LogGDP

Log transforming GDP and running regression analyses

Running Code

```
library(here)
```

```
Warning: package 'here' was built under R version 4.3.3
```

```
here() starts at C:/Users/temoo/OneDrive/Desktop/Uni/Year MPH 1/Year 2/Stat computation/Armed
```

```
finaldata <- read.csv(here("data", "analytical", "finaldata.csv"), header = TRUE)

lmmod <- lm(MarMor ~ -1 + conflict + gdp1000 + OECD + popdens + urban +
              agedep + male_edu + temp + rainfall1000 + Earthquake + Drought +
              ISO + as.factor(Year),
            data = finaldata)

library(plm)
```

```
Warning: package 'plm' was built under R version 4.3.3
```

```
plmmod <- plm(MarMor ~ conflict + gdp1000 + OECD + popdens + urban +
                agedep + male_edu + temp + rainfall1000 + Earthquake + Drought,
              index = c("ISO", "Year"),
              effect = "twoways",
              model = "within",
              data = finaldata)
```

```r
#summary(lmmod)

#comparing output
library(texreg)
```

```
Warning: package 'texreg' was built under R version 4.3.3
```

```
Version:  1.39.4
Date:     2024-07-23
Author:   Philip Leifeld (University of Manchester)

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

```r
#screenreg(list(lmmod,plmmod))
#in panel linear mmodel, omits coefficietns for the countries. for linear, get all

#we also need to put fixed effect for year, not just country


#Adding fixed-effects for year

lmmod1 <- lm(MarMor ~ -1 + conflict + gdp1000 + OECD + popdens + urban +
               agedep + male_edu + temp + rainfall1000 + Earthquake + Drought +
               ISO + as.factor(Year),
             data = finaldata)

plmmod1 <- plm(MarMor ~ conflict + gdp1000 + OECD + popdens + urban +
                 agedep + male_edu + temp + rainfall1000 + Earthquake + Drought,
               index = c("ISO", "Year"),
               effect = "twoways",
               model = "within",
               data = finaldata)

#running this for all mortality outcomes

preds <- as.formula(" ~ conflict + gdp1000 + OECD + popdens + urban +
                   agedep + male_edu + temp + rainfall1000 + Earthquake + Drought +
                   ISO + as.factor(Year)")

matmormod <- lm(update.formula(preds, MarMor ~ .), data = finaldata)
```

```
un5mormod <- lm(update.formula(preds, Under5Mort ~ .), data = finaldata)
infmormod <- lm(update.formula(preds, InfMort ~ .), data = finaldata)
neomormod <- lm(update.formula(preds, NeonatalMort ~ .), data = finaldata)

#log transform GDP. Right now, positive relationship with GDP and mortality.
finaldata$logGDP <- log(finaldata$gdp1000)

preds_gdplog <- as.formula(" ~ conflict + logGDP + OECD + popdens + urban +
                  agedep + male_edu + temp + ISO + Year")

matmormod <- plm(update.formula(preds, MarMor ~ .), index = c("ISO", "Year"),
                 effect = "twoways",
                 model = "within",
                 data = finaldata)
un5mormod <- plm(update.formula(preds, Under5Mort ~ .), index = c("ISO", "Year"),
                 effect = "twoways",
                 model = "within",
                 data = finaldata)
infmormod <- plm(update.formula(preds, InfMort ~ .), index = c("ISO", "Year"),
                 effect = "twoways",
                 model = "within",
                 data = finaldata)
neomormod <- plm(update.formula(preds, NeonatalMort ~ .), index = c("ISO", "Year"),
                 effect = "twoways",
                 model = "within",
                 data = finaldata)

keepvars <- list("conflict" = "armed conflict",
                 "logGDP" = "log(GDP)",
                 "OECD" = "OECD",
                 "popdens" = "population density",
                 "urban" = "urban",
                 "agedep" = "Age dependency",
                 "male_edu" = "male education",
                 "temp" = "temperature",
                 "ISO" = "ISO",
                 "Year" = "Year")

library(htmltools)
h <- htmlreg(list(matmormod, un5mormod, infmormod, neomormod),
             ci.force = TRUE,
             custom.coef.map = keepvars,
```

```
            custom.model.names = c("Maternal mortality", "Under-5 mortality",
                                   "Infant Mortality", "Neonatal Mortality"))
HTML(h)
```

Table 1: Statistical models

	Maternal mortality	Under-5 mortality	Infant Mortality	Neonatal Mortality
armed conflict	37.00*	3.95*	2.36*	0.50*
	[28.41; 45.58]	[2.58; 5.31]	[1.65; 3.06]	[0.21; 0.79]
OECD	26.12	5.26*	2.34*	0.81
	[-3.99; 56.24]	[0.86; 9.65]	[0.07; 4.62]	[-0.11; 1.73]
population density	-0.54	-0.38*	-0.20*	-0.06*
	[-1.27; 0.19]	[-0.49; -0.26]	[-0.26; -0.14]	[-0.08; -0.04]
urban	-6.04*	-1.42*	-0.86*	-0.35*
	[-7.98; -4.09]	[-1.71; -1.13]	[-1.02; -0.71]	[-0.42; -0.29]
Age dependency	-0.47	0.01	0.10*	0.08*
	[-1.09; 0.16]	[-0.08; 0.10]	[0.06; 0.15]	[0.06; 0.10]
male education	-42.92*	-4.58*	-2.08*	-0.11
	[-54.28; -31.56]	[-6.20; -2.95]	[-2.92; -1.23]	[-0.45; 0.23]
temperature	9.94*	2.36*	1.14*	0.31*
	[3.81; 16.07]	[1.36; 3.35]	[0.62; 1.65]	[0.10; 0.52]
R^2	0.13	0.18	0.21	0.18
Adj. R^2	0.07	0.13	0.16	0.12
Num. obs.	3223	3618	3618	3618

* Null hypothesis value outside the confidence interval.