Replication Code: Government Responses to COVID-19, Mobility, and Poverty in South America

Demonstration for R

May 28, 2021

Packages and Functions

```
## Run in R version 4.0.2 (2020-06-22) -- "Taking Off Again"
## Also in R version 4.1.0 (2021-05-18) -- "Camp Pontanezen"

## Packages
library(tidyverse)
library(ggplot2)
library(estimatr)
library(fmsb)
library(stargazer)
library(lmtest)
library(sandwich)

## Integer Function
is.integer0 <- function(x)
{
  is.integer(x) && length(x) == 0L
}

## Poverty in Argentina Function
## GitHub Repository ~/tree/master/data/poverty-sources/ARG
mean_poverty_ARG <- 40.9
f.poverty.ARG <- function(x)
{ if(is.integer0(x)){
  print(NA)
} else if(x == "Buenos Aires"){
  print(17.3)
} else if(x == "Buenos Aires Province"){
  print(47.5)
} else if(x == "Catamarca Province"){
  print(35.2)
} else if(x == "Chaco Province"){
  print(NA)
} else if(x == "Chubut Province"){
  print(NA)
} else if(x == "Cordoba"){
  print(40.7)
} else if(x == "Corrientes"){
```

```
  print(41.2)
} else if(x == "Entre Rios"){
  print(NA)
} else if(x == "Formosa Province"){
  print(42.4)
} else if(x == "Jujuy"){
  print(38)
} else if(x == "La Pampa"){
  print(NA)
} else if(x == "La Rioja Province"){
  print(29.8)
} else if(x == "Mendoza Province"){
  print(41.5)
} else if(x == "Misiones Province"){
  print(NA)
} else if(x == "Neuquen"){
  print(37.5)
} else if(x == "Rio Negro"){
  print(NA)
} else if(x == "Salta Province"){
  print(45.5)
} else if(x == "San Juan Province"){
  print(35.8)
} else if(x == "San Luis Province"){
  print(39.2)
} else if(x == "Santa Cruz Province"){
  print(NA)
} else if(x == "Santa Fe Province"){
  print(42.6)
} else if(x == "Santiago del Estero Province"){
  print(42.9)
} else if(x == "Tierra del Fuego Province"){
  print(NA)
} else if(x == "Tucuman"){
  print(41.5)
} else {
  print(NA)
}}

## Poverty in Chile Function
## GitHub Repository ~/tree/master/data/poverty-sources/CHL
mean_poverty_CHL <- 8.6
f.poverty.CHL <- function(x)
{ if(is.integer0(x)){
  print(NA)
} else if(x == "Arica y Parinacota"){
  print(8.4)
} else if(x == "Tarapacá"){
  print(6.4)
} else if(x == "Antofagasta"){
  print(5.1)
} else if(x == "Atacama"){
  print(7.9)
```

```
} else if(x == "Coquimbo"){
  print(11.9)
} else if(x == "Valparaíso"){
  print(7.1)
} else if(x == "Santiago Metropolitan Region"){
  print(5.4)
} else if(x == "O'Higgins"){
  print(10.1)
} else if(x == "Maule"){
  print(12.7)
} else if(x == "Ñuble"){
  print(16.1)
} else if(x == "Bio Bio"){
  print(12.3)
} else if(x == "Araucania"){
  print(17.2)
} else if(x == "Los Ríos"){
  print(12.1)
} else if(x == "Los Lagos"){
  print(11.7)
} else if(x == "Aysén"){
  print(4.6)
} else if(x == "Magallanes and Chilean Antarctica"){
  print(2.1)
} else {
  print(NA)
}}

## Poverty in Colombia Function
## GitHub Repository ~/tree/master/data/poverty-sources/COL
mean_poverty_COL <- 35.7
f.poverty.COL <- function(x)
{ if(is.integer0(x)){
  print(NA)
} else if(x == "Amazonas"){
  print(NA)
} else if(x == "Antioquia"){
  print(29.8)
} else if(x == "Arauca"){
  print(NA)
} else if(x == "Atlantico"){
  print(27.3)
} else if(x == "Bogota"){
  print(27.2)
