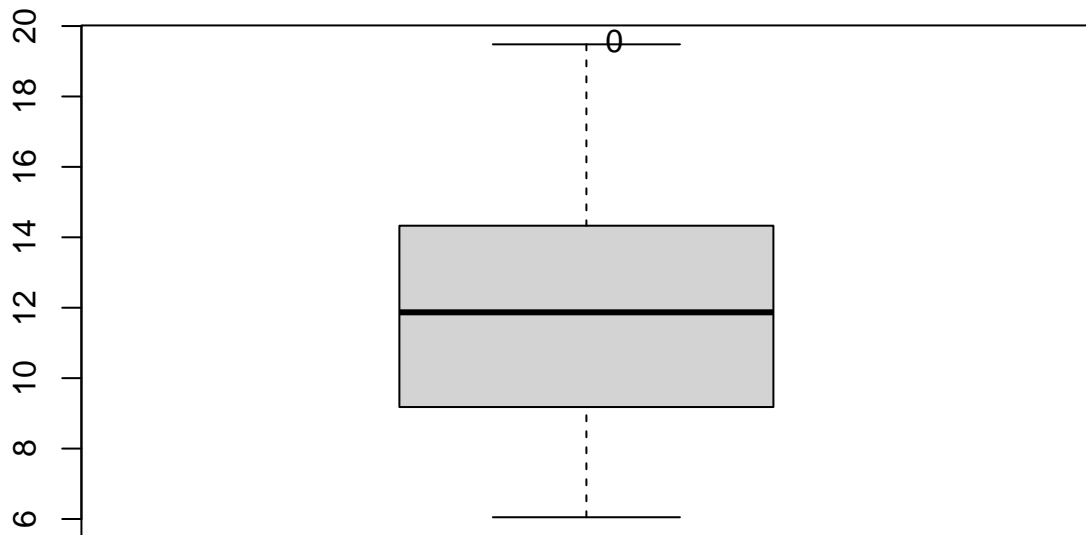
GDP – LVA



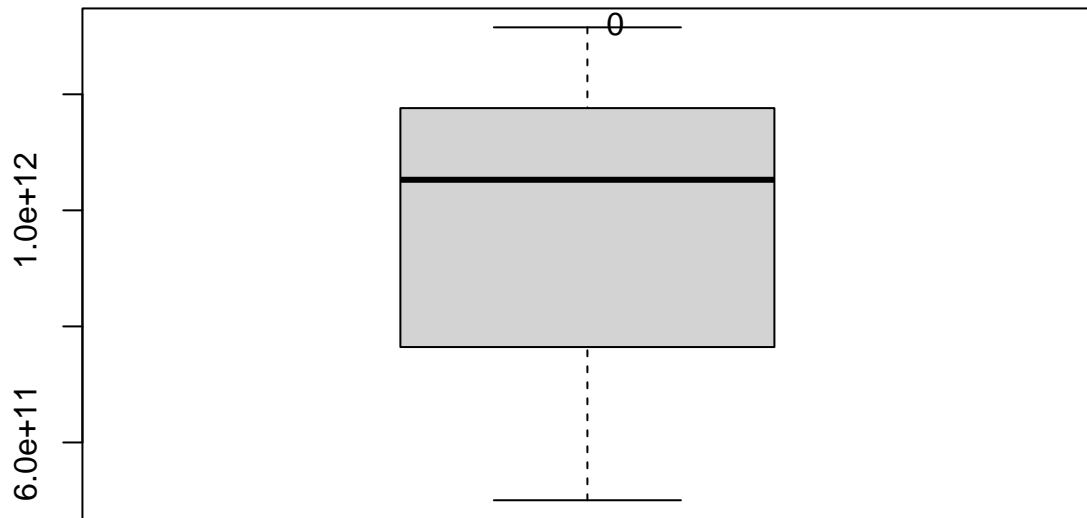
dot_L – LVA



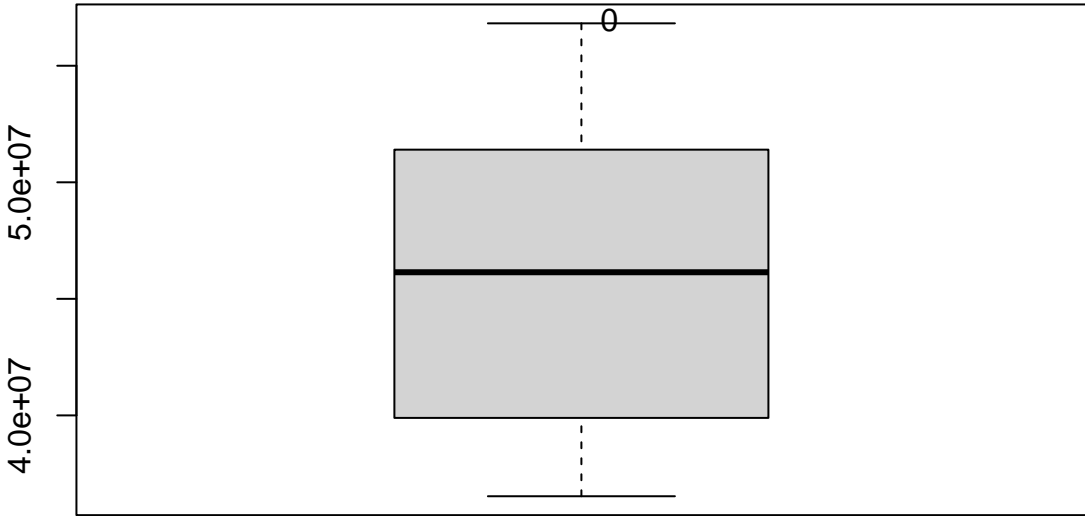
unemployment – LVA



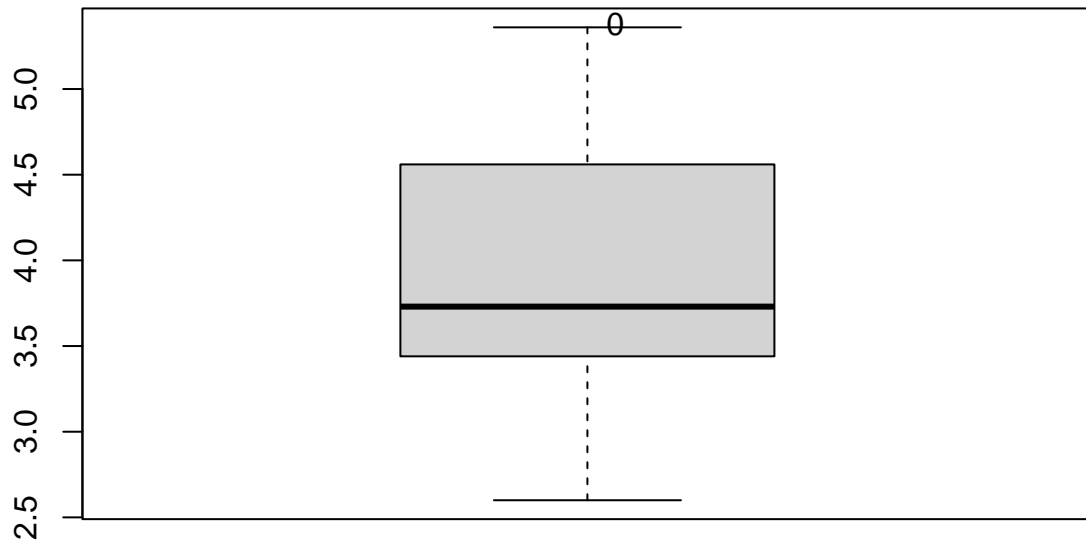
GDP – MEX



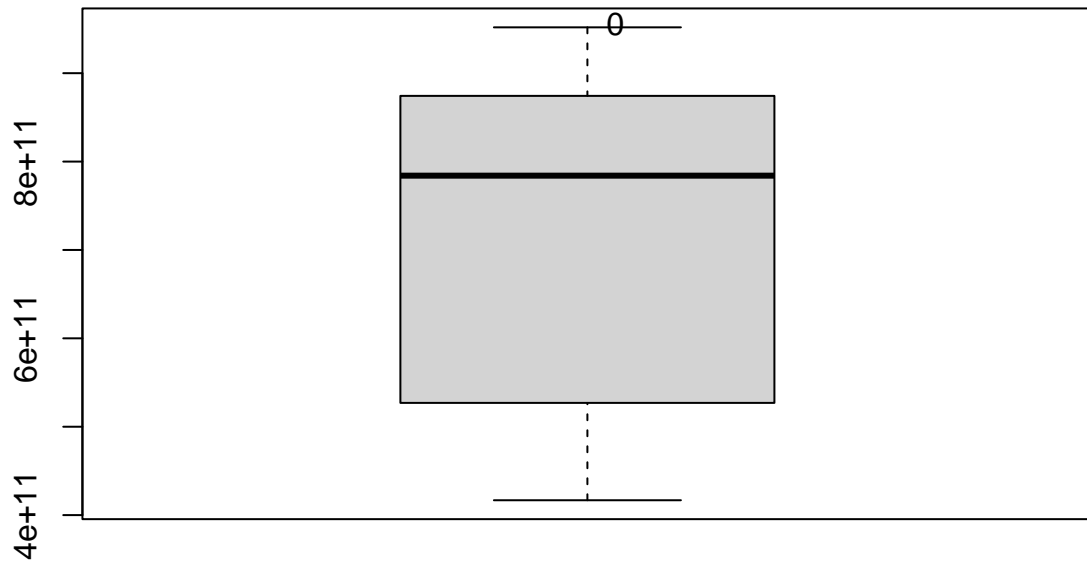
dot_L - MEX



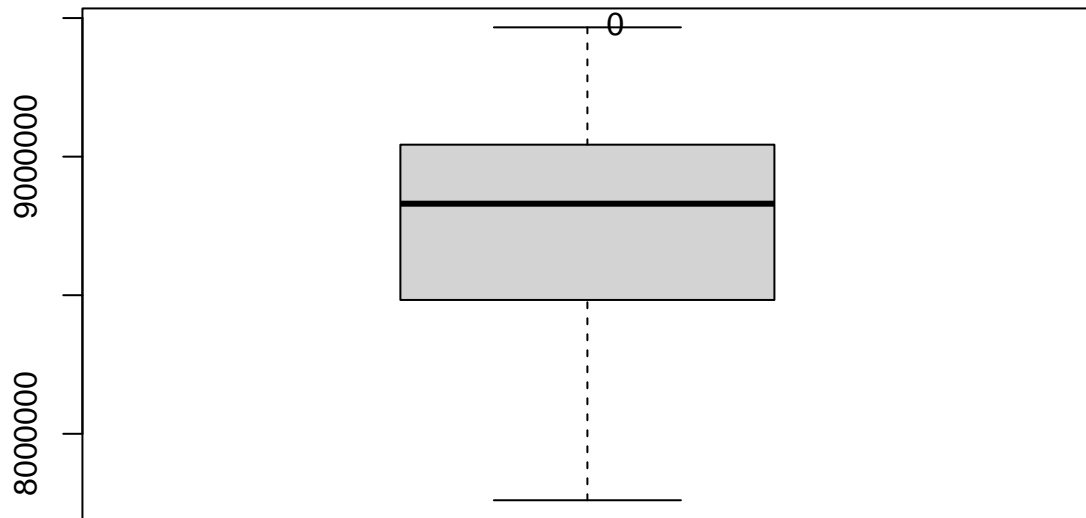
unemployment – MEX



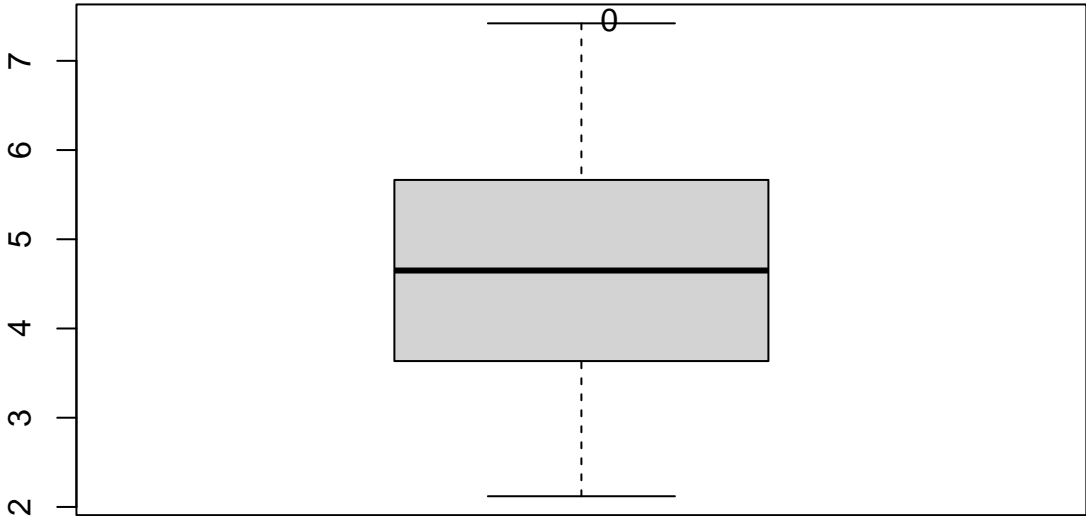
GDP – NLD



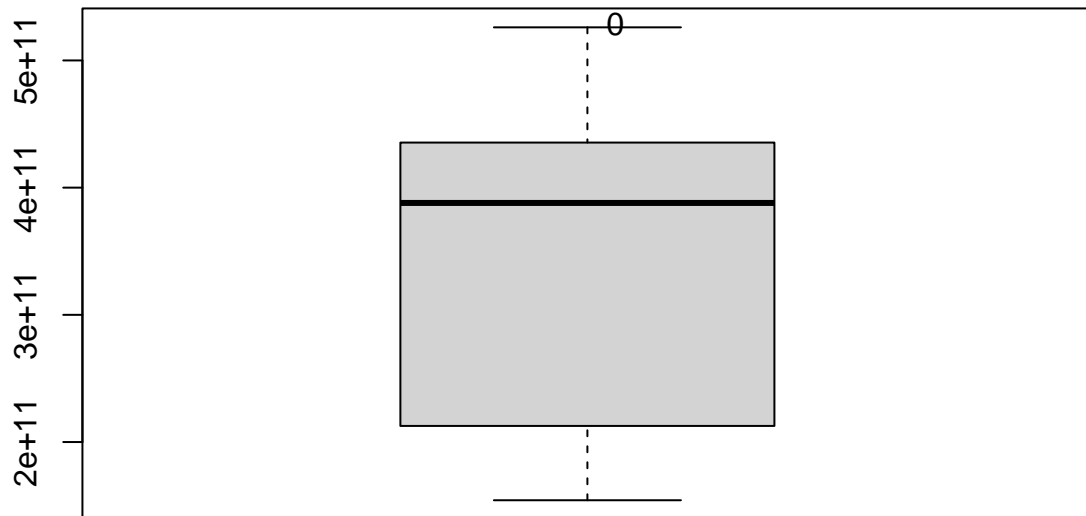
dot_L - NLD



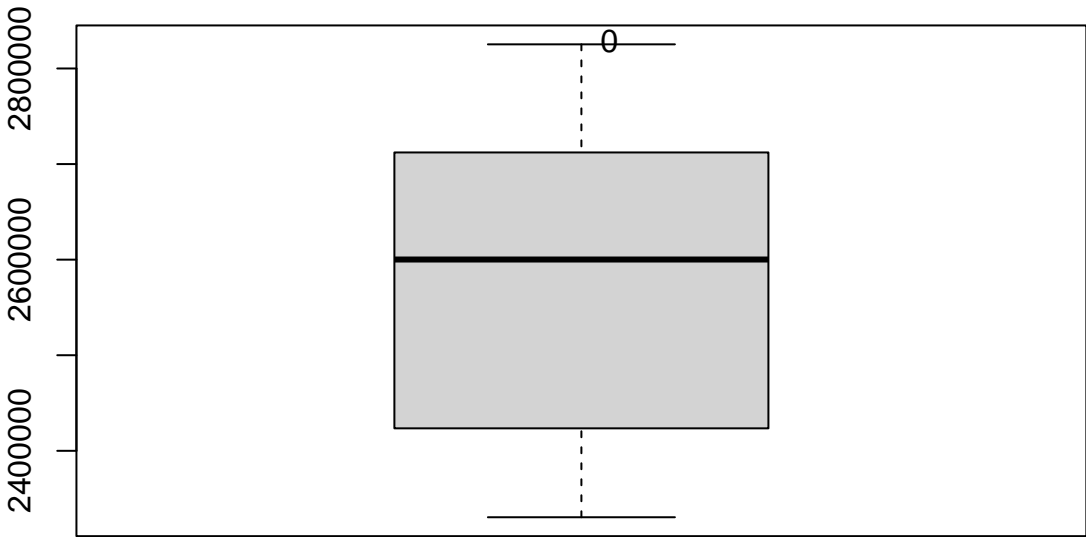
unemployment – NLD



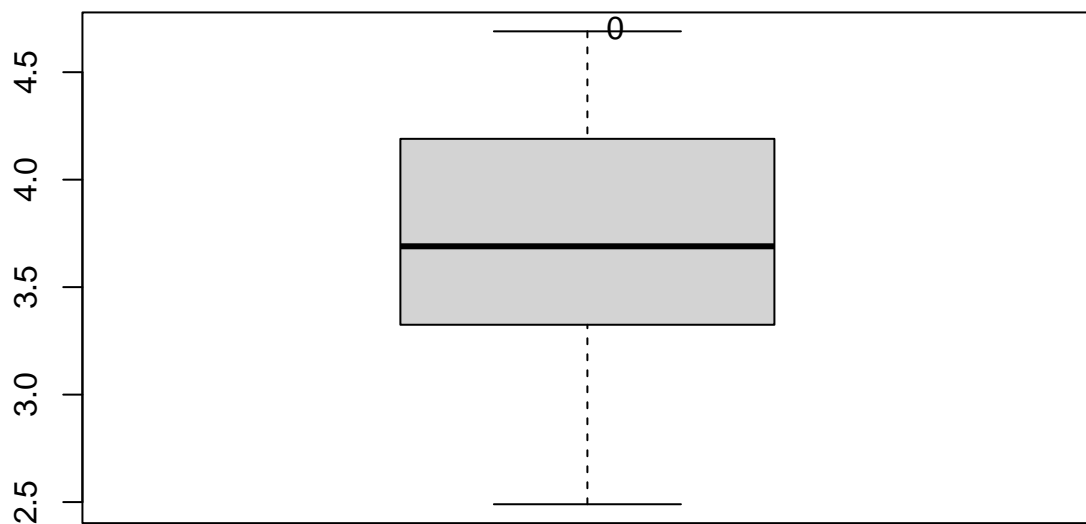
GDP – NOR



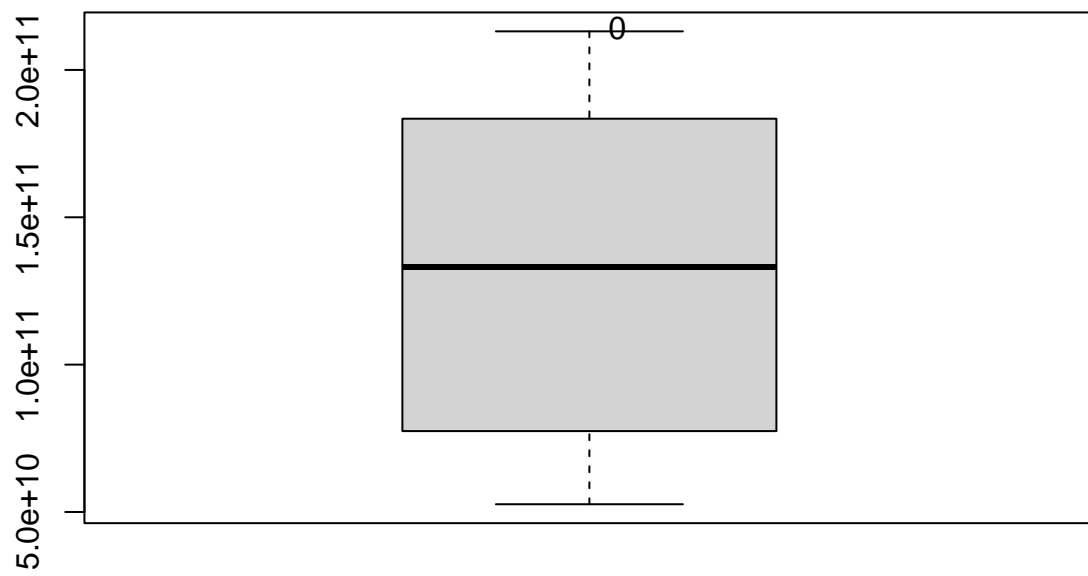
dot_L - NOR



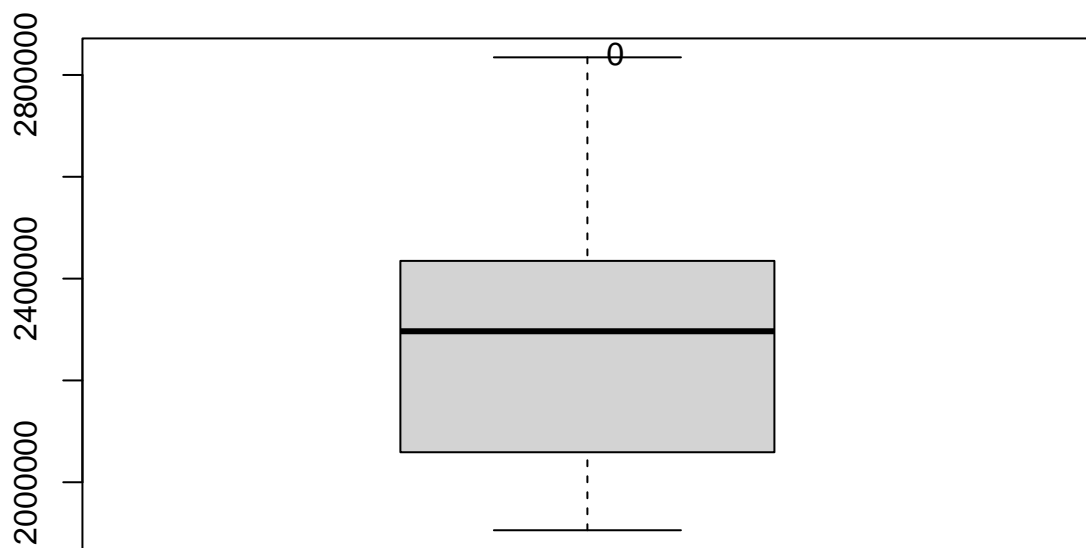
unemployment – NOR



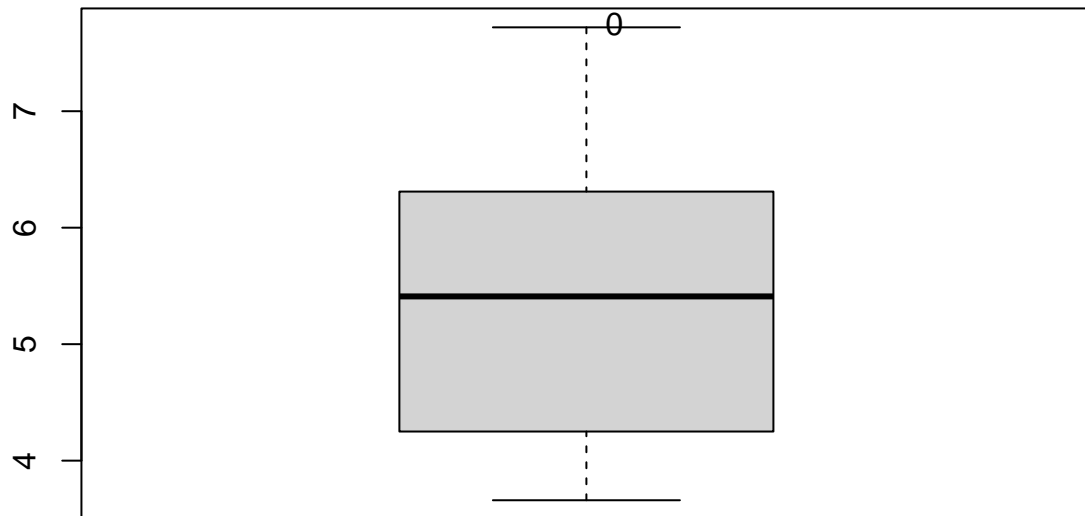
GDP – NZL

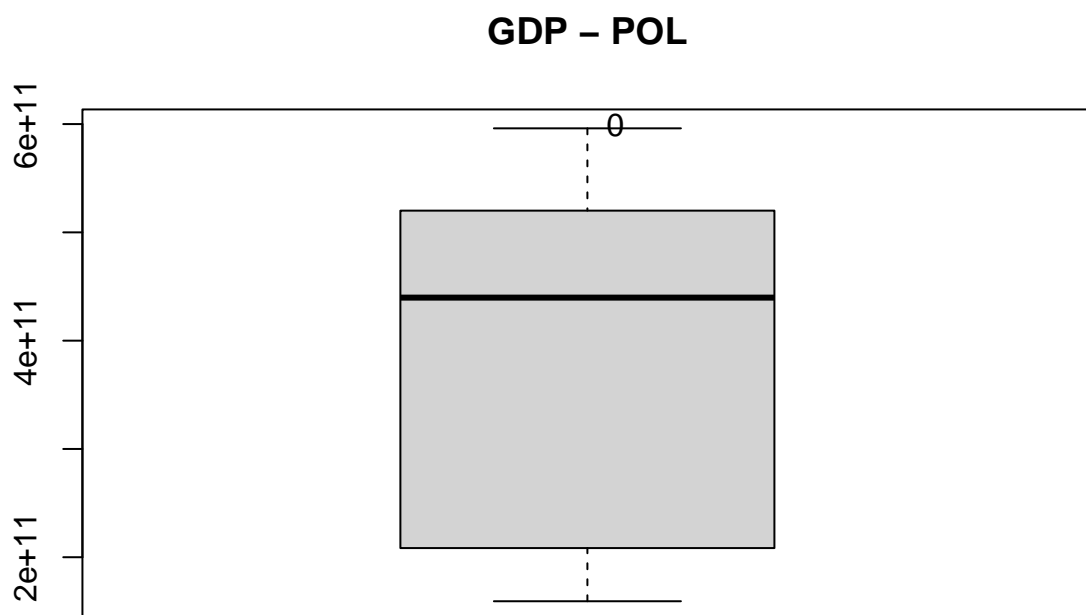


dot_L - NZL

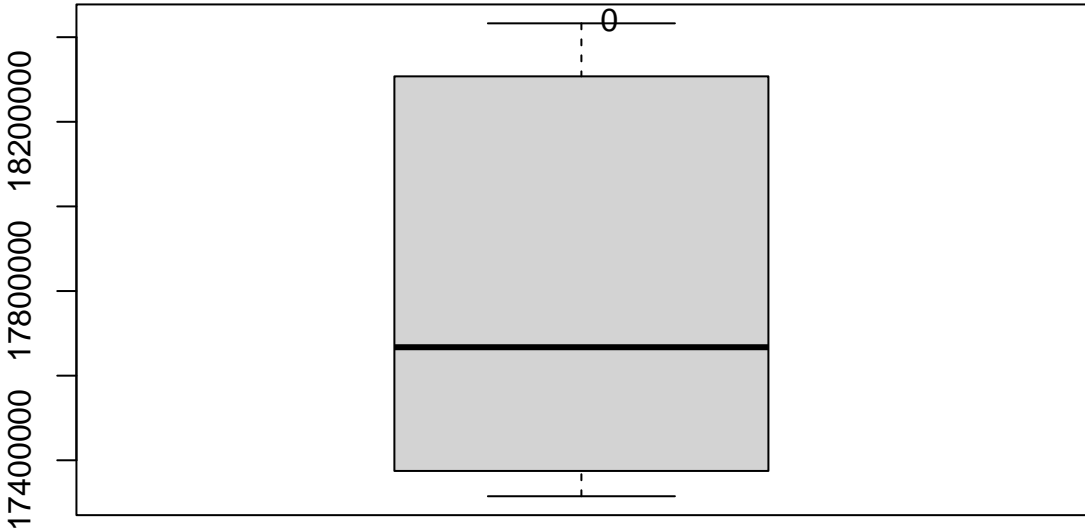


unemployment – NZL

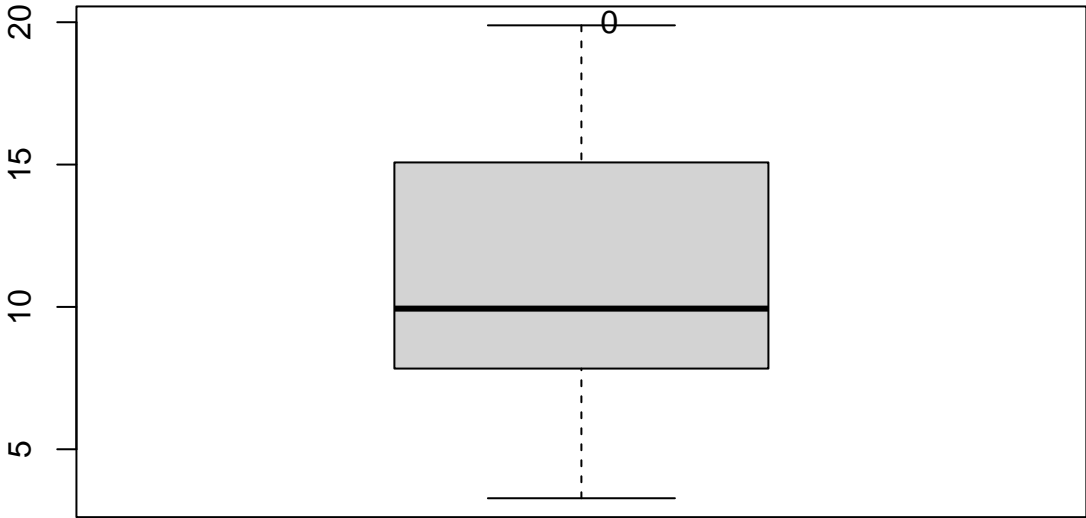




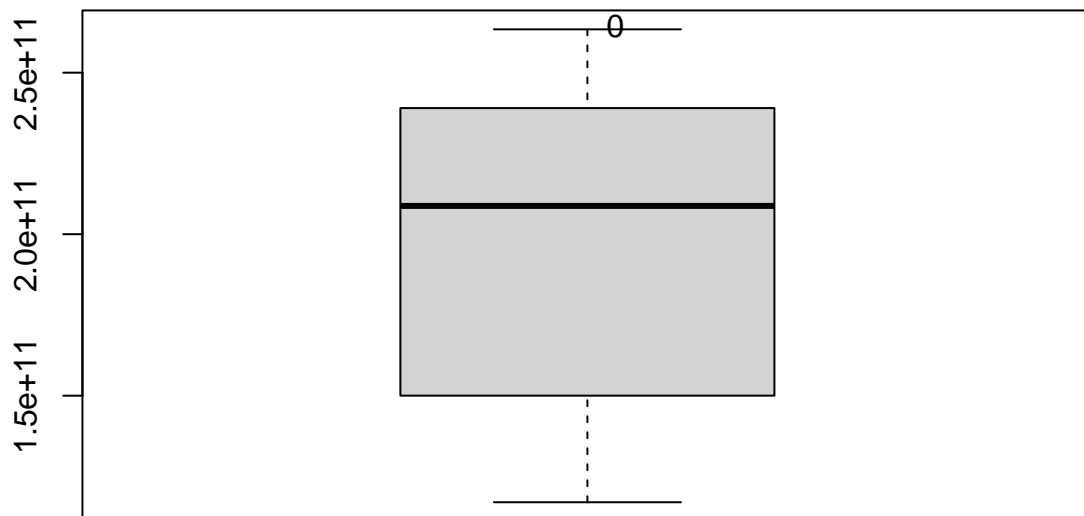
dot_L - POL



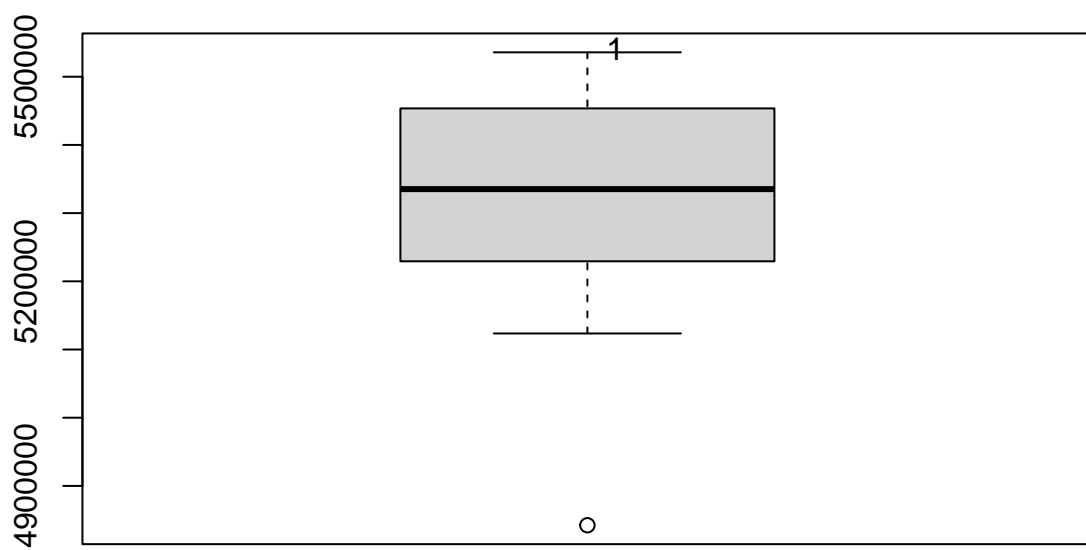
unemployment – POL



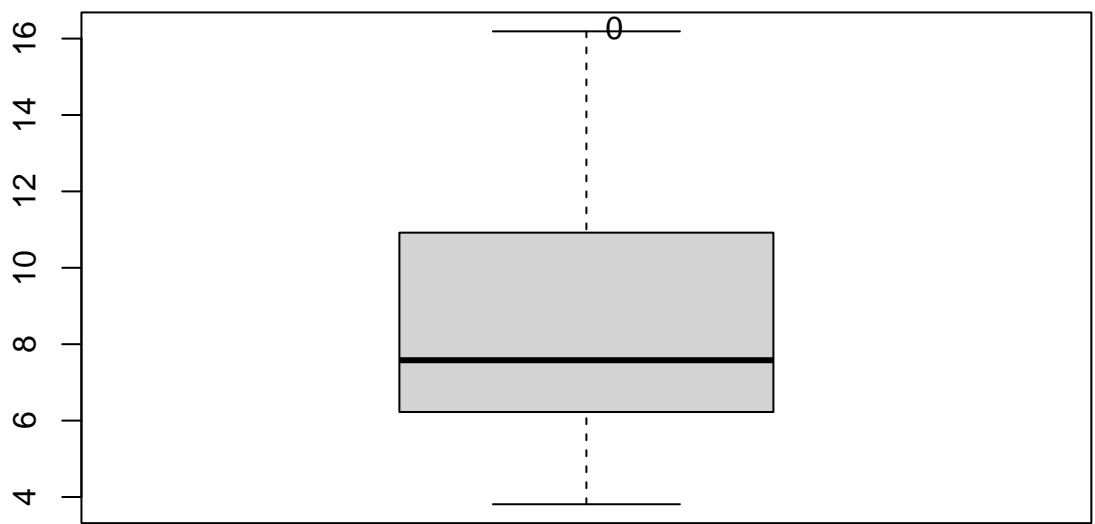
GDP – PRT



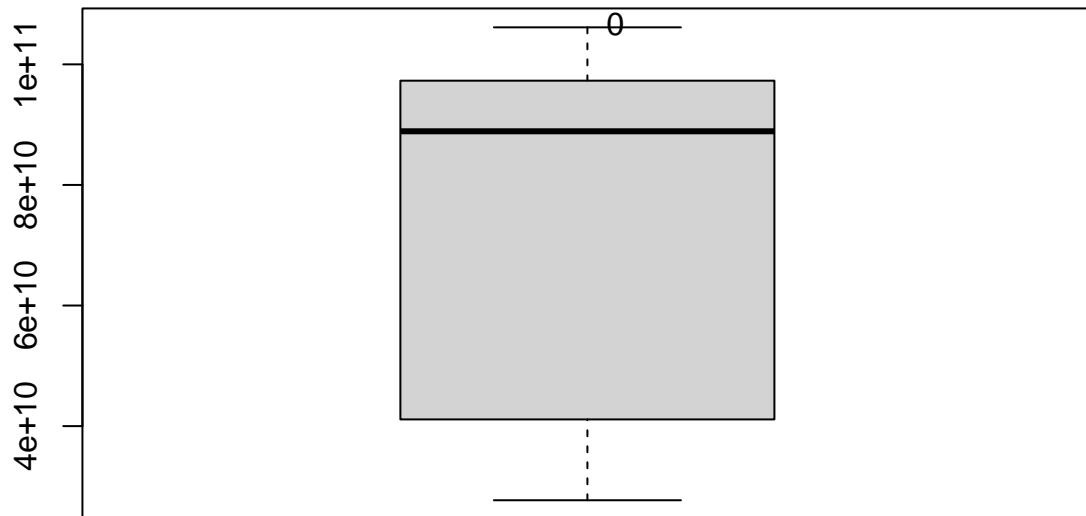
dot_L - PRT



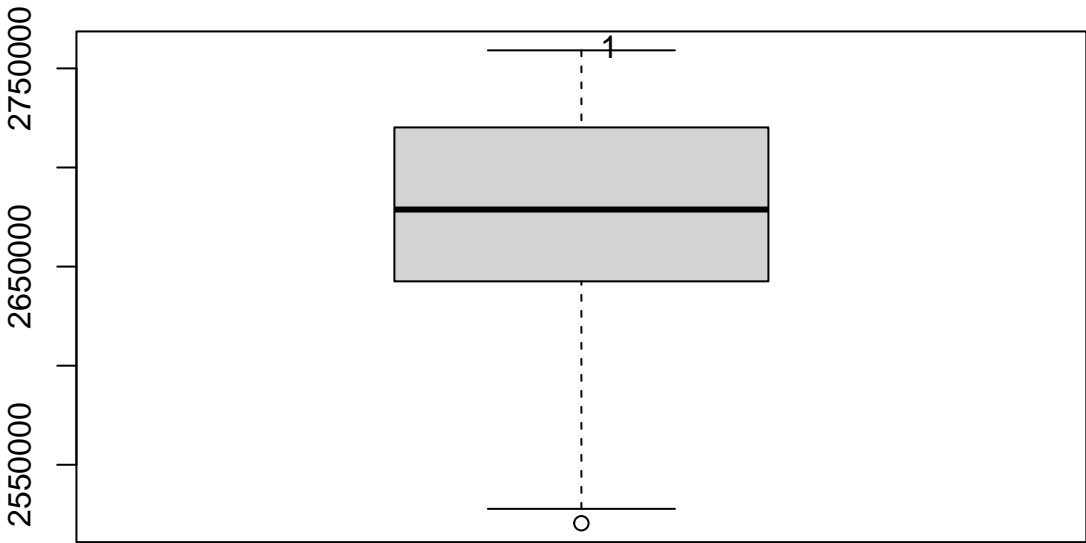
unemployment – PRT



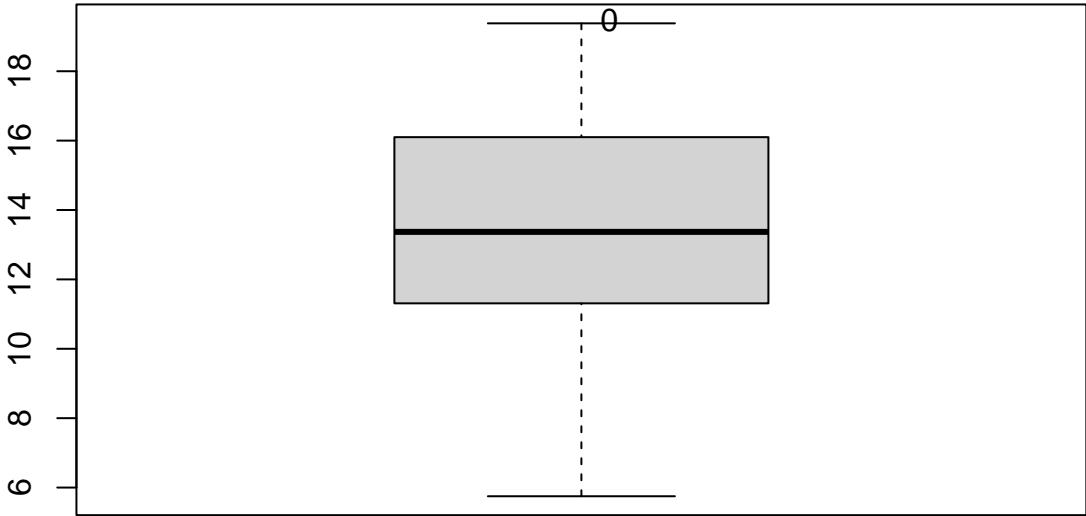
GDP – SVK



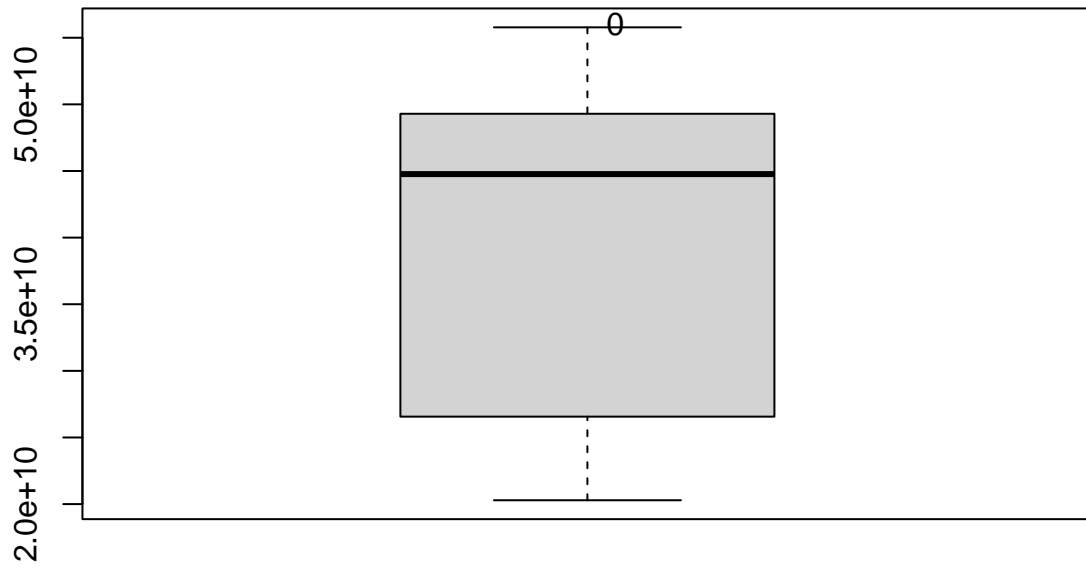
dot_L - SVK

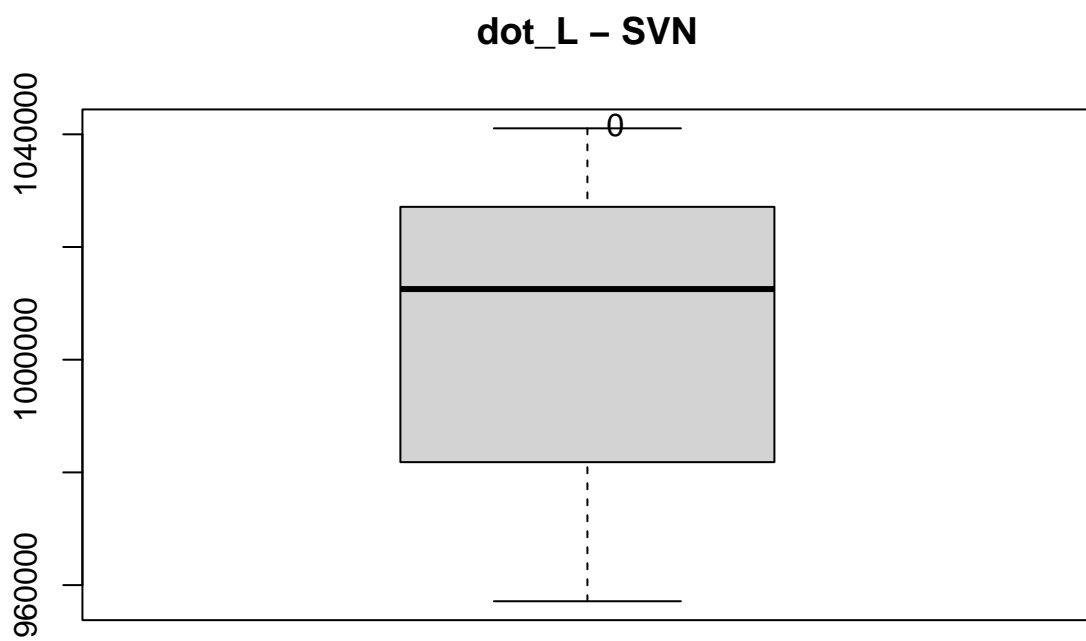


unemployment – SVK

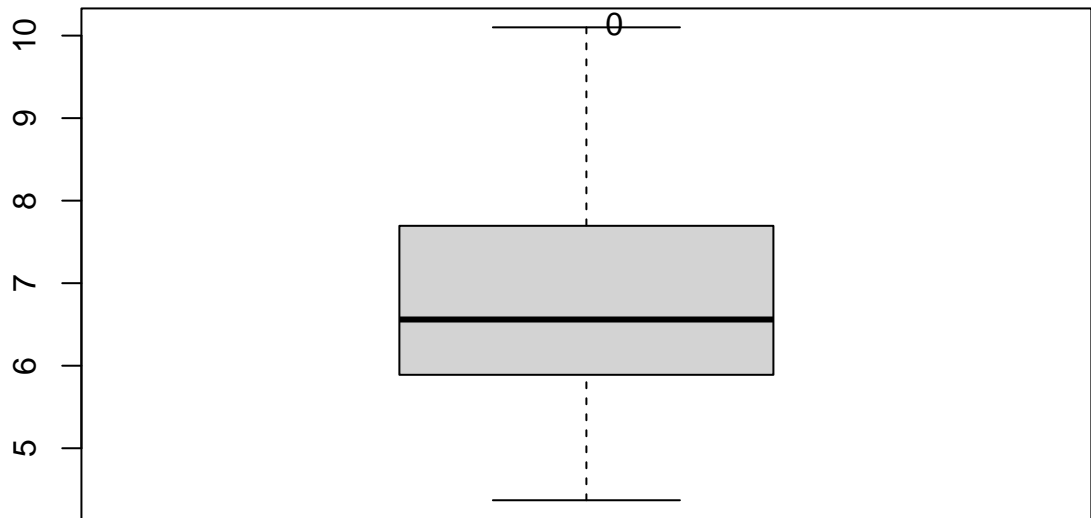


GDP – SVN

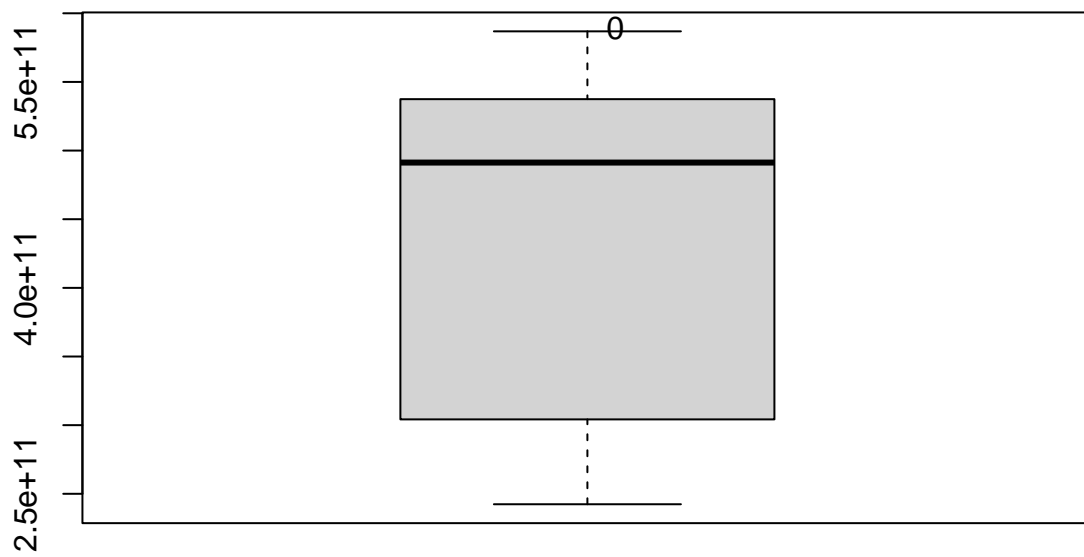


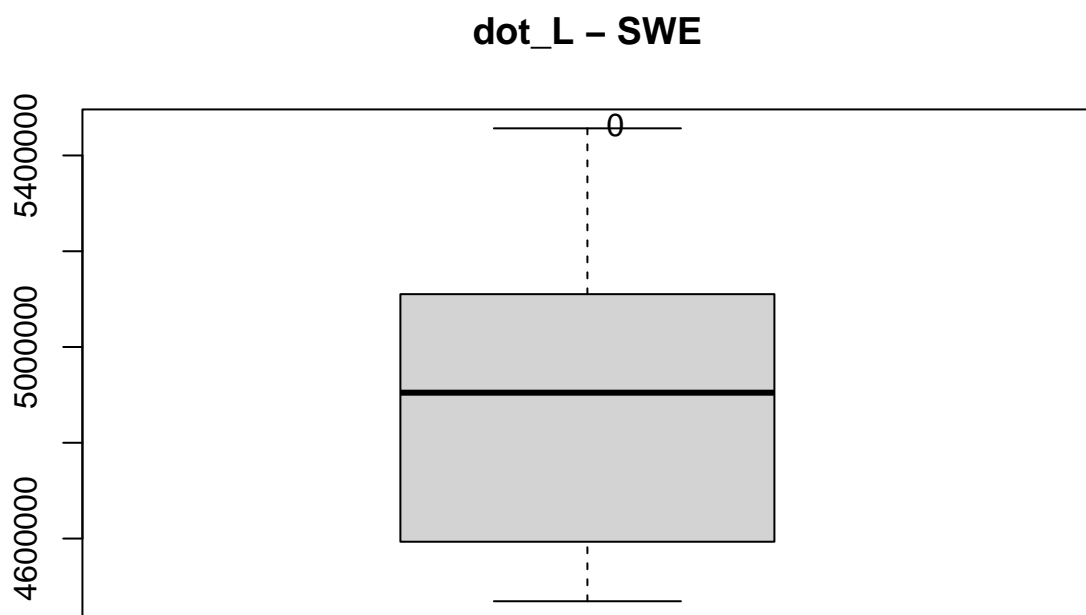


unemployment – SVN

