Week 5 In-class Assignment

Felix Ho

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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".  
  
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.  
  
my\_summary <- function(x) {  
 # Remove NAs before calculation.  
 x <- na.omit(x)  
 # Calculate median, 25th and 75th percentiles.  
 q <- quantile(x, probs = c(0.25, 0.5, 0.75))  
 # Format the output as "median [25th%, 75th%]" with 1 decimal place.  
 sprintf("%.1f [%.1f, %.1f]", q[2], q[1], q[3])  
}  
  
table1(strata, labels, groupspan=c(1, 2),   
 caption = "Table 1: Description of data used in the study",   
 footnote = "Data given as median [25th percentile, 75th percentile] for continuous variables or counts (%) for categorical variables.",  
 render.continuous = my\_summary, render.missing = NULL)

|  |  | Armed conflict exposure | |
| --- | --- | --- | --- |
|  | Total (N=3720) | Yes (N=704) | No (N=3016) |
| **Maternal mortality ratio per 100,000 live births** | 66.0 [17.0, 299.8] | 251.5 [69.0, 641.0] | 51.0 [12.0, 201.0] |
| **Under-5 mortality rate per 1,000 live births** | 22.2 [9.0, 61.3] | 58.4 [22.5, 98.7] | 18.6 [7.3, 47.9] |
| **Infant mortality rate per 1,000 live births** | 18.9 [7.6, 44.5] | 42.5 [19.1, 66.7] | 16.1 [6.2, 37.1] |
| **Neonatal mortality rate per 1,000 live births** | 12.1 [4.9, 25.3] | 25.6 [12.0, 36.6] | 10.4 [4.0, 22.4] |
| **GDP per capita** | 4.1 [1.2, 13.2] | 1.3 [0.6, 4.0] | 5.1 [1.6, 17.3] |
| **OECD member** |  |  |  |
| Member | 636 (17.1%) | 40 (5.7%) | 596 (19.8%) |
| Nonmember | 3084 (82.9%) | 664 (94.3%) | 2420 (80.2%) |
| **Population density** | 27.5 [14.8, 40.7] | 23.3 [14.5, 36.1] | 29.3 [14.8, 41.8] |
| **Urban residence** | 30.3 [17.3, 41.7] | 29.4 [19.9, 39.7] | 30.4 [16.3, 42.0] |
| **Age dependency ratio** | 55.5 [47.9, 77.1] | 74.5 [53.0, 90.6] | 53.9 [47.3, 71.3] |
| **Male education** | 8.4 [5.9, 10.8] | 6.6 [4.6, 8.3] | 8.8 [6.5, 11.2] |
| **Temperature** | 22.0 [12.9, 25.9] | 23.6 [19.8, 26.5] | 21.5 [11.6, 25.7] |
| **Rainfall** | 1.0 [0.6, 1.7] | 1.0 [0.4, 1.5] | 1.0 [0.6, 1.7] |
| **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 median [25th percentile, 75th percentile] 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")