} else if(x == "Bolivar"){
  print(46)
} else if(x == "Boyaca"){
  print(35.7)
} else if(x == "Caldas"){
  print(28.7)
} else if(x == "Caqueta"){
  print(48.8)
} else if(x == "Casanare"){
```

```
  print(NA)
} else if(x == "Cauca"){
  print(59.6)
} else if(x == "Cesar"){
  print(51.7)
} else if(x == "Choco"){
  print(68.4)
} else if(x == "Cordoba"){
  print(54.2)
} else if(x == "Cundinamarca"){
  print(20.4)
} else if(x == "Guaviare"){
  print(NA)
} else if(x == "Huila"){
  print(51.2)
} else if(x == "La Guajira"){
  print(61.8)
} else if(x == "Magdalena"){
  print(53.5)
} else if(x == "Meta"){
  print(32.7)
} else if(x == "Narino"){
  print(51)
} else if(x == "North Santander"){
  print(51.9)
} else if(x == "Putamayo"){
  print(NA)
} else if(x == "Risaralda"){
  print(28.7)
} else if(x == "San Andres and Providencia"){
  print(NA)
} else if(x == "Santander"){
  print(31.1)
} else if(x == "Sucre"){
  print(50.3)
} else if(x == "Tolima"){
  print(39.3)
} else if(x == "Valle del Cauca"){
  print(24)
} else if(x == "Vichada"){
  print(NA)
} else {
  print(NA)
}}

## Poverty in Peru Function
## GitHub Repository ~/tree/master/data/poverty-sources/PER
mean_poverty_PER <- 16.0020707435589
f.poverty.PER <- function(x)
{ if(is.integer0(x)){
  print(NA)
} else if(x == "Amazonas"){
  print(30.1724485103745)
```

```
} else if(x == "Ancash"){
  print(17.2014035176195)
} else if(x == "Apurimac"){
  print(11.3483419932819)
} else if(x == "Arequipa"){
  print(10.5929218558695)
} else if(x == "Ayacucho"){
  print(19.1847914434206)
} else if(x == "Cajamarca"){
  print(17.1953111040605)
} else if(x == "Callao Region"){
  print(5.11481472685651)
} else if(x == "Cusco"){
  print(13.546762877841)
} else if(x == "Huancavelica"){
  print(20.5397542865539)
} else if(x == "Huanuco"){
  print(23.8404272441335)
} else if(x == "Ica"){
  print(8.96345334783655)
} else if(x == "Junin"){
  print(23.1032758602094)
} else if(x == "La Libertad"){
  print(10.1432418346883)
} else if(x == "Lambayeque"){
  print(10.2376802573772)
} else if(x == "Lima Region"){
  print(15.4991405118145)
} else if(x == "Loreto"){
  print(52.4256305274022)
} else if(x == "Madre de Dios"){
  print(23.2150761977107)
} else if(x == "Metropolitan Municipality of Lima"){
  print(8.80510784789396)
} else if(x == "Moquegua"){
  print(10.9651994187931)
} else if(x == "Pasco"){
  print(29.896691812666)
} else if(x == "Piura"){
  print(22.3131259897851)
} else if(x == "Puno"){
  print(20.8666595807204)
} else if(x == "San Martin"){
  print(29.0546286229956)
} else if(x == "Tacna"){
  print(7.48157860009444)
} else if(x == "Tumbes"){
  print(20.7392401397941)
} else if(x == "Ucayali"){
  print(43.447542619887)
} else {
  print(NA)
}}
```

Google Data

```
## Google Data
mobility <- read.csv("../data/Google/Global_Mobility_Report.csv", encoding = "UTF-8")
## Download data from https://www.google.com/covid19/mobility/ and edit the route

## Subsample Argentina
ARG <- filter(mobility, country_region == "Argentina" & date < "2020-05-01" & date
              > "2020-02-29" & sub_region_1 != "" & sub_region_2 != "")

## Placebo Argentina
placebo_ARG <- filter(mobility, country_region == "Argentina" & date < "2020-03-11"