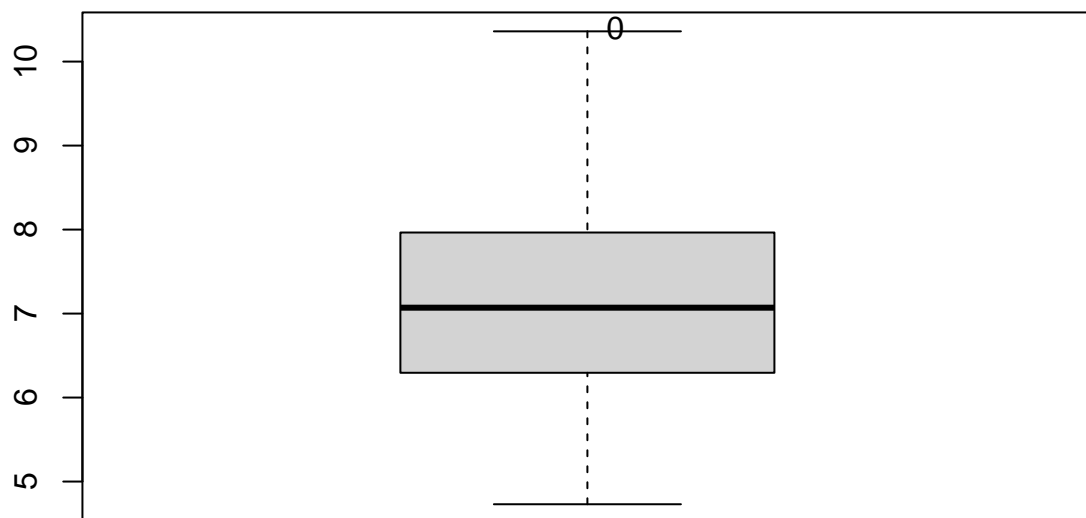


GDP – SWE

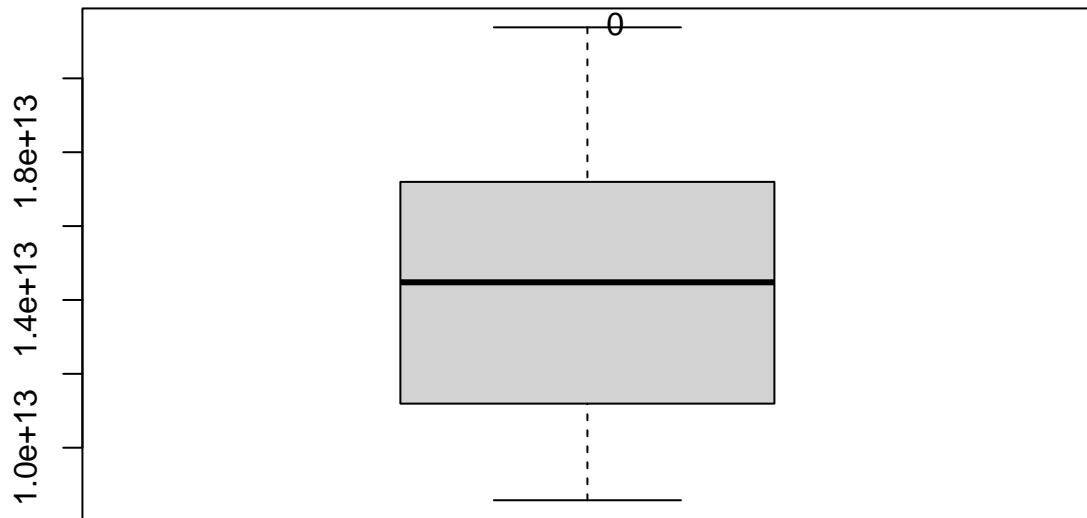




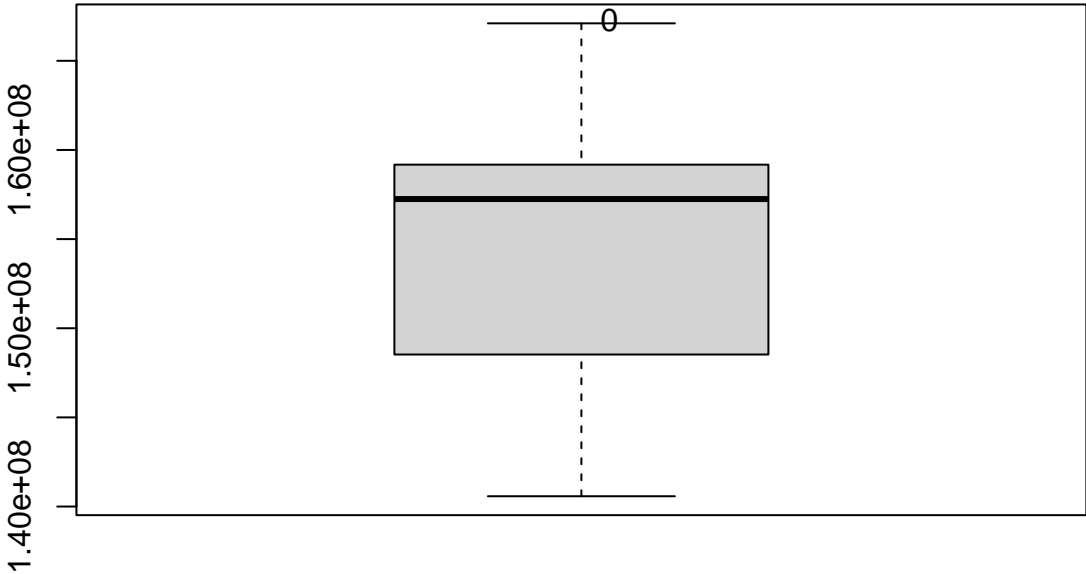
unemployment – SWE



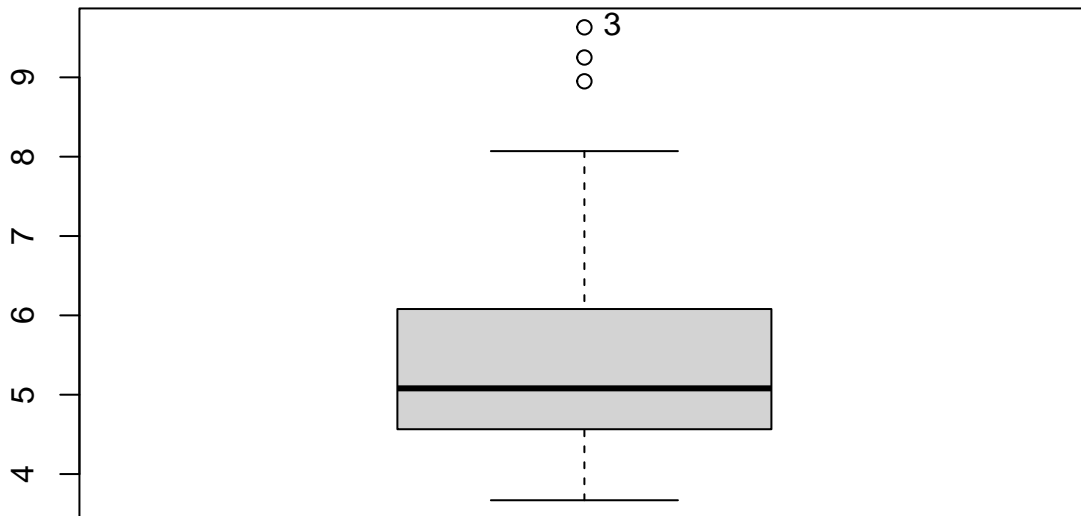
GDP – USA



dot_L - USA



unemployment – USA



```
rownames(resultados2) <- NULL
```

```
países_unicos <- unique(controles$exporter_iso3)
```

```
resultados_df <- data.frame(Pais = character(0), Status = character(0))
```

```
for (pais in países_unicos) {
  dados_pais <- filter(controles, exporter_iso3 == pais)
  variaveis_numericas <- dados_pais %>% select(GDP, dot_L, unemployment)
```

```
dentro_fora <- "DENTRO"
```

```
for (coluna in colnames(variaveis_numericas)) {
  quantis <- quantile(variaveis_numericas[[coluna]], c(0, 0.25, 0.5, 0.75, 1))
  min_valor <- min(variaveis_numericas[[coluna]])
  max_valor <- max(variaveis_numericas[[coluna]])
  iqr <- quantis[4] - quantis[2]
  limite_inferior <- quantis[2] - 1.5 * iqr
  limite_superior <- quantis[4] + 1.5 * iqr
```

```
  if ("dot_L" %in% coluna) {
    if (max(variaveis_numericas[[coluna]]) > limite_superior || min(variaveis_numericas[[coluna]]) < limite_inferior) {
      dentro_fora <- "FORA"
      break
    }
  }
}
```

```

    if ("unemployment" %in% coluna) {
      if (max(variaveis_numericas[[coluna]]) > limite_superior || min(variaveis_numericas[[coluna]]) < .
        dentro_fora <- "FORA"
        break
      }
    }
  }

  resultados_df <- rbind(resultados_df, data.frame(exporter_iso3 = pais, status = dentro_fora))
}

