Week 5 In-class Assignment

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2024-10-04

Create Table 1 for armed conflict paper.

```
finaldata <- read.csv(here("data", "mergealldata.csv"), header = TRUE)
finaldata$OECDf <- factor(finaldata$OECD, levels = c(1,0),
                          labels = c("Member", "Nonmember"))
finaldata$droughtf <- factor(finaldata$drought, levels = c(1,0),
                             labels = c("Presence", "Absence"))
finaldata$earthquakef <- factor(finaldata$earthquake, levels = c(1,0),
                                labels = c("Presence", "Absence"))
finaldata$armconf <- factor(finaldata$armcon, levels = c(1,0),
                            labels = c("Yes", "No"))

label(finaldata$gdp1000) <- "GDP per capita"
label(finaldata$OECDf) <- "OECD member"
label(finaldata$popdens) <- "Population density"
label(finaldata$urban) <- "Urban residence"
label(finaldata$agedep) <- "Age dependency ratio"
label(finaldata$male_edu) <- "Male education"
label(finaldata$temp) <- "Temperature"
label(finaldata$rainfall1000) <- "Rainfall"
label(finaldata$droughtf) <- "Droughts"
label(finaldata$earthquakef) <- "Earthquakes"

label(finaldata$matmor) <- "Maternal mortality ratio per 100,000 live births"
label(finaldata$infmor) <- "Infant mortality rate per 1,000 live births"
label(finaldata$neomor) <- "Neonatal mortality rate per 1,000 live births"
label(finaldata$un5mor) <- "Under-5 mortality rate per 1,000 live births"

# Set up the rows or labels of the table. Group the two "Yes" and "No" strata
# under a common heading" "Armed conflict exposure".
```

```r
labels <- list(
  variables = list(matmor = render.varlabel(finaldata$matmor),
                   un5mor = render.varlabel(finaldata$un5mor),
                   infmor = render.varlabel(finaldata$infmor),
                   neomor = render.varlabel(finaldata$neomor),
                   gdp1000 = render.varlabel(finaldata$gdp1000),
                   OECDf = render.varlabel(finaldata$OECDf),
                   popdens = render.varlabel(finaldata$popdens),
                   urban = render.varlabel(finaldata$urban),
                   agedep = render.varlabel(finaldata$agedep),
                   male_edu = render.varlabel(finaldata$male_edu),
                   temp = render.varlabel(finaldata$temp),
                   rainfall1000 = render.varlabel(finaldata$rainfall1000),
                   droughtf = render.varlabel(finaldata$droughtf),
                   earthquakef = render.varlabel(finaldata$earthquakef)
                   ),
  groups=list("", "Armed conflict exposure"))

# Set up the strata or columns of the table.

strata <- c(list(Total=finaldata), split(finaldata, finaldata$armconf))

# Make all values in the table have 1 decimal place.

custom_render_continuous <- function(x) {
  sprintf("%.1f (%.1f)", mean(x, na.rm = TRUE), sd(x, na.rm = TRUE))
}

footnote <- "Data given as mean (standard deviation) for continuous variables or counts (%) i

table1(strata, labels, groupspan=c(1, 2),
       caption = "Description of data used in the study",
       footnote = footnote,
       render.continuous = custom_render_continuous, render.missing = NULL)
```

Table 1: Description of data used in the study

		Armed conflict exposure	
	Total	Yes	No
	(N=3720)	(N=704)	(N=3016)
Maternal mortality ratio per 100,000 live births			
	210.6 (303.8)	396.8 (398.1)	166.9 (258.4)
Under-5 mortality rate per 1,000 live births			
	40.5 (42.4)	66.9 (49.5)	34.3 (38.0)
Infant mortality rate per 1,000 live births			
	28.9 (26.4)	46.0 (29.7)	24.9 (23.9)
Neonatal mortality rate per 1,000 live births			
	16.2 (13.0)	25.2 (13.9)	14.0 (11.8)
GDP per capita			
	11.5 (17.4)	3.2 (5.0)	13.4 (18.6)
OECD member			
Member	636 (17.1%)	40 (5.7%)	596 (19.8%)
Nonmember	3084 (82.9%)	664 (94.3%)	2420 (80.2%)
Population density			
	30.6 (20.8)	27.8 (19.0)	31.2 (21.1)
Urban residence			
	30.7 (17.6)	30.4 (13.8)	30.8 (18.4)
Age dependency ratio			
	61.9 (18.9)	72.6 (21.2)	59.4 (17.3)
Male education			
	8.3 (3.0)	6.5 (2.6)	8.7 (3.0)
Temperature			
	19.6 (7.3)	22.2 (5.5)	19.0 (7.6)
Rainfall			
	1.2 (0.8)	1.1 (0.7)	1.2 (0.8)
Droughts			
Presence	325 (8.7%)	92 (13.1%)	233 (7.7%)
Absence	3395 (91.3%)	612 (86.9%)	2783 (92.3%)
Earthquakes			
Presence	310 (8.3%)	115 (16.3%)	195 (6.5%)
Absence	3410 (91.7%)	589 (83.7%)	2821 (93.5%)