                      & date > "2020-02-14" & sub_region_1 != "" & sub_region_2 != "")

## Subsample Chile
CHL <- filter(mobility, country_region == "Chile" & date < "2020-05-01" & date
              > "2020-02-29" & sub_region_1 != "" & sub_region_2 != "")

## Placebo Chile
placebo_CHL <- filter(mobility, country_region == "Chile" & date < "2020-03-11"
                      & date > "2020-02-14" & sub_region_1 != "" & sub_region_2 != "")

## Subsample Colombia
mobility$sub_region_2[which(mobility$sub_region_1 == "Bogota")] <- "Bogota"
COL <- filter(mobility, country_region == "Colombia" & date < "2020-05-01" & date
              > "2020-02-29" & sub_region_1 != ""  & sub_region_2 != "")

## Placebo Colombia
placebo_COL <- filter(mobility, country_region == "Colombia" & date < "2020-03-11" & date
                      > "2020-02-14" & sub_region_1 != "" & sub_region_2 != "")

## Subsample Peru
PER <- filter(mobility, country_region == "Peru" & date < "2020-05-01" & date
              > "2020-02-29" & sub_region_1 != "" & sub_region_2 != "")

## Placebo Peru
placebo_PER <- filter(mobility, country_region == "Peru" & date < "2020-03-11" & date
                      > "2020-02-14" & sub_region_1 != "" & sub_region_2 != "")
```

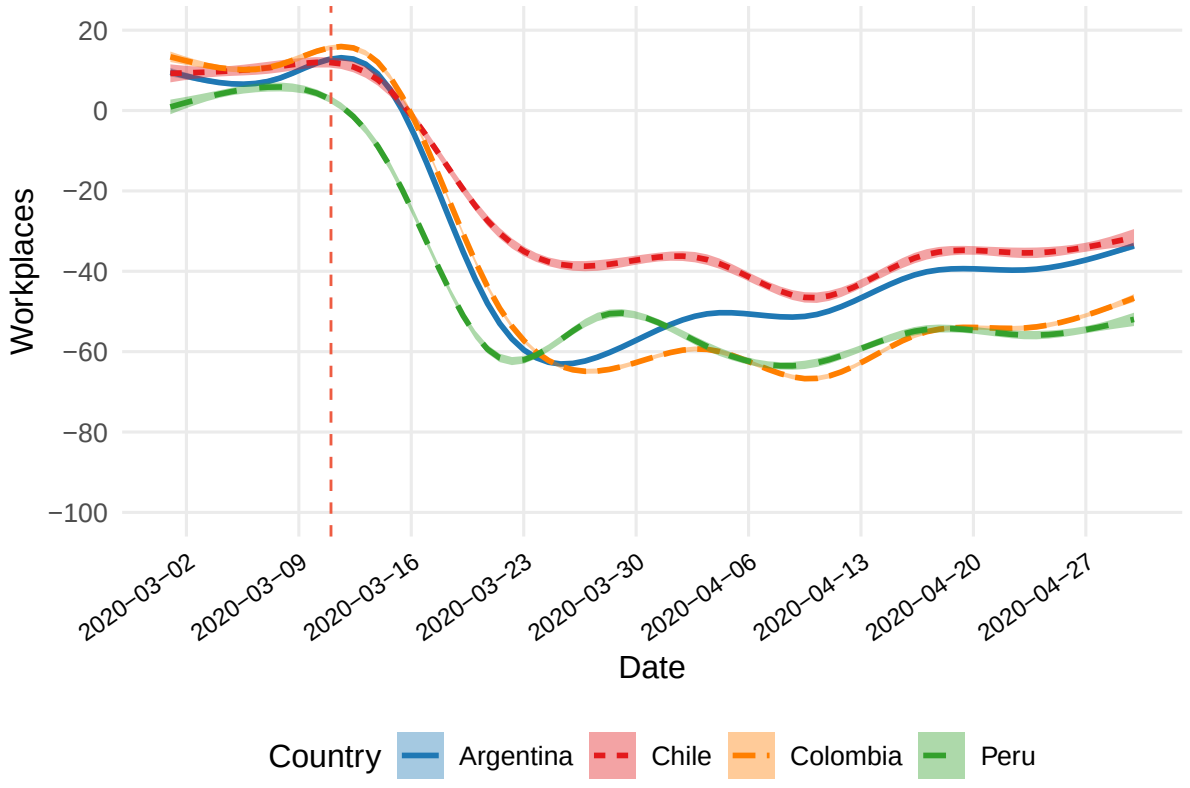
Poverty Data

```
## Poverty in Argentina
for(i in 1:nrow(ARG)) {
  ARG$poverty[i] <- f.poverty.ARG(ARG$sub_region_1[i])
}
for(i in 1:nrow(placebo_ARG)) {
  placebo_ARG$poverty[i] <- f.poverty.ARG(placebo_ARG$sub_region_1[i])
}

## Poverty in Chile
```

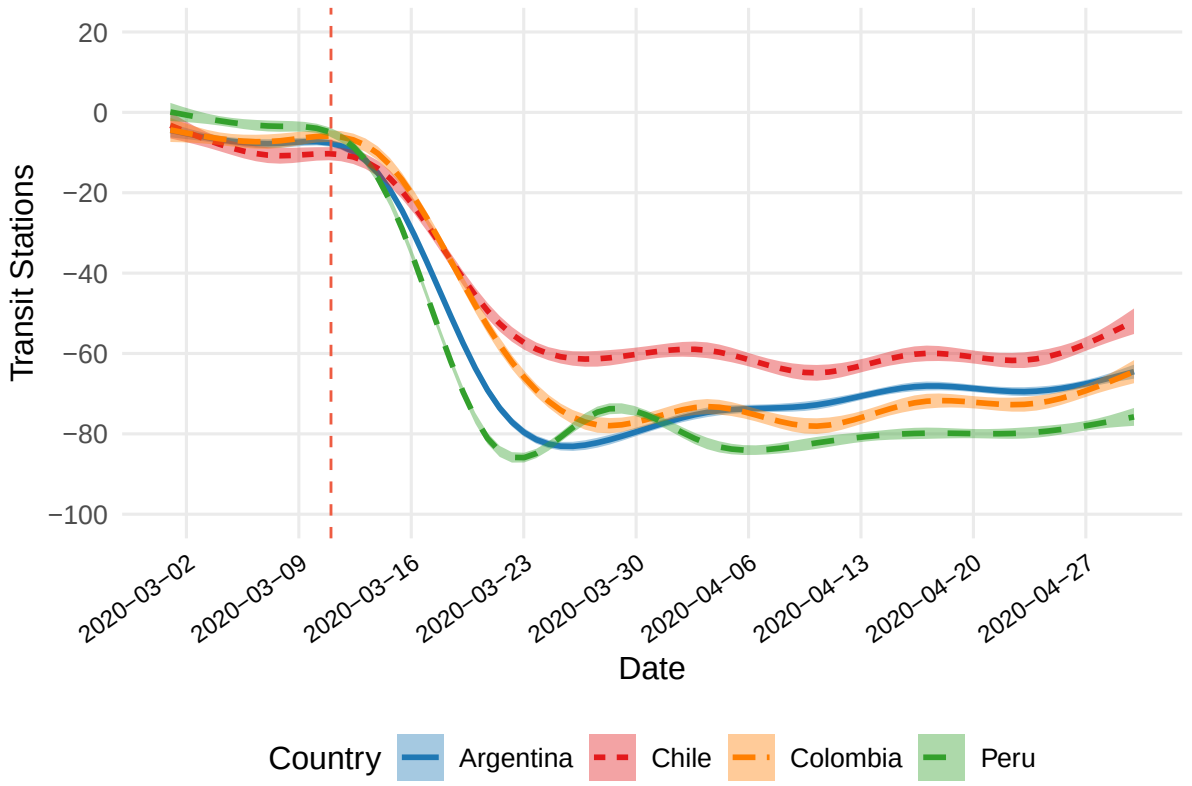
```r
for(i in 1:nrow(CHL)) {
  CHL$poverty[i] <- f.poverty.CHL(CHL$sub_region_1[i])
}
for(i in 1:nrow(placebo_CHL)) {
  placebo_CHL$poverty[i] <- f.poverty.CHL(placebo_CHL$sub_region_1[i])
}

### Poverty in Colombia
for(i in 1:nrow(COL)) {
  COL$poverty[i] <- f.poverty.COL(COL$sub_region_1[i])
}
for(i in 1:nrow(placebo_COL)) {
  placebo_COL$poverty[i] <- f.poverty.COL(placebo_COL$sub_region_1[i])
}

### Poverty in Peru
for(i in 1:nrow(PER)) {
  PER$poverty[i] <- f.poverty.PER(PER$sub_region_1[i])
}
for(i in 1:nrow(placebo_PER)) {
  placebo_PER$poverty[i] <- f.poverty.PER(placebo_PER$sub_region_1[i])
}

## Recode Argentina
unique(ARG$sub_region_1[which(is.na(ARG$poverty))])
ARG.vor <- ARG %>% drop_na(poverty)
ARG.vor$Poverty <- ifelse(ARG.vor$poverty > mean_poverty_ARG, "High % of poor",
                          "Low % of poor")
ARG.vor$binary_poverty <- ifelse(ARG.vor$poverty > mean_poverty_ARG, 1, 0)
placebo_ARG <- placebo_ARG %>% drop_na(poverty)
placebo_ARG$binary_poverty <- ifelse(placebo_ARG$poverty > mean_poverty_ARG, 1, 0)

## Recode Chile
unique(CHL$sub_region_1[which(is.na(CHL$poverty))])
CHL$Poverty <- ifelse(CHL$poverty > mean_poverty_CHL, "High % of poor",
                      "Low % of poor")
CHL$binary_poverty <- ifelse(CHL$poverty > mean_poverty_CHL, 1, 0)
placebo_CHL$binary_poverty <- ifelse(placebo_CHL$poverty > mean_poverty_CHL, 1, 0)

## Recode Colombia
unique(COL$sub_region_1[which(is.na(COL$poverty))])
COL.vor <- COL %>% drop_na(poverty)
COL.vor$Poverty <- ifelse(COL.vor$poverty > mean_poverty_COL, "High % of poor",