print(resultados_df)

```

```

##      exporter_iso3 status
## 1             AUS  FORA
## 2             AUT DENTRO
## 3             BEL DENTRO
## 4             CAN DENTRO
## 5             CHE DENTRO
## 6             CHL DENTRO
## 7             CRI DENTRO
## 8             CZE DENTRO
## 9             DEU DENTRO
## 10            DNK  FORA
## 11            ESP DENTRO
## 12            EST DENTRO
## 13            FIN  FORA
## 14            FRA  FORA
## 15            GBR DENTRO
## 16            GRC DENTRO
## 17            HUN DENTRO
## 18            IRL DENTRO
## 19            ISL  FORA
## 20            ISR DENTRO
## 21            ITA DENTRO
## 22            JPN DENTRO
## 23            LTU DENTRO
## 24            LUX DENTRO
## 25            LVA DENTRO
## 26            MEX DENTRO
## 27            NLD DENTRO
## 28            NOR DENTRO
## 29            NZL DENTRO
## 30            POL DENTRO
## 31            PRT  FORA
## 32            SVK  FORA
## 33            SVN DENTRO
## 34            SWE DENTRO
## 35            USA  FORA

```

```

controles <- controles %>%
  left_join(resultados_df, by = c("exporter_iso3" = "exporter_iso3")) %>%

```

```
group_by(exporter_iso3)
```

```
#controles <- controles %>%  
# filter(status == "DENTRO")
```

```
print(controles)
```

```
## # A tibble: 805 x 8  
## # Groups:   exporter_iso3 [35]  
##   'Country name' exporter_iso3 year   wage      GDP dot_L unemployment status  
##   <chr>           <chr>      <dbl> <dbl>    <dbl> <dbl>      <dbl> <chr>  
## 1 Australia      AUS        1997 46356.  