Week8_InClass

Week8 In_class Assignment

Name: Ting Lin

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

```
library(tidyverse)
```

```
-- Attaching core tidyverse packages ------------------------ tidyverse 2.0.0 --
v dplyr     1.1.4     v readr     2.1.5
v forcats   1.0.0     v stringr   1.5.1
v ggplot2   3.5.1     v tibble    3.2.1
v lubridate 1.9.3     v tidyr     1.3.1
v purrr     1.0.2
-- Conflicts ------------------------------------------ tidyverse_conflicts() --
x dplyr::filter() masks stats::filter()
x dplyr::lag()    masks stats::lag()
i Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to beco
```

```
library(table1)
```

```
Attaching package: 'table1'

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

    units, units<-
```

```r
library(here)
```

```
here() starts at /Users/apple/Desktop/armed_conflict
```

```r
library(plm)
```

```

Attaching package: 'plm'

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

    between, lag, lead
```

```r
library(texreg)
```

```
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").

Attaching package: 'texreg'

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

    extract
```

```r
data <- read.csv(here("merged_all_con.csv"), header = TRUE)
data$armconf1 <- ifelse(is.na(data$armconf1), 0, data$armconf1)
data$popdens = data$popdens /100
names(data)
```

[1] “country_name” “ISO” “region”
[4] “year” “gdp1000” “OECD”
[7] “OECD2023” “popdens” “urban”
[10] “agedep” “male_edu” “temp”
[13] “rainfall1000” “totaldeath” “armconf1”
[16] “MaternalMortalityRate” “InfantMortalityRate” “NeonatalMortalityRate” [19] “Under5MortalityRate” “drought” “earthquake”

```
data$loggdp1000 <- log(data$gdp1000)
```

2. script that fits the four mortality models using plm()

3. Creating a table

```
library(tidyverse)
library(table1)
library(here)
library(plm)
library(texreg)

# Week 8 in-class
preds <- as.formula(" ~ armconf1 + loggdp1000 + OECD + popdens + urban +
                  agedep + male_edu + temp + rainfall1000 + earthquake + drought +
                  ISO + as.factor(year)")

matmormod <- plm(update.formula(preds, MaternalMortalityRate ~ .), data = data)
```

```
Warning in pdata.frame(data, index = index, ...): duplicate couples (id-time) in resulting po
 to find out which, use, e.g., table(index(your_pdataframe), useNA = "ifany")
```

```
un5mormod <- plm(update.formula(preds, Under5MortalityRate ~ .), data = data)
```

```
Warning in pdata.frame(data, index = index, ...): duplicate couples (id-time) in resulting po
 to find out which, use, e.g., table(index(your_pdataframe), useNA = "ifany")
```

```
infmormod <- plm(update.formula(preds, InfantMortalityRate ~ .), data = data)
```

```
Warning in pdata.frame(data, index = index, ...): duplicate couples (id-time) in resulting po
 to find out which, use, e.g., table(index(your_pdataframe), useNA = "ifany")
```

```
neomormod <- plm(update.formula(preds, NeonatalMortalityRate ~ .), data = data)
```

```
Warning in pdata.frame(data, index = index, ...): duplicate couples (id-time) in resulting po
 to find out which, use, e.g., table(index(your_pdataframe), useNA = "ifany")
```

```
screenreg(list(matmormod,un5mormod,infmormod,neomormod))
```

```
==========================================================================
Model 1 Model 2 Model 3 Model 4
--------------------------------------------------------------------------
armconf1 34.47 *** 2.96 *** 1.65 *** 0.13
(4.49) (0.72) (0.36) (0.14)
loggdp1000 -27.49 *** -8.70 *** -6.13 *** -3.18 *** (4.74) (0.73) (0.37) (0.15)
OECD 28.06 6.62 3.22 1.22 (15.64) (2.28) (1.16) (0.45)
popdens -41.61 -34.45 ** -18.25 *** -5.37 *** (37.98) (5.79) (2.95) (1.15)
urban -8.30 -1.74 *** -1.01 *** -0.39 *** (0.99) (0.15) (0.08) (0.03)
agedep -0.60 -0.06 0.04 0.04 (0.34) (0.05) (0.02) (0.01)
male_edu -60.63 *** -9.01 *** -4.82 *** -1.32 *** (5.95) (0.85) (0.43) (0.17)
temp 10.52 2.42 *** 1.15 *** 0.30 ** (3.18) (0.52) (0.26) (0.10)
rainfall1000 -4.58 -0.04 0.02 -0.13
(6.15) (0.97) (0.50) (0.19)
earthquake 4.50 1.64 * 0.88 * 0.45 ** (4.68) (0.75) (0.38) (0.15)
drought -1.26 0.94 0.73 * 0.40 ** (4.18) (0.65) (0.33) (0.13)
as.factor(year)2001 -2.19 -1.01 -0.64 -0.30
(6.35) (1.05) (0.54) (0.21)
as.factor(year)2002 -0.51 -1.89 -1.13 * -0.47 *
(6.44) (1.06) (0.54) (0.21)
as.factor(year)2003 4.08 -1.16 -0.66 -0.27
(6.58) (1.08) (0.55) (0.21)
as.factor(year)2004 5.11 -0.58 -0.26 -0.07
(6.86) (1.12) (0.57) (0.22)
as.factor(year)2005 4.28 -0.39 -0.07 0.10
(7.19) (1.16) (0.59) (0.23)
as.factor(year)2006 4.20 -0.17 0.17 0.28
(7.63) (1.22) (0.62) (0.24)
as.factor(year)2007 6.99 0.40 0.68 0.53 *
(8.19) (1.30) (0.66) (0.26)
as.factor(year)2008 12.31 1.59 1.48 * 0.84 ** (8.73) (1.38) (0.70) (0.27)
as.factor(year)2009 7.90 -0.03 0.52 0.39
(8.89) (1.40) (0.71) (0.28)
as.factor(year)2010 11.36 0.90 1.02 0.52
(9.47) (1.48) (0.75) (0.29)
as.factor(year)2011 17.77 1.34 1.47 0.74 *
(9.98) (1.55) (0.79) (0.31)
as.factor(year)2012 20.58 * 1.36 1.45 0.67 *
(10.40) (1.60) (0.82) (0.32)
as.factor(year)2013 24.75 * 1.71 1.63 0.67 *
```