                          "Low % of poor")
COL.vor$binary_poverty <- ifelse(COL.vor$poverty > mean_poverty_COL, 1, 0)
placebo_COL <- placebo_COL %>% drop_na(poverty)
placebo_COL$binary_poverty <- ifelse(placebo_COL$poverty > mean_poverty_COL, 1, 0)

## Recode PER
unique(PER$sub_region_1[which(is.na(PER$poverty))])
PER$Poverty <- ifelse(PER$poverty > mean_poverty_PER, "High % of poor", "Low % of poor")
PER$binary_poverty <- ifelse(PER$poverty > mean_poverty_PER, 1, 0)
placebo_PER$binary_poverty <- ifelse(placebo_PER$poverty > mean_poverty_PER, 1, 0)
```

Cross-National Mobility Changes

```
## Cross National Data Frame
baseline.cross <- bind_rows(ARG, CHL, COL, PER)
names(baseline.cross)[2] = "Country"
cross.national <- bind_rows(ARG.vor, CHL, COL.vor, PER)
names(cross.national)[2] = "Country"

## Plot Workplaces
ggplot(baseline.cross, aes(x = as.Date(date), y = workplaces_percent_change_from_baseline,
                           col = Country)) + geom_smooth(aes(linetype = Country,
                                                             fill = Country)) +
  theme_minimal(base_size = 12) + theme(legend.position = "bottom") +
  theme(panel.grid.minor = element_blank()) +
  theme(axis.text.x = element_text(angle = 35, hjust = 1, color = "black",  size = 9)) +
  labs(x = "Date", y = "Workplaces", title = NULL, subtitle = NULL) +
  theme(plot.margin = unit(c(0.5,0.5,0.5,0.5), "cm")) +
  scale_x_date(date_breaks = "1 week", date_minor_breaks = "1 week",
               date_labels = "%Y-%m-%d") +
  scale_y_continuous(limits = c(-100, 20), breaks = c(-100, -80, -60, -40, -20, 0, 20)) +
  scale_colour_manual(values = c("#1f78b4", "#e31a1c", "#ff7f00", "#33a02c")) +
  scale_fill_manual(values = c("#1f78b4", "#e31a1c", "#ff7f00", "#33a02c")) +
  geom_vline(xintercept = as.Date("2020-03-11"), col = "tomato2", lty = 2)
```

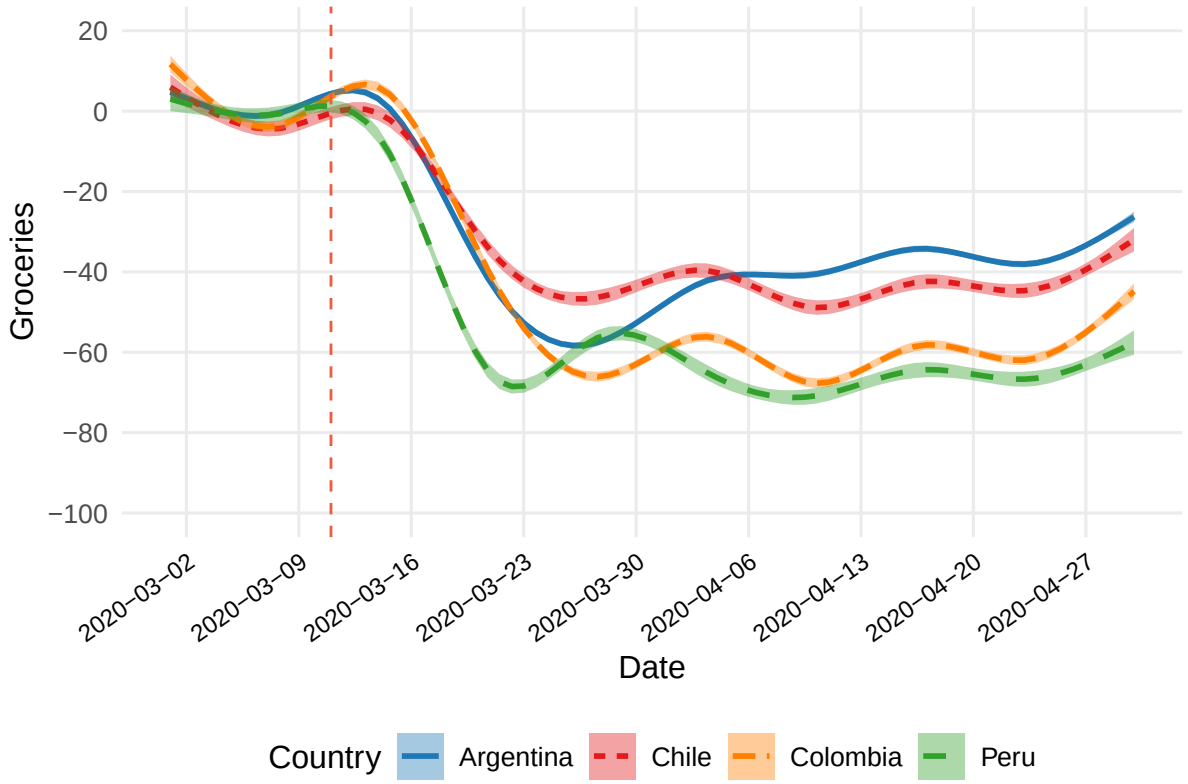


```
## Plot Transit Stations
ggplot(baseline.cross, aes(x = as.Date(date),
                           y = transit_stations_percent_change_from_baseline,
                           col = Country)) + geom_smooth(aes(linetype = Country,
                                                             fill = Country)) +
  theme_minimal(base_size = 12) + theme(legend.position = "bottom") +
  theme(panel.grid.minor = element_blank()) +
  theme(axis.text.x = element_text(angle = 35, hjust = 1, color = "black",  size = 9)) +
  labs(x = "Date", y = "Transit Stations", title = NULL, subtitle = NULL) +
  theme(plot.margin = unit(c(0.5,0.5,0.5,0.5), "cm")) +
  scale_x_date(date_breaks = "1 week", date_minor_breaks = "1 week",
               date_labels = "%Y-%m-%d") +
  scale_y_continuous(limits = c(-100, 20), breaks = c(-100, -80, -60, -40, -20, 0, 20)) +
  scale_colour_manual(values = c("#1f78b4", "#e31a1c", "#ff7f00", "#33a02c")) +
  scale_fill_manual(values = c("#1f78b4", "#e31a1c", "#ff7f00", "#33a02c")) +
  geom_vline(xintercept = as.Date("2020-03-11"), col = "tomato2", lty = 2)
```



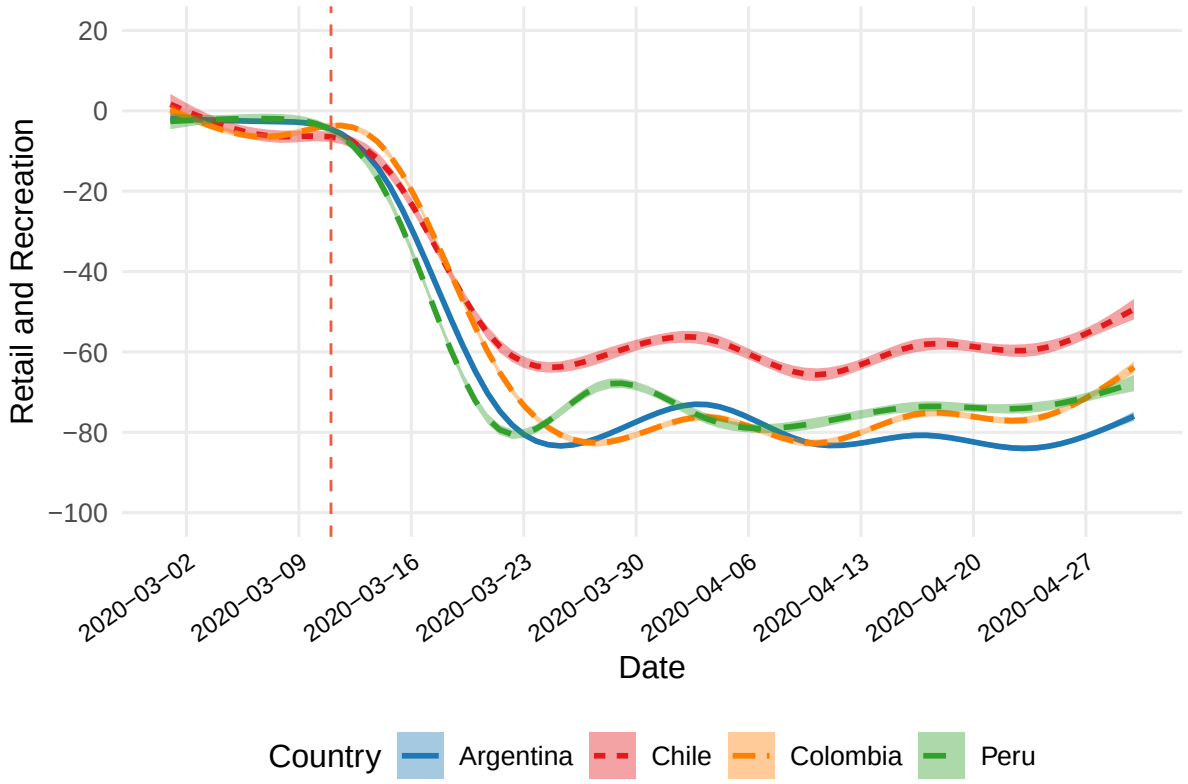

```
## Plot Groceries
ggplot(baseline.cross, aes(x = as.Date(date),
                           y = grocery_and_pharmacy_percent_change_from_baseline,