4.36e11 9.16e6      8.36 FORA  
## 2 Australia      AUS        1998 47000.  4.00e11 9.25e6      7.68 FORA  
## 3 Australia      AUS        1999 48065.  3.89e11 9.34e6      6.87 FORA  
## 4 Australia      AUS        2000 48213.  4.16e11 9.52e6      6.28 FORA  
## 5 Australia      AUS        2001 48693.  3.79e11 9.69e6      6.74 FORA  
## 6 Australia      AUS        2002 49141.  3.96e11 9.84e6      6.37 FORA  
## 7 Australia      AUS        2003 49849.  4.67e11 1.00e7      5.93 FORA  
## 8 Australia      AUS        2004 51414.  6.14e11 1.01e7      5.39 FORA  
## 9 Australia      AUS        2005 52014.  6.95e11 1.04e7      5.03 FORA  
## 10 Australia     AUS        2006 52368   7.48e11 1.07e7      4.78 FORA  
## # i 795 more rows
```

```
países_unicos <- unique(controles$exporter_iso3)
```

```
países_sobraram <- length(países_unicos)
```

```
print(países_sobraram)
```

```
## [1] 35
```

```
print(países_unicos)
```

```
## [1] "AUS" "AUT" "BEL" "CAN" "CHE" "CHL" "CRI" "CZE" "DEU" "DNK" "ESP" "EST"  
## [13] "FIN" "FRA" "GBR" "GRC" "HUN" "IRL" "ISL" "ISR" "ITA" "JPN" "LTU" "LUX"  
## [25] "LVA" "MEX" "NLD" "NOR" "NZL" "POL" "PRT" "SVK" "SVN" "SWE" "USA"
```

```
caminho <- "C:/Users/jcase/OneDrive/Joao/Insper/6 semestre/Problemas em Economia/Econometria/Descritiva
```

```
comwchn <- read_excel(caminho, sheet = "Report")
```

```
caminho <- "C:/Users/jcase/OneDrive/Joao/Insper/6 semestre/Problemas em Economia/Econometria/Descritiva
```

```
comcwor <- read_excel(caminho, sheet = "Report")
