Log_Transform_Mortality_Models

```
library(plm)
library(tidyverse)
```

```
-- Attaching packages --------------------------------------- tidyverse 1.3.1 --

v ggplot2 3.4.3     v purrr   1.0.2
v tibble  3.2.1     v dplyr   1.1.2
v tidyr   1.3.0     v stringr 1.5.1
v readr   2.1.1     v forcats 0.5.1

-- Conflicts ------------------------------------------ tidyverse_conflicts() --
x dplyr::between() masks plm::between()
x dplyr::filter()  masks stats::filter()
x dplyr::lag()     masks plm::lag(), stats::lag()
x dplyr::lead()    masks plm::lead()
```

```
library(here)
```

```
here() starts at /Users/alexandergebreamlak/Downloads/GitHub/ArmedConflict
```

```
library(texreg)
```

```
Version:  1.39.3
Date:     2023-11-09
Author:   Philip Leifeld (University of Essex)

Consider submitting praise using the praise or praise_interactive functions.
Please cite the JSS article in your publications -- see citation("texreg").
```

```
Attaching package: 'texreg'

The following object is masked from 'package:tidyr':

    extract
```

```
library(multgee)
```

```
Loading required package: gnm
```

```
library(table1)
```

```
Attaching package: 'table1'

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

    units, units<-
```

```
library(dplyr)
library(tidyr)
library(usethis)
library(countrycode)
library(htmltools)
Final_data <- read.csv(here("data","Cleaned_primary_analysis_data.csv"))
```

Log transform GDP and use the transformed GDP as one of the predictors

```
#Log transforming GDP and adding as predictor
Final_data$logGDP <- log(Final_data$gdp1000)

matmorplm_logGDP <- plm(MatMor ~ Conflict + logGDP + OECD + popdens + urban +
                  agedep + male_edu + temp + rainfall1000 + earthquake + drought,
               index = c("ISO", "Year"),
               effect = "twoways",
               model = "within",
               data = Final_data)
matmorplm_logGDP
```

```
Model Formula: MatMor ~ Conflict + logGDP + OECD + popdens + urban + agedep +
    male_edu + temp + rainfall1000 + earthquake + drought

Coefficients:
    Conflict       logGDP         OECD      popdens        urban       agedep
    34.40602    -27.55558     28.41152     -0.41704     -8.29340     -0.61127
    male_edu         temp rainfall1000   earthquake      drought
   -60.66638     10.53928     -4.62895      0.25778     -1.95237
```

```
preds_logGDP <- as.formula(" ~ Conflict + logGDP + OECD + popdens + urban +
                  agedep + male_edu + temp + rainfall1000 + earthquake + drought")
```

```
matmormod_logGDP <- plm(update.formula(preds_logGDP, MatMor ~ .),
               index = c("ISO", "Year"),
               effect = "twoways",
               model = "within",
               data = Final_data)

un5mormod_logGDP <- plm(update.formula(preds_logGDP, Und5Mor ~ .),
               index = c("ISO", "Year"),
               effect = "twoways",
               model = "within",
               data = Final_data)

infmormod_logGDP <- plm(update.formula(preds_logGDP, InfMor ~ .),
               index = c("ISO", "Year"),
               effect = "twoways",
               model = "within",
               data = Final_data)

neomormod_logGDP <- plm(update.formula(preds_logGDP, NeoMor ~ .),
               index = c("ISO", "Year"),
               effect = "twoways",
               model = "within",
               data = Final_data)
```

```
#Apply labels into a list
label <- list(
  "MatMor" = "Maternal mortality ratio per 100,000 live births",
  "logGDP" = "Logarithm of GDP per capita",
  "OECD" = "OECD member",
```

```
  "popdens" = "Population density",
  "urban" = "Urban residence",
  "agedep" = "Age dependency ratio",
  "male_edu" = "Male education",
  "temp" = "Temperature",
  "rainfall1000" = "Rainfall",
  "earthquake" = "Earthquakes",
  "drought" = "Droughts"
)
```

```
final_output <- htmlreg(
  list(matmormod_logGDP, un5mormod_logGDP, infmormod_logGDP, neomormod_logGDP),
  custom.coef.map = label,
  custom.model.names = c("Maternal mortality ratio per 100,000 live births", "Under-5 mortali
  ci.force = TRUE)

HTML(final_output)
```

Table 1: St

	Maternal mortality ratio per 100,000 live births	Under-5 mortality ratio per
Logarithm of GDP per capita	-27.56*	-8.69*
	[-36.85; -18.26]	[-10.13; -7.25]
OECD member	28.41	6.72*
	[-2.25; 59.07]	[2.25; 11.18]
Population density	-0.42	-0.35*
	[-1.16; 0.33]	[-0.46; -0.23]
Urban residence	-8.29*	-1.74*
	[-10.23; -6.36]	[-2.03; -1.44]
Age dependency ratio	-0.61	-0.06
	[-1.27; 0.05]	[-0.15; 0.04]
Male education	-60.67*	-8.97*
	[-72.34; -48.99]	[-10.64; -7.30]
Temperature	10.54*	2.44*
	[4.30; 16.78]	[1.43; 3.45]
Rainfall	-4.63	-0.04
	[-16.68; 7.42]	[-1.95; 1.87]
Earthquakes	0.26	0.42
	[-4.82; 5.34]	[-0.36; 1.20]
Droughts	-1.95	0.80
	[-9.80; 5.90]	[-0.42; 2.03]

	Maternal mortality ratio per 100,000 live births	Under-5 mortality ratio per
R^2	0.10	0.15
Adj. R^2	0.03	0.10
Num. obs.	3223	3618

* Null hypothesis value outside the confidence interval.