                           col = Country)) + geom_smooth(aes(linetype = Country,
                                                             fill = Country)) +
  theme_minimal(base_size = 12) + theme(legend.position = "bottom") +
  theme(panel.grid.minor = element_blank()) +
```

```
  theme(axis.text.x = element_text(angle = 35, hjust = 1, color = "black",  size = 9)) +
  labs(x = "Date", y = "Groceries", title = NULL, subtitle = NULL) +
  theme(plot.margin = unit(c(0.5,0.5,0.5,0.5), "cm")) +
  scale_x_date(date_breaks = "1 week", date_minor_breaks = "1 week",
               date_labels = "%Y-%m-%d") +
  scale_y_continuous(limits = c(-100, 20), breaks = c(-100, -80, -60, -40, -20, 0, 20)) +
  scale_colour_manual(values = c("#1f78b4", "#e31a1c", "#ff7f00", "#33a02c")) +
  scale_fill_manual(values = c("#1f78b4", "#e31a1c", "#ff7f00", "#33a02c")) +
  geom_vline(xintercept = as.Date("2020-03-11"), col = "tomato2", lty = 2)
```




```
## dev.off()

## Plot Recreation
ggplot(baseline.cross, aes(x = as.Date(date),
                           y = retail_and_recreation_percent_change_from_baseline,
                           col = Country)) + geom_smooth(aes(linetype = Country,
                                                             fill = Country)) +
  theme_minimal(base_size = 12) + theme(legend.position = "bottom") +
  theme(panel.grid.minor = element_blank()) +
  theme(axis.text.x = element_text(angle = 35, hjust = 1, color = "black",  size = 9)) +
  labs(x = "Date", y = "Retail and Recreation", title = NULL, subtitle = NULL) +
  theme(plot.margin = unit(c(0.5,0.5,0.5,0.5), "cm")) +
  scale_x_date(date_breaks = "1 week", date_minor_breaks = "1 week",
               date_labels = "%Y-%m-%d") +
  scale_y_continuous(limits = c(-100, 20), breaks = c(-100, -80, -60, -40, -20, 0, 20)) +
```

```
  scale_colour_manual(values = c("#1f78b4", "#e31a1c", "#ff7f00", "#33a02c")) +
  scale_fill_manual(values = c("#1f78b4", "#e31a1c", "#ff7f00", "#33a02c")) +
  geom_vline(xintercept = as.Date("2020-03-11"), col = "tomato2", lty = 2)
```



Oxford Government Responses Tracker

```
## Code based on **source omitted because of peer-reviewing**

## OxCGRT - Covid-Policy-Tracker
stringencyindex <- read.csv("https://osf.io/kga4d/download", sep = ",")
c1_schoolclosing <- read.csv("https://osf.io/82hjz/download", sep = ",")
c1_flag <- read.csv("https://osf.io/qcmsb/download", sep = ",")
c2_workplaceclosing <- read.csv("https://osf.io/5fs42/download", sep = ",")
c2_flag <- read.csv("https://osf.io/yn83e/download", sep = ",")
c6_stayathomerequirements <- read.csv("https://osf.io/xpm74/download", sep = ",")
c6_flag <- read.csv("https://osf.io/62r7k/download", sep = ",")

## Period Coverage
dd_OXF <- as.numeric((as.Date("2020-05-15")) - as.Date("2020-01-01"))
begin_OXF <- ((as.Date("2020-05-15"))-dd_OXF) ## 01 January
dates_OXF <- seq(as.Date(begin_OXF), as.Date("2020-05-15"), by="days")
```

```
## Economic measures
e1_incomesupport <- read.csv("https://osf.io/f94d6/download", sep = ",")
e1_flag <- read.csv("https://osf.io/3eyt5/download", sep = ",")
e2_debtrelief <- read.csv("https://osf.io/d82gu/download", sep = ",")
```

Argentina Responses

```