```

```
caminho_exp <- "C:/Users/jcase/OneDrive/Joao/Insper/6 semestre/Problemas em Economia/Econometria/Descr
```

```
caminho_imp <- "C:/Users/jcase/OneDrive/Joao/Insper/6 semestre/Problemas em Economia/Econometria/Descr
```

```

Exp <- read_xlsx(caminho_exp, sheet = "Exp")
Imp <- read_xlsx(caminho_imp, sheet = "Imp")

Exp_melted <- Exp %>%
  select(-`Data Type`)

Exp <- Exp_melted %>%
  gather(key = "year", value = "Exports", -Country, -NAIC, -Description)

colnames(Exp) <- c("Country", "NAIC", "Description", "year", "Exports")

Imp_melted <- Imp %>%
  select(-`Data Type`)

Imp <- Imp_melted %>%
  gather(key = "year", value = "Imports", -Country, -NAIC, -Description)

colnames(Imp) <- c("Country", "NAIC", "Description", "year", "Imports")

mapeamento <- data.frame(
  Nome = c("Australia", "Austria", "Belgium", "Canada", "Switzerland", "Chile", "Costa Rica", "Czech Rep",
  Codigo = c("AUS", "AUT", "BEL", "CAN", "CHE", "CHL", "CRI", "CZE", "DEU", "DNK", "ESP", "EST", "FIN",
)

Imp <- Imp[Imp$Country %in% mapeamento$Nome, ]
Exp <- Exp[Exp$Country %in% mapeamento$Nome, ]

#calculate_CID <- function(total_imports, imports_from_china) {
#   if (imports_from_china == 0 || total_imports == 0) {
#     return(0)
#   } else {
#     return((imports_from_china / total_imports) * 100)
#   }
#}

calculate_RTOTI <- function(exports_to_china, total_exports) {
  if (exports_to_china == 0 || total_exports == 0) {
    return(0)
  } else {
    return((exports_to_china / total_exports) * 100)
  }
}