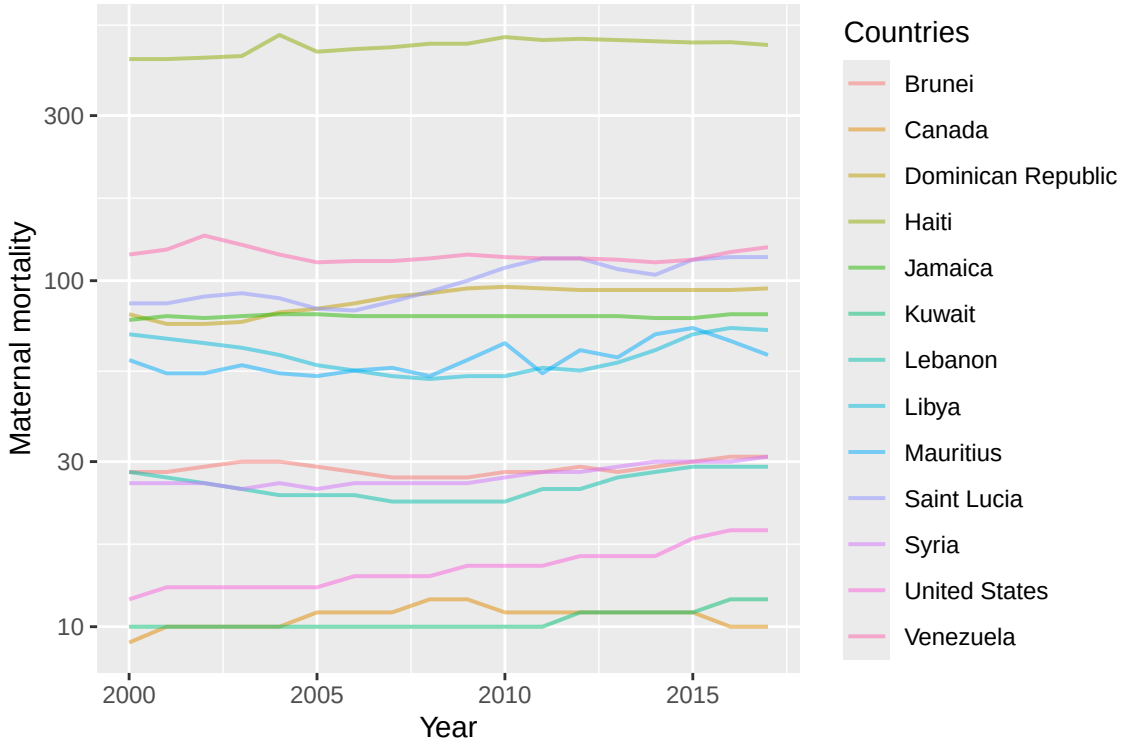
Data given as mean (standard deviation) for continuous variables or counts (%) for categorical variables.

Create a figure that shows the trend in maternal mortality for countries that had an increase from 2000 to 2017. First, create a new variable `diffmatmor` that shows the difference between maternal mortality in 2017 and maternal mortality in 2000.

```
graphdata <- finaldata %>%
  select(country_name, year, matmor) %>%
  filter(year == c(2000, 2017)) %>%
  arrange(country_name, year) %>%
  group_by(country_name) %>%
  mutate(diffmatmor = matmor - matmor[1L]) %>%
  filter(diffmatmor > 0)

finaldatag <- finaldata %>%
  filter(country_name %in% graphdata$country_name)

finaldatag %>%
  ggplot(aes(x = year, y = matmor, group = country_name)) +
  geom_line(aes(color = as.factor(country_name)), alpha = 0.5, lwd = 0.7) +
  xlim(c(2000,2017)) +
  scale_y_continuous(trans='log10') +
  labs(y = "Maternal mortality", x = "Year", color = "Countries")
```


Maternal mortality
300
100
30
10
2000
2005
2010
2015
Year
Countries
Brunei
Canada
Dominican Republic
Haiti
Jamaica
Kuwait
Lebanon
Libya
Mauritius
Saint Lucia
Syria
United States
Venezuela