## Code based on **source omitted because of peer-reviewing**

## stringencyindex
arg.stringencyindex <- slice(stringencyindex,
                             which(stringencyindex[,1]== "Argentina")
                             :which(stringencyindex[,1] == "Argentina")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "stringency_index")
arg.stringencyindex <- slice(arg.stringencyindex, 1:136) ## 15 May
arg.stringencyindex <- data.frame(arg.stringencyindex, dates_OXF)
arg.stringencyindex$X <- NULL
arg.stringencyindex$X.1 <- NULL
arg.stringencyindex$Date <- NULL

## c1_schoolclosing
arg.c1_schoolclosing <- slice(c1_schoolclosing,
                              which(c1_schoolclosing[,1] == "Argentina")
                              :which(c1_schoolclosing[,1] == "Argentina")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c1_schoolclosing")
arg.c1_schoolclosing <- slice(arg.c1_schoolclosing, 1:136) ## 15 May
arg.c1_schoolclosing <- data.frame(arg.c1_schoolclosing, dates_OXF)
arg.c1_schoolclosing$X <- NULL
arg.c1_schoolclosing$X.1 <- NULL
arg.c1_schoolclosing$Date <- NULL

## c1_flag
arg.c1_flag <- slice(c1_flag, which(c1_flag[,1] == "Argentina")
                     :which(c1_flag[,1] == "Argentina")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c1_flag")
arg.c1_flag <- slice(arg.c1_flag, 1:136) ## 15 May
arg.c1_flag <- data.frame(arg.c1_flag, dates_OXF)
arg.c1_flag$X <- NULL
arg.c1_flag$X.1 <- NULL
arg.c1_flag$Date <- NULL

## c2_workplaceclosing
arg.c2_workplaceclosing <- slice(c2_workplaceclosing,
                                 which(c2_workplaceclosing[,1] == "Argentina")
                                 :which(c2_workplaceclosing[,1] == "Argentina")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c2_workplaceclosing")
arg.c2_workplaceclosing <- slice(arg.c2_workplaceclosing, 1:136) ## 15 May
arg.c2_workplaceclosing <- data.frame(arg.c2_workplaceclosing, dates_OXF)
arg.c2_workplaceclosing$X <- NULL
```

```r
arg.c2_workplaceclosing$X.1 <- NULL
arg.c2_workplaceclosing$Date <- NULL

## c2_flag
arg.c2_flag <- slice(c2_flag, which(c2_flag[,1] == "Argentina")
                     :which(c2_flag[,1] == "Argentina")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c2_flag")
arg.c2_flag <- slice(arg.c2_flag, 1:136) ## 15 May
arg.c2_flag <- data.frame(arg.c2_flag, dates_OXF)
arg.c2_flag$X <- NULL
arg.c2_flag$X.1 <- NULL
arg.c2_flag$Date <- NULL

## c6_stayathomerequirements
arg.c6_stayathomerequirements <- slice(c6_stayathomerequirements,
                                       which(c6_stayathomerequirements[,1] == "Argentina")
                                       :which(c6_stayathomerequirements[,1]
                                              == "Argentina")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c6_stayathomerequirements")
arg.c6_stayathomerequirements <- slice(arg.c6_stayathomerequirements, 1:136) ## 15 May
arg.c6_stayathomerequirements <- data.frame(arg.c6_stayathomerequirements, dates_OXF)
arg.c6_stayathomerequirements$X <- NULL
arg.c6_stayathomerequirements$X.1 <- NULL
arg.c6_stayathomerequirements$Date <- NULL

## c6_flag
arg.c6_flag <- slice(c6_flag, which(c6_flag[,1] == "Argentina")