```

```

calculate_ATOI <- function(RTOI_exports, RTOI_imports) {
  if (is.na(RTOI_exports) && is.na(RTOI_imports)) {
    return(0)
  } else if (is.na(RTOI_exports)) {
    return(RTOI_imports)
  } else if (is.na(RTOI_imports)) {
    return(RTOI_exports)
  } else {
    return((RTOI_exports + RTOI_imports) / 2)
  }
}

#calculate_TII <- function(exports_to_china, imports_from_china, total_exports, total_imports) {
#   if (imports_from_china == 0 || total_imports == 0 || exports_to_china == 0 || total_exports == 0) #{
#     return(0)
#   } else {
#     return((exports_to_china / imports_from_china) / (total_exports / total_imports))
#   }
#}

anos_especificos <- c(1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010)

resultados_indices <- data.frame(Country = character(0))

for (ano in anos_especificos) {

  comwchn_ano <- filter(comwchn, year == ano)
  comcwor_ano <- filter(comcwor, year == ano)
  Exp_ano <- filter(Exp, year == ano)
  Imp_ano <- filter(Imp, year == ano)

  paises <- unique(comwchn_ano$partner)
  for (pais in paises) {
    a1 <- sum(comwchn_ano$imports[comwchn_ano$partner == pais])
    a2 <- sum(comcwor_ano$imports[comcwor_ano$reporting == pais])
    a3 <- sum(Exp_ano$Exports[Exp_ano$Country == pais])
    a4 <- sum(Imp_ano$Imports[Imp_ano$Country == pais])

    #CID <- calculate_CID(a4, a2)
    RTOI <- calculate_RTOI(a1, a3)
    ATOI <- calculate_ATOI(RTOI, RTOI)
    #TII <- calculate_TII(a1, a2, a3, a4)

    resultados_indices <- bind_rows(resultados_indices, data.frame(Country = pais,
                                                                  ATOI = ATOI, Year = ano))
  }
}

```

```
}
```

```
print(resultados_indices)
```

```
##          Country      ATOI Year
## 1      Australia 2.696493e+01 1997
## 2        Austria 1.230505e+01 1997
## 3        Belgium 6.828962e+00 1997
## 4         Canada 1.336823e+00 1997
## 5          Chile 9.488136e+00 1997
## 6      Costa Rica 6.702392e-02 1997
## 7 Czech Republic 0.000000e+00 1997
## 8        Denmark 1.970198e+01 1997
## 9         Estonia 5.562078e+00 1997
## 10        Finland 3.946117e+01 1997
## 11         France 2.030498e+01 1997
## 12         Germany 2.519674e+01 1997
## 13          Greece 6.984394e+00 1997
## 14         Hungary 5.294769e+00 1997
## 15         Iceland 5.166311e+00 1997
## 16         Ireland 1.457735e+00 1997
## 17          Israel 1.663813e+00 1997
## 18          Italy 2.723893e+01 1997
## 19          Japan 4.414344e+01 1997
## 20          Latvia 5.489544e-01 1997
## 21      Lithuania 3.023177e+00 1997
## 22      Luxembourg 4.224884e+00 1997
## 23          Mexico 2.582047e-01 1997
## 24      Netherlands 5.411252e+00 1997
## 25      New Zealand 1.777455e+01 1997
## 26          Norway 2.200786e+01 1997
## 27          Poland 2.735550e+00 1997
## 28          Portugal 4.677817e+00 1997
## 29          Slovakia 7.389050e+00 1997
## 30          Slovenia 3.424903e+00 1997
## 31           Spain 1.001967e+01 1997
## 32           Sweden 3.913014e+01 1997
## 33      Switzerland 8.024470e+00 1997
## 34      United Kingdom 5.241212e+00 1997
## 35 United States of America 0.000000e+00 1997
## 36      Australia 4.360621e+01 2001
## 37      Austria 2.521485e+01 2001
## 38      Belgium 1.272545e+01 2001
## 39      Canada 2.459962e+00 2001
## 40      Chile 4.163239e+01 2001
## 41      Costa Rica 1.061919e+00 2001
## 42 Czech Republic 0.000000e+00 2001
## 43      Denmark 3.884401e+01 2001
## 44      Estonia 1.876843e+01 2001
## 45      Finland 1.529289e+02 2001
## 46      France 2.062231e+01 2001
## 47      Germany 4.571930e+01 2001
```

## 48	Greece	4.514454e+00	2001
## 49	Hungary	1.898637e+01	2001
## 50	Iceland	8.234970e+00	2001
## 51	Ireland	8.567049e+00	2001
## 52	Israel	6.458423e+00	2001
## 53	Italy	3.815302e+01	2001
## 54	Japan	7.421638e+01	2001
## 55	Latvia	4.567541e+00	2001
## 56	Lithuania	4.434685e+00	2001
## 57	Luxembourg	1.054126e+01	2001
## 58	Mexico	7.499582e-01	2001
## 59	Netherlands	7.460768e+00	2001
## 60	New Zealand	3.447374e+01	2001
## 61	Norway	3.104221e+01	2001
## 62	Poland	2.872515e+01	2001
## 63	Portugal	5.678539e+00	2001
## 64	Slovakia	1.843746e+01	2001
## 65	Slovenia	1.060652e+01	2001
## 66	Spain	1.229423e+01	2001
## 67	Sweden	6.108938e+01	2001
## 68	Switzerland	1.520245e+01	2001
## 69	United Kingdom	8.628553e+00	2001
## 70	United States of America	0.000000e+00	2001
## 71	Australia	4.110535e+01	2002
## 72	Austria	3.683877e+01	2002
## 73	Belgium	1.515486e+01	2002
## 74	Canada	2.255474e+00	2002
## 75	Chile	5.999742e+01	2002
## 76	Costa Rica	5.891370e+00	2002
## 77	Czech Republic	0.000000e+00	2002
## 78	Denmark	4.256179e+01	2002
## 79	Estonia	4.422828e+01	2002
## 80	Finland	9.843616e+01	2002
## 81	France	2.235422e+01	2002
## 82	Germany	6.162990e+01	2002
## 83	Greece	4.775975e+00	2002
## 84	Hungary	2.454114e+01	2002
## 85	Iceland	6.587512e+00	2002
## 86	Ireland	1.021571e+01	2002
## 87	Israel	7.139781e+00	2002
## 88	Italy	4.280628e+01	2002
## 89	Japan	1.039119e+02	2002
## 90	Latvia	5.761384e+00	2002
## 91	Lithuania	1.148172e+01	2002
## 92	Luxembourg	1.040801e+01	2002
## 93	Mexico	1.143187e+00	2002
## 94	Netherlands	8.571688e+00	2002
## 95	New Zealand	4.427551e+01	2002
## 96	Norway	6.561492e+01	2002
## 97	Poland	3.182936e+01	2002
## 98	Portugal	9.587203e+00	2002
## 99	Slovakia	4.084870e+01	2002
## 100	Slovenia	2.257934e+01	2002
## 101	Spain	1.722594e+01	2002

## 102	Sweden	5.678304e+01	2002
## 103	Switzerland	2.283347e+01	2002
## 104	United Kingdom	1.001098e+01	2002
## 105	United States of America	0.000000e+00	2002
## 106	Australia	5.485210e+01	2003
## 107	Austria	6.162429e+01	2003
## 108	Belgium	1.819003e+01	2003
## 109	Canada	2.580707e+00	2003
## 110	Chile	8.267333e+01	2003
## 111	Costa Rica	1.642833e+01	2003
## 112	Czech Republic	0.000000e+00	2003
## 113	Denmark	6.226754e+01	2003
## 114	Estonia	2.515631e+01	2003
## 115	Finland	1.042080e+02	2003
## 116	France	3.572925e+01	2003
## 117	Germany	8.418461e+01	2003
## 118	Greece	6.268416e+00	2003
## 119	Hungary	3.227111e+01	2003
## 120	Iceland	9.402089e+00	2003
## 121	Ireland	1.235944e+01	2003
## 122	Israel	9.894704e+00	2003
## 123	Italy	4.806156e+01	2003
## 124	Japan	1.423087e+02	2003
## 125	Latvia	1.549037e+01	2003
## 126	Lithuania	1.061707e+01	2003
## 127	Luxembourg	4.141435e+01	2003
## 128	Mexico	1.720486e+00	2003
## 129	Netherlands	9.337398e+00	2003
## 130	New Zealand	5.526303e+01	2003
## 131	Norway	5.896970e+01	2003
## 132	Poland	4.734094e+01	2003
## 133	Portugal	2.255550e+01	2003
## 134	Slovakia	1.060010e+02	2003
## 135	Slovenia	2.583412e+01	2003
## 136	Spain	2.293626e+01	2003
## 137	Sweden	8.420053e+01	2003
## 138	Switzerland	2.746753e+01	2003
## 139	United Kingdom	1.052191e+01	2003
## 140	United States of America	0.000000e+00	2003
## 141	Australia	8.045512e+01	2004
## 142	Austria	7.711800e+01	2004
## 143	Belgium	2.083292e+01	2004
## 144	Canada	3.912757e+00	2004
## 145	Chile	1.011502e+02	2004
## 146	Costa Rica	1.941101e+01	2004
## 147	Czech Republic	0.000000e+00	2004
## 148	Denmark	5.616301e+01	2004
## 149	Estonia	1.546294e+01	2004
## 150	Finland	1.462085e+02	2004
## 151	France	3.600822e+01	2004
## 152	Germany	9.671116e+01	2004
## 153	Greece	4.183403e+00	2004
## 154	Hungary	4.164358e+01	2004
## 155	Iceland	8.865268e+00	2004

## 156	Ireland	1.454708e+01	2004
## 157	Israel	1.010235e+01	2004
## 158	Italy	6.022801e+01	2004
## 159	Japan	1.731724e+02	2004
## 160	Latvia	1.638119e+01	2004
## 161	Lithuania	4.587600e+00	2004
## 162	Luxembourg	1.829415e+01	2004
## 163	Mexico	1.931695e+00	2004
## 164	Netherlands	1.222670e+01	2004
## 165	New Zealand	6.805337e+01	2004
## 166	Norway	8.716675e+01	2004
## 167	Poland	5.251443e+01	2004
## 168	Portugal	2.685005e+01	2004
## 169	Slovakia	9.767475e+01	2004
## 170	Slovenia	2.185924e+01	2004
## 171	Spain	2.629220e+01	2004
## 172	Sweden	1.022792e+02	2004
## 173	Switzerland	3.391555e+01	2004
## 174	United Kingdom	1.322121e+01	2004
## 175	United States of America	0.000000e+00	2004
## 176	Australia	1.013413e+02	2005
## 177	Austria	6.195222e+01	2005
## 178	Belgium	2.152870e+01	2005
## 179	Canada	3.549493e+00	2005
## 180	Chile	9.603335e+01	2005
## 181	Costa Rica	2.564597e+01	2005
## 182	Czech Republic	0.000000e+00	2005
## 183	Denmark	6.221468e+01	2005
## 184	Estonia	3.963845e+01	2005
## 185	Finland	1.169098e+02	2005
## 186	France	4.020466e+01	2005
## 187	Germany	8.990464e+01	2005
## 188	Greece	7.282980e+00	2005
## 189	Hungary	3.578293e+01	2005
## 190	Iceland	9.164532e+00	2005
## 191	Ireland	1.524386e+01	2005
## 192	Israel	1.085682e+01	2005
## 193	Italy	6.014840e+01	2005
## 194	Japan	1.807994e+02	2005
## 195	Latvia	4.839678e+00	2005
## 196	Lithuania	2.954459e+00	2005
## 197	Luxembourg	1.926872e+01	2005
## 198	Mexico	1.853596e+00	2005
## 199	Netherlands	1.104605e+01	2005
## 200	New Zealand	5.006475e+01	2005
## 201	Norway	5.930553e+01	2005
## 202	Poland	4.400313e+01	2005
## 203	Portugal	2.868093e+01	2005
## 204	Slovakia	1.221913e+02	2005
## 205	Slovenia	2.453403e+01	2005
## 206	Spain	3.002139e+01	2005
## 207	Sweden	8.416933e+01	2005
## 208	Switzerland	3.099082e+01	2005
## 209	United Kingdom	1.427658e+01	2005