(10.86) (1.67) (0.85) (0.33)
as.factor(year)2014 26.81 * 1.47 1.45 0.52
(11.35) (1.74) (0.88) (0.34)
as.factor(year)2015 25.28 * 0.50 0.71 0.05
(11.60) (1.77) (0.90) (0.35)
as.factor(year)2016 26.11 * 0.36 0.59 -0.07
(12.05) (1.83) (0.93) (0.36)
as.factor(year)2017 31.06 * 1.33 1.10 0.10
(12.59) (1.90) (0.97) (0.38)
as.factor(year)2018 2.25 1.56 0.17
(1.98) (1.01) (0.39)
as.factor(year)2019 2.62 1.66 0.08
(2.04) (1.04) (0.41)
R^2 0.32 0.50 0.59 0.62
Adj. R^2 0.27 0.47 0.56 0.60
Num. obs. 3223 3618 3618 3618
*** p < 0.001; ** p < 0.01; * p < 0.05

```
htmlreg(list(matmormod,un5mormod, infmormod, neomormod))
```

Statistical models

Model 1

Model 2

Model 3

Model 4

armconf1

34.47***

2.96***

1.65***

0.13

(4.49)

(0.72)

(0.36)

(0.14)

loggdp1000

-27.49***

-8.70***

-6.13***

-3.18***

(4.74)

(0.73)

(0.37)

(0.15)

OECD

28.06

6.62**

3.22**

1.22**

(15.64)

(2.28)

(1.16)

(0.45)

popdens

-41.61

-34.45***

-18.25***

-5.37***

(37.98)

(5.79)

(2.95)

(1.15)

urban

-8.30***

-1.74***

-1.01***

-0.39***

(0.99)

(0.15)

(0.08)

(0.03)

agedep

-0.60

-0.06

0.04

0.04***

(0.34)

(0.05)

(0.02)

(0.01)

male_edu

-60.63***

-9.01***

-4.82***

-1.32***

(5.95)

(0.85)

(0.43)

(0.17)

temp

10.52***

2.42***

1.15***

0.30**

(3.18)

(0.52)

(0.26)

(0.10)

rainfall1000

-4.58

-0.04

0.02

-0.13

(6.15)

(0.97)

(0.50)

(0.19)

earthquake

4.50

1.64*

0.88*

0.45**

(4.68)

(0.75)

(0.38)

(0.15)

drought

-1.26

0.94

0.73*

0.40**

(4.18)

(0.65)

(0.33)

(0.13)

as.factor(year)2001

-2.19

-1.01

-0.64

-0.30

(6.35)

(1.05)

(0.54)

(0.21)

as.factor(year)2002

-0.51

-1.89

-1.13*

-0.47*

(6.44)

(1.06)

(0.54)

(0.21)

as.factor(year)2003

4.08

-1.16

-0.66

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(6.58)

(1.08)

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as.factor(year)2004

5.11

-0.58

-0.26

-0.07

(6.86)

(1.12)

(0.57)

(0.22)

as.factor(year)2005

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-0.39

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as.factor(year)2010

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as.factor(year)2011

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as.factor(year)2013

24.75*

1.71

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as.factor(year)2014

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1.56

0.17

(1.98)

(1.01)

(0.39)

as.factor(year)2019

2.62

1.66

0.08

(2.04)

(1.04)

(0.41)

R2

0.32

0.50

0.59

0.62

Adj. R2

0.27

0.47

0.56

0.60

Num. obs.

3223

3618

3618

3618

***p < 0.001; **p < 0.01; *p < 0.05