                     :which(c6_flag[,1] == "Argentina")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c6_flag")
arg.c6_flag <- slice(arg.c6_flag, 1:136) ## 15 May
arg.c6_flag <- data.frame(arg.c6_flag, dates_OXF)
arg.c6_flag$X <- NULL
arg.c6_flag$X.1 <- NULL
arg.c6_flag$Date <- NULL

## e1_incomesupport
arg.e1_incomesupport <- slice(e1_incomesupport, which(e1_incomesupport[,1] == "Argentina")
                              :which(e1_incomesupport[,1] == "Argentina")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e1_incomesupport")
arg.e1_incomesupport <- slice(arg.e1_incomesupport, 1:136) ## 15 May
arg.e1_incomesupport <- data.frame(arg.e1_incomesupport, dates_OXF)
arg.e1_incomesupport$X <- NULL
arg.e1_incomesupport$X.1 <- NULL
arg.e1_incomesupport$Date <- NULL

## e1_flag
arg.e1_flag <- slice(e1_flag, which(e1_flag[,1] == "Argentina")
                     :which(e1_flag[,1] == "Argentina")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e1_flag")
arg.e1_flag <- slice(arg.e1_flag, 1:136) ## 15 May
arg.e1_flag <- data.frame(arg.e1_flag, dates_OXF)
arg.e1_flag$X <- NULL
arg.e1_flag$X.1 <- NULL
```

```
arg.e1_flag$Date <- NULL

## e2_debtrelief
arg.e2_debtrelief <- slice(e2_debtrelief, which(e2_debtrelief[,1] == "Argentina")
                           :which(e2_debtrelief[,1] == "Argentina")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e2_debtrelief")
arg.e2_debtrelief <- slice(arg.e2_debtrelief, 1:136) ## 15 May
arg.e2_debtrelief <- data.frame(arg.e2_debtrelief, dates_OXF)
arg.e2_debtrelief$X <- NULL
arg.e2_debtrelief$X.1 <- NULL
arg.e2_debtrelief$Date <- NULL

## Dataframe Responses Argentina
arg_resp <- data.frame(arg.stringencyindex, arg.c1_schoolclosing$c1_schoolclosing,
                       arg.c1_flag$c1_flag, arg.c2_workplaceclosing$c2_workplaceclosing,
                       arg.c2_flag$c2_flag,
                       arg.c6_stayathomerequirements$c6_stayathomerequirements,
                       arg.c6_flag$c6_flag, arg.e1_incomesupport$e1_incomesupport,
                       arg.e1_flag$e1_flag, arg.e2_debtrelief$e2_debtrelief)
names(arg_resp)[1] = "stringencyindex"
names(arg_resp)[2] = "dates"
names(arg_resp)[3] = "c1_schoolclosing"
names(arg_resp)[4] = "c1_flag"
names(arg_resp)[5] = "c2_workplaceclosing"
names(arg_resp)[6] = "c2_flag"
names(arg_resp)[7] = "c6_stayathomerequirements"
names(arg_resp)[8] = "c6_flag"
names(arg_resp)[9] = "e1_incomesupport"
names(arg_resp)[10] = "e1_flag"
names(arg_resp)[11] = "e2_debtrelief"
```

Chile Responses

```
## Code based on **source omitted because of peer-reviewing**

## stringencyindex
chl.stringencyindex <- slice(stringencyindex, which(stringencyindex[,1] == "Chile")
                             :which(stringencyindex[,1] == "Chile")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "stringency_index")
chl.stringencyindex <- slice(chl.stringencyindex, 1:136) ## 15 May
chl.stringencyindex <- data.frame(chl.stringencyindex, dates_OXF)
chl.stringencyindex$X <- NULL
chl.stringencyindex$X.1 <- NULL
chl.stringencyindex$Date <- NULL

## c1_schoolclosing
chl.c1_schoolclosing <- slice(c1_schoolclosing, which(c1_schoolclosing[,1] == "Chile")