##	210	United States of America	0.000000e+00	2005
##	211	Australia	1.082215e+02	2006
##	212	Austria	6.888784e+01	2006
##	213	Belgium	2.015974e+01	2006
##	214	Canada	3.324399e+00	2006
##	215	Chile	8.447624e+01	2006
##	216	Costa Rica	4.228224e+01	2006
##	217	Czech Republic	0.000000e+00	2006
##	218	Denmark	5.771390e+01	2006
##	219	Estonia	1.286739e+02	2006
##	220	Finland	1.180293e+02	2006
##	221	France	4.649200e+01	2006
##	222	Germany	9.163135e+01	2006
##	223	Greece	6.712093e+00	2006
##	224	Hungary	5.885319e+01	2006
##	225	Iceland	1.093059e+01	2006
##	226	Ireland	1.814662e+01	2006
##	227	Israel	1.183019e+01	2006
##	228	Italy	6.840916e+01	2006
##	229	Japan	1.935614e+02	2006
##	230	Latvia	5.587286e+00	2006
##	231	Lithuania	2.751617e+00	2006
##	232	Luxembourg	2.920478e+01	2006
##	233	Mexico	1.943176e+00	2006
##	234	Netherlands	1.173588e+01	2006
##	235	New Zealand	4.486736e+01	2006
##	236	Norway	5.220439e+01	2006
##	237	Poland	3.402702e+01	2006
##	238	Portugal	2.405818e+01	2006
##	239	Slovakia	6.591454e+01	2006
##	240	Slovenia	3.969487e+01	2006
##	241	Spain	4.055436e+01	2006
##	242	Sweden	8.357706e+01	2006
##	243	Switzerland	2.660760e+01	2006
##	244	United Kingdom	1.430064e+01	2006
##	245	United States of America	0.000000e+00	2006
##	246	Australia	1.338482e+02	2007
##	247	Austria	7.734305e+01	2007
##	248	Belgium	1.965782e+01	2007
##	249	Canada	4.414470e+00	2007
##	250	Chile	1.236989e+02	2007
##	251	Costa Rica	5.035633e+01	2007
##	252	Czech Republic	0.000000e+00	2007
##	253	Denmark	6.285335e+01	2007
##	254	Estonia	3.709124e+01	2007
##	255	Finland	1.210993e+02	2007
##	256	France	4.863389e+01	2007
##	257	Germany	9.139402e+01	2007
##	258	Greece	8.074507e+00	2007
##	259	Hungary	9.368087e+01	2007
##	260	Iceland	5.661824e+00	2007
##	261	Ireland	2.136708e+01	2007
##	262	Israel	1.255672e+01	2007
##	263	Italy	7.218435e+01	2007

## 264	Japan	2.134767e+02	2007
## 265	Latvia	5.638558e+00	2007
## 266	Lithuania	2.733974e+00	2007
## 267	Luxembourg	2.510625e+01	2007
## 268	Mexico	2.391445e+00	2007
## 269	Netherlands	1.493004e+01	2007
## 270	New Zealand	5.467735e+01	2007
## 271	Norway	5.290331e+01	2007
## 272	Poland	3.561839e+01	2007
## 273	Portugal	1.551922e+01	2007
## 274	Slovakia	1.081297e+02	2007
## 275	Slovenia	3.722933e+01	2007
## 276	Spain	4.484071e+01	2007
## 277	Sweden	9.216041e+01	2007
## 278	Switzerland	3.059516e+01	2007
## 279	United Kingdom	1.540618e+01	2007
## 280	United States of America	0.000000e+00	2007
## 281	Australia	1.662475e+02	2008
## 282	Austria	1.177953e+02	2008
## 283	Belgium	1.838572e+01	2008
## 284	Canada	4.847720e+00	2008
## 285	Chile	9.238659e+01	2008
## 286	Costa Rica	3.996116e+01	2008
## 287	Czech Republic	0.000000e+00	2008
## 288	Denmark	9.575983e+01	2008
## 289	Estonia	3.932010e+01	2008
## 290	Finland	9.392994e+01	2008
## 291	France	5.352236e+01	2008
## 292	Germany	1.019004e+02	2008
## 293	Greece	9.601651e+00	2008
## 294	Hungary	9.657849e+01	2008
## 295	Iceland	7.476521e+00	2008
## 296	Ireland	3.173956e+01	2008
## 297	Israel	1.223956e+01	2008
## 298	Italy	7.515131e+01	2008
## 299	Japan	2.259476e+02	2008
## 300	Latvia	4.569613e+00	2008
## 301	Lithuania	3.504118e+00	2008
## 302	Luxembourg	2.760381e+01	2008
## 303	Mexico	2.435191e+00	2008
## 304	Netherlands	1.317503e+01	2008
## 305	New Zealand	7.363038e+01	2008
## 306	Norway	6.317155e+01	2008
## 307	Poland	3.375121e+01	2008
## 308	Portugal	1.464451e+01	2008
## 309	Slovakia	1.723092e+02	2008
## 310	Slovenia	4.249334e+01	2008
## 311	Spain	4.415836e+01	2008
## 312	Sweden	9.908780e+01	2008
## 313	Switzerland	2.903572e+01	2008
## 314	United Kingdom	1.772732e+01	2008
## 315	United States of America	0.000000e+00	2008
## 316	Australia	2.011568e+02	2009
## 317	Austria	1.340951e+02	2009

## 318	Belgium	2.703356e+01	2009
## 319	Canada	5.876364e+00	2009
## 320	Chile	1.378556e+02	2009
## 321	Costa Rica	5.625574e+01	2009
## 322	Czech Republic	0.000000e+00	2009
## 323	Denmark	1.112120e+02	2009
## 324	Estonia	4.329800e+01	2009
## 325	Finland	1.964381e+02	2009
## 326	France	4.897273e+01	2009
## 327	Germany	1.286596e+02	2009
## 328	Greece	8.721549e+00	2009
## 329	Hungary	1.190566e+02	2009
## 330	Iceland	9.513419e+00	2009
## 331	Ireland	4.308158e+01	2009
## 332	Israel	1.586716e+01	2009
## 333	Italy	8.995020e+01	2009
## 334	Japan	2.554449e+02	2009
## 335	Latvia	8.999090e+00	2009
## 336	Lithuania	9.340805e+00	2009
## 337	Luxembourg	1.584469e+01	2009
## 338	Mexico	3.022214e+00	2009
## 339	Netherlands	1.583497e+01	2009
## 340	New Zealand	1.147050e+02	2009
## 341	Norway	1.111639e+02	2009
## 342	Poland	6.533571e+01	2009
## 343	Portugal	4.436012e+01	2009
## 344	Slovakia	4.310370e+02	2009
## 345	Slovenia	5.242398e+01	2009
## 346	Spain	4.905079e+01	2009
## 347	Sweden	1.196206e+02	2009
## 348	Switzerland	3.337582e+01	2009
## 349	United Kingdom	1.721260e+01	2009
## 350	United States of America	0.000000e+00	2009
## 351	Australia	2.772952e+02	2010
## 352	Austria	1.741465e+02	2010
## 353	Belgium	3.079348e+01	2010
## 354	Canada	5.946347e+00	2010
## 355	Chile	1.644424e+02	2010
## 356	Costa Rica	5.999777e+01	2010
## 357	Czech Republic	0.000000e+00	2010
## 358	Denmark	1.240566e+02	2010
## 359	Estonia	9.682136e+01	2010
## 360	Finland	1.844140e+02	2010
## 361	France	6.340634e+01	2010
## 362	Germany	1.541656e+02	2010
## 363	Greece	3.528353e+01	2010
## 364	Hungary	1.703118e+02	2010
## 365	Iceland	1.271837e+01	2010
## 366	Ireland	4.690346e+01	2010
## 367	Israel	2.305551e+01	2010
## 368	Italy	9.841889e+01	2010
## 369	Japan	2.914670e+02	2010
## 370	Latvia	1.132378e+01	2010
## 371	Lithuania	6.710220e+00	2010

## 372	Luxembourg	1.791159e+01	2010
## 373	Mexico	4.200736e+00	2010
## 374	Netherlands	1.865015e+01	2010
## 375	New Zealand	1.334356e+02	2010
## 376	Norway	1.042090e+02	2010
## 377	Poland	5.687749e+01	2010
## 378	Portugal	7.131475e+01	2010
## 379	Slovakia	6.998430e+02	2010
## 380	Slovenia	5.381432e+01	2010
## 381	Spain	6.022317e+01	2010
## 382	Sweden	1.246394e+02	2010
## 383	Switzerland	4.043356e+01	2010
## 384	United Kingdom	2.334048e+01	2010
## 385	United States of America	0.000000e+00	2010
## 386	Australia	2.938579e+02	2011
## 387	Austria	1.648068e+02	2011
## 388	Belgium	3.380310e+01	2011
## 389	Canada	7.680566e+00	2011
## 390	Chile	1.291867e+02	2011
## 391	Costa Rica	6.302682e+01	2011
## 392	Czech Republic	0.000000e+00	2011
## 393	Denmark	1.251620e+02	2011
## 394	Estonia	6.634915e+01	2011
## 395	Finland	1.438369e+02	2011
## 396	France	7.925247e+01	2011
## 397	Germany	1.881052e+02	2011
## 398	Greece	3.128928e+01	2011
## 399	Hungary	1.657563e+02	2011
## 400	Iceland	1.203463e+01	2011
## 401	Ireland	4.835517e+01	2011
## 402	Israel	2.176168e+01	2011
## 403	Italy	1.095632e+02	2011
## 404	Japan	2.953634e+02	2011
## 405	Latvia	1.082601e+01	2011
## 406	Lithuania	7.670733e+00	2011
## 407	Luxembourg	1.950008e+01	2011
## 408	Mexico	4.734847e+00	2011
## 409	Netherlands	2.049415e+01	2011
## 410	New Zealand	1.392677e+02	2011
## 411	Norway	9.978160e+01	2011
## 412	Poland	6.517668e+01	2011
## 413	Portugal	8.834293e+01	2011
## 414	Slovakia	1.143258e+03	2011
## 415	Slovenia	3.023817e+01	2011
## 416	Spain	6.849456e+01	2011
## 417	Sweden	1.355479e+02	2011
## 418	Switzerland	4.713446e+01	2011
## 419	United Kingdom	2.597654e+01	2011
## 420	United States of America	0.000000e+00	2011
## 421	Australia	2.523433e+02	2012
## 422	Austria	1.381339e+02	2012
## 423	Belgium	3.384939e+01	2012
## 424	Canada	7.766267e+00	2012
## 425	Chile	1.098997e+02	2012

## 426	Costa Rica	7.282663e+01	2012
## 427	Czech Republic	0.000000e+00	2012
## 428	Denmark	1.305524e+02	2012
## 429	Estonia	5.752448e+01	2012
## 430	Finland	1.493715e+02	2012
## 431	France	7.826065e+01	2012
## 432	Germany	1.883580e+02	2012
## 433	Greece	5.314416e+01	2012
## 434	Hungary	1.483311e+02	2012
## 435	Iceland	2.399029e+01	2012
## 436	Ireland	5.136874e+01	2012
## 437	Israel	2.047700e+01	2012
## 438	Italy	9.972764e+01	2012
## 439	Japan	2.539083e+02	2012
## 440	Latvia	1.336990e+01	2012
## 441	Lithuania	1.182288e+01	2012
## 442	Luxembourg	1.379717e+01	2012
## 443	Mexico	4.243669e+00	2012
## 444	Netherlands	2.142868e+01	2012
## 445	New Zealand	1.799647e+02	2012
## 446	Norway	8.761779e+01	2012
## 447	Poland	5.969959e+01	2012
## 448	Portugal	1.380538e+02	2012
## 449	Slovakia	1.089326e+03	2012
## 450	Slovenia	8.315971e+01	2012
## 451	Spain	6.631840e+01	2012
## 452	Sweden	1.319132e+02	2012
## 453	Switzerland	3.690173e+01	2012
## 454	United Kingdom	3.061275e+01	2012
## 455	United States of America	0.000000e+00	2012
## 456	Australia	3.523397e+02	2013
## 457	Austria	1.429098e+02	2013
## 458	Belgium	3.091445e+01	2013
## 459	Canada	8.032773e+00	2013
## 460	Chile	1.182222e+02	2013
## 461	Costa Rica	6.587015e+01	2013
## 462	Czech Republic	0.000000e+00	2013
## 463	Denmark	1.513042e+02	2013
## 464	Estonia	6.807185e+01	2013
## 465	Finland	1.662646e+02	2013
## 466	France	7.279703e+01	2013
## 467	Germany	1.985897e+02	2013
## 468	Greece	5.862571e+01	2013
## 469	Hungary	1.572216e+02	2013
## 470	Iceland	1.476423e+01	2013
## 471	Ireland	6.321925e+01	2013
## 472	Israel	2.314677e+01	2013
## 473	Italy	1.047736e+02	2013
## 474	Japan	2.484495e+02	2013
## 475	Latvia	2.004945e+01	2013
## 476	Lithuania	1.460786e+01	2013
## 477	Luxembourg	1.388256e+01	2013
## 478	Mexico	4.531218e+00	2013
## 479	Netherlands	2.307572e+01	2013