                              :which(c1_schoolclosing[,1] == "Chile")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c1_schoolclosing")
chl.c1_schoolclosing <- slice(chl.c1_schoolclosing, 1:136) ## 15 May
chl.c1_schoolclosing <- data.frame(chl.c1_schoolclosing, dates_OXF)
```

```r
chl.c1_schoolclosing$X <- NULL
chl.c1_schoolclosing$X.1 <- NULL
chl.c1_schoolclosing$Date <- NULL

## c1_flag
chl.c1_flag <- slice(c1_flag, which(c1_flag[,1] == "Chile")
                     :which(c1_flag[,1] == "Chile")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c1_flag")
chl.c1_flag <- slice(chl.c1_flag, 1:136) ## 15 May
chl.c1_flag <- data.frame(chl.c1_flag, dates_OXF)
chl.c1_flag$X <- NULL
chl.c1_flag$X.1 <- NULL
chl.c1_flag$Date <- NULL

## c2_workplaceclosing
chl.c2_workplaceclosing <- slice(c2_workplaceclosing,
                                 which(c2_workplaceclosing[,1] == "Chile")
                                 :which(c2_workplaceclosing[,1] == "Chile")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c2_workplaceclosing")
chl.c2_workplaceclosing <- slice(chl.c2_workplaceclosing, 1:136) ## 15 May
chl.c2_workplaceclosing <- data.frame(chl.c2_workplaceclosing, dates_OXF)
chl.c2_workplaceclosing$X <- NULL
chl.c2_workplaceclosing$X.1 <- NULL
chl.c2_workplaceclosing$Date <- NULL

## c2_flag
chl.c2_flag <- slice(c2_flag, which(c2_flag[,1] == "Chile")
                     :which(c2_flag[,1] == "Chile")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c2_flag")
chl.c2_flag <- slice(chl.c2_flag, 1:136) ## 15 May
chl.c2_flag <- data.frame(chl.c2_flag, dates_OXF)
chl.c2_flag$X <- NULL
chl.c2_flag$X.1 <- NULL
chl.c2_flag$Date <- NULL

## c6_stayathomerequirements
chl.c6_stayathomerequirements <- slice(c6_stayathomerequirements,
                                       which(c6_stayathomerequirements[,1] == "Chile")
                                       :which(c6_stayathomerequirements[,1]
                                              == "Chile")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c6_stayathomerequirements")
chl.c6_stayathomerequirements <- slice(chl.c6_stayathomerequirements, 1:136) ## 15 May
chl.c6_stayathomerequirements <- data.frame(chl.c6_stayathomerequirements, dates_OXF)
chl.c6_stayathomerequirements$X <- NULL
chl.c6_stayathomerequirements$X.1 <- NULL
chl.c6_stayathomerequirements$Date <- NULL

## c6_flag
chl.c6_flag <- slice(c6_flag, which(c6_flag[,1] == "Chile")
                     :which(c6_flag[,1] == "Chile")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c6_flag")
chl.c6_flag <- slice(chl.c6_flag, 1:136) ## 15 May
chl.c6_flag <- data.frame(chl.c6_flag, dates_OXF)
```

```
chl.c6_flag$X <- NULL
chl.c6_flag$X.1 <- NULL
chl.c6_flag$Date <- NULL

## e1_incomesupport
chl.e1_incomesupport <- slice(e1_incomesupport, which(e1_incomesupport[,1] == "Chile")
                              :which(e1_incomesupport[,1] == "Chile")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e1_incomesupport")
chl.e1_incomesupport <- slice(chl.e1_incomesupport, 1:136) ## 15 May
chl.e1_incomesupport <- data.frame(chl.e1_incomesupport, dates_OXF)
chl.e1_incomesupport$X <- NULL
chl.e1_incomesupport$X.1 <- NULL
chl.e1_incomesupport$