## 480	New Zealand	2.558787e+02	2013
## 481	Norway	7.512928e+01	2013
## 482	Poland	5.906864e+01	2013
## 483	Portugal	1.657440e+02	2013
## 484	Slovakia	1.169013e+03	2013
## 485	Slovenia	1.123595e+02	2013
## 486	Spain	5.829564e+01	2013
## 487	Sweden	1.617886e+02	2013
## 488	Switzerland	3.678255e+01	2013
## 489	United Kingdom	4.007630e+01	2013
## 490	United States of America	0.000000e+00	2013
## 491	Australia	3.365267e+02	2014
## 492	Austria	1.530528e+02	2014
## 493	Belgium	2.889852e+01	2014
## 494	Canada	6.742307e+00	2014
## 495	Chile	1.272164e+02	2014
## 496	Costa Rica	6.026385e+01	2014
## 497	Czech Republic	0.000000e+00	2014
## 498	Denmark	1.717465e+02	2014
## 499	Estonia	7.306709e+01	2014
## 500	Finland	1.885692e+02	2014
## 501	France	8.519900e+01	2014
## 502	Germany	2.119519e+02	2014
## 503	Greece	4.465365e+01	2014
## 504	Hungary	1.767863e+02	2014
## 505	Iceland	1.592537e+01	2014
## 506	Ireland	4.780443e+01	2014
## 507	Israel	2.083602e+01	2014
## 508	Italy	1.129976e+02	2014
## 509	Japan	2.427920e+02	2014
## 510	Latvia	3.430581e+01	2014
## 511	Lithuania	2.296259e+01	2014
## 512	Luxembourg	2.004692e+01	2014
## 513	Mexico	4.639083e+00	2014
## 514	Netherlands	2.166894e+01	2014
## 515	New Zealand	2.232569e+02	2014
## 516	Norway	1.010518e+02	2014
## 517	Poland	8.015066e+01	2014
## 518	Portugal	1.484000e+02	2014
## 519	Slovakia	7.583582e+02	2014
## 520	Slovenia	1.100982e+02	2014
## 521	Spain	6.081834e+01	2014
## 522	Sweden	1.566339e+02	2014
## 523	Switzerland	4.606828e+01	2014
## 524	United Kingdom	4.343933e+01	2014
## 525	United States of America	0.000000e+00	2014
## 526	Australia	2.936598e+02	2015
## 527	Austria	1.234520e+02	2015
## 528	Belgium	2.050051e+01	2015
## 529	Canada	9.333548e+00	2015
## 530	Chile	1.193544e+02	2015
## 531	Costa Rica	1.366364e+01	2015
## 532	Czech Republic	0.000000e+00	2015
## 533	Denmark	1.859212e+02	2015

## 534	Estonia	8.141734e+01	2015
## 535	Finland	2.234163e+02	2015
## 536	France	8.200026e+01	2015
## 537	Germany	1.753062e+02	2015
## 538	Greece	3.934690e+01	2015
## 539	Hungary	1.676440e+02	2015
## 540	Iceland	1.590231e+01	2015
## 541	Ireland	4.799729e+01	2015
## 542	Israel	2.069567e+01	2015
## 543	Italy	1.037407e+02	2015
## 544	Japan	2.290404e+02	2015
## 545	Latvia	5.413084e+01	2015
## 546	Lithuania	2.627582e+01	2015
## 547	Luxembourg	2.217429e+01	2015
## 548	Mexico	4.240680e+00	2015
## 549	Netherlands	2.182890e+01	2015
## 550	New Zealand	1.813372e+02	2015
## 551	Norway	1.161228e+02	2015
## 552	Poland	7.379836e+01	2015
## 553	Portugal	1.551037e+02	2015
## 554	Slovakia	5.894833e+02	2015
## 555	Slovenia	8.365929e+01	2015
## 556	Spain	5.419130e+01	2015
## 557	Sweden	1.629018e+02	2015
## 558	Switzerland	1.854994e+02	2015
## 559	United Kingdom	3.375066e+01	2015
## 560	United States of America	0.000000e+00	2015
## 561	Australia	3.201193e+02	2016
## 562	Austria	1.323817e+02	2016
## 563	Belgium	2.140944e+01	2016
## 564	Canada	6.871036e+00	2016
## 565	Chile	1.438137e+02	2016
## 566	Costa Rica	1.188986e+01	2016
## 567	Czech Republic	0.000000e+00	2016
## 568	Denmark	1.892322e+02	2016
## 569	Estonia	8.251027e+01	2016
## 570	Finland	2.306289e+02	2016
## 571	France	7.221957e+01	2016
## 572	Germany	1.736221e+02	2016
## 573	Greece	3.787064e+01	2016
## 574	Hungary	1.877844e+02	2016
## 575	Iceland	2.107284e+01	2016
## 576	Ireland	5.537123e+01	2016
## 577	Israel	2.402843e+01	2016
## 578	Italy	9.979365e+01	2016
## 579	Japan	2.295734e+02	2016
## 580	Latvia	4.840211e+01	2016
## 581	Lithuania	3.532647e+01	2016
## 582	Luxembourg	2.111538e+01	2016
## 583	Mexico	4.483460e+00	2016
## 584	Netherlands	2.473402e+01	2016
## 585	New Zealand	1.997164e+02	2016
## 586	Norway	8.239893e+01	2016
## 587	Poland	6.958930e+01	2016

## 588	Portugal	1.635225e+02	2016
## 589	Slovakia	8.219234e+02	2016
## 590	Slovenia	1.317728e+02	2016
## 591	Spain	5.894589e+01	2016
## 592	Sweden	1.617781e+02	2016
## 593	Switzerland	1.747180e+02	2016
## 594	United Kingdom	3.380160e+01	2016
## 595	United States of America	0.000000e+00	2016
## 596	Australia	3.868697e+02	2017
## 597	Austria	1.369853e+02	2017
## 598	Belgium	2.521805e+01	2017
## 599	Canada	7.209347e+00	2017
## 600	Chile	1.553217e+02	2017
## 601	Costa Rica	1.287828e+01	2017
## 602	Czech Republic	0.000000e+00	2017
## 603	Denmark	1.899783e+02	2017
## 604	Estonia	9.492894e+01	2017
## 605	Finland	2.820738e+02	2017
## 606	France	7.949333e+01	2017
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## 608	Greece	4.499220e+01	2017
## 609	Hungary	2.158185e+02	2017
## 610	Iceland	2.756438e+01	2017
## 611	Ireland	7.579567e+01	2017
## 612	Israel	3.349904e+01	2017
## 613	Italy	1.110882e+02	2017
## 614	Japan	2.447589e+02	2017
## 615	Latvia	4.640649e+01	2017
## 616	Lithuania	4.181190e+01	2017
## 617	Luxembourg	2.854580e+01	2017
## 618	Mexico	4.843004e+00	2017
## 619	Netherlands	2.685671e+01	2017
## 620	New Zealand	2.383964e+02	2017
## 621	Norway	5.739005e+01	2017
## 622	Poland	7.404912e+01	2017
## 623	Portugal	1.789840e+02	2017
## 624	Slovakia	5.852018e+02	2017
## 625	Slovenia	1.331452e+02	2017
## 626	Spain	7.230933e+01	2017
## 627	Sweden	2.106847e+02	2017
## 628	Switzerland	1.515585e+02	2017
## 629	United Kingdom	3.947974e+01	2017
## 630	United States of America	0.000000e+00	2017
## 631	Australia	4.174605e+02	2018
## 632	Austria	1.940616e+02	2018
## 633	Belgium	2.217181e+01	2018
## 634	Canada	9.453517e+00	2018
## 635	Chile	1.745619e+02	2018
## 636	Costa Rica	1.200989e+01	2018
## 637	Czech Republic	0.000000e+00	2018
## 638	Denmark	1.680526e+02	2018
## 639	Estonia	7.081173e+01	2018
## 640	Finland	2.541064e+02	2018
## 641	France	8.784736e+01	2018

## 642	Germany	1.839077e+02	2018
## 643	Greece	5.180553e+01	2018
## 644	Hungary	2.479570e+02	2018
## 645	Iceland	2.472175e+01	2018
## 646	Ireland	1.010143e+02	2018
## 647	Israel	3.383378e+01	2018
## 648	Italy	9.194976e+01	2018
## 649	Japan	2.400758e+02	2018
## 650	Latvia	4.173879e+01	2018
## 651	Lithuania	4.665874e+01	2018
## 652	Luxembourg	2.876203e+01	2018
## 653	Mexico	5.265562e+00	2018
## 654	Netherlands	2.531432e+01	2018
## 655	New Zealand	2.724256e+02	2018
## 656	Norway	6.284675e+01	2018
## 657	Poland	6.796759e+01	2018
## 658	Portugal	1.428363e+02	2018
## 659	Slovakia	1.812732e+03	2018
## 660	Slovenia	1.835867e+02	2018
## 661	Spain	6.688749e+01	2018
## 662	Sweden	2.000929e+02	2018
## 663	Switzerland	1.736836e+02	2018
## 664	United Kingdom	3.579695e+01	2018
## 665	United States of America	0.000000e+00	2018
## 666	Australia	4.285261e+02	2019
## 667	Austria	1.538057e+02	2019
## 668	Belgium	2.421694e+01	2019
## 669	Canada	1.080910e+01	2019
## 670	Chile	1.818180e+02	2019
## 671	Costa Rica	1.483309e+01	2019
## 672	Czech Republic	0.000000e+00	2019
## 673	Denmark	1.745221e+02	2019
## 674	Estonia	8.708677e+01	2019
## 675	Finland	3.247325e+02	2019
## 676	France	1.566563e+02	2019
## 677	Germany	2.106919e+02	2019
## 678	Greece	6.758365e+01	2019
## 679	Hungary	2.234842e+02	2019
## 680	Iceland	1.645784e+01	2019
## 681	Ireland	1.681887e+02	2019
## 682	Israel	3.530248e+01	2019
## 683	Italy	1.084252e+02	2019
## 684	Japan	2.744600e+02	2019
## 685	Latvia	3.679167e+01	2019
## 686	Lithuania	5.295002e+01	2019
## 687	Luxembourg	2.727279e+01	2019
## 688	Mexico	7.129535e+00	2019
## 689	Netherlands	2.921772e+01	2019
## 690	New Zealand	2.067070e+02	2019
## 691	Norway	8.786273e+01	2019
## 692	Poland	7.782641e+01	2019
## 693	Portugal	1.486959e+02	2019
## 694	Slovakia	1.606381e+03	2019
## 695	Slovenia	1.697285e+02	2019

```
## 696          Spain 6.955262e+01 2019
## 697          Sweden 2.534939e+02 2019
## 698          Switzerland 1.823954e+02 2019
## 699          United Kingdom 4.659863e+01 2019
## 700 United States of America 0.000000e+00 2019
```

```
indices <- c("ATOI")

media_por_pais <- data.frame(Country = resultados_indices$Country)

for (indice in indices) {

  media_coluna <- paste("Media", indice, sep = "_")

  medias <- numeric(nrow(resultados_indices))

  for (i in 1:nrow(resultados_indices)) {

    cols <- grepl(indice, names(resultados_indices))
    values <- resultados_indices[i, cols]

    medias[i] <- mean(values, na.rm = TRUE)
  }

  media_por_pais[media_coluna] <- medias
}

mATOI <- media_por_pais[c("Country", "Media_ATOI")]

mATOI <- aggregate(Media_ATOI ~ Country, data = mATOI, FUN = mean, na.rm = TRUE)

# Removendo dado zerado
mATOI <- mATOI[mATOI$Country != "Czech Republic", ]
mATOI <- mATOI[mATOI$Country != "United States of America", ]
print(mATOI)
```

```
##          Country Media_ATOI
## 1    Australia 215.839864
## 2      Austria 109.345532
## 3     Belgium  22.613673
## 4       Canada   5.720149
## 5        Chile 112.661467
## 6    Costa Rica  32.231053
## 8      Denmark 110.991012
## 9      Estonia  58.789436
## 10     Finland 166.753166
## 11      France  61.498844
## 12     Germany 134.043299
## 13      Greece  26.585734
## 14     Hungary 119.389210
## 15      Iceland 13.307752
```

```
## 16      Ireland  44.137201
## 17      Israel   17.762295
## 18      Italy    81.140482
## 19      Japan   207.843574
## 20      Latvia   19.486426
## 21      Lithuania 16.111322
## 22      Luxembourg 20.745976
## 23      Mexico    3.288047
## 24      Netherlands 17.149955
## 25      New Zealand 129.408563
## 26      Norway    73.898041
## 27      Poland    53.004237
## 28      Portugal  79.880484
## 29      Slovakia 572.272662
## 30      Slovenia  68.612100
## 31      Spain     46.671533
## 32      Sweden   126.078597
## 33      Switzerland 66.661201
## 34      United Kingdom 23.971009
```

Criar um ranking

```
mATOI$ranking <- rank(-mATOI$Media_ATOI)
mATOI <- mATOI %>% arrange(ranking)
print(mATOI)
```

```
##      Country Media_ATOI ranking
## 1      Slovakia 572.272662      1
## 2      Australia 215.839864      2
## 3      Japan    207.843574      3
## 4      Finland  166.753166      4
## 5      Germany  134.043299      5
## 6      New Zealand 129.408563      6
## 7      Sweden   126.078597      7
## 8      Hungary  119.389210      8
## 9      Chile    112.661467      9
## 10     Denmark  110.991012     10
## 11     Austria  109.345532     11
## 12     Italy     81.140482     12
## 13     Portugal  79.880484     13
## 14     Norway    73.898041     14
## 15     Slovenia  68.612100     15
## 16     Switzerland 66.661201     16
## 17     France    61.498844     17
## 18     Estonia   58.789436     18
## 19     Poland    53.004237     19
## 20     Spain     46.671533     20
## 21     Ireland   44.137201     21
## 22     Costa Rica 32.231053     22
## 23     Greece    26.585734     23
## 24     United Kingdom 23.971009     24
## 25     Belgium   22.613673     25
## 26     Luxembourg 20.745976     26
## 27     Latvia    19.486426     27
```

## 28	Israel	17.762295	28
## 29	Netherlands	17.149955	29
## 30	Lithuania	16.111322	30
## 31	Iceland	13.307752	31
## 32	Canada	5.720149	32
## 33	Mexico	3.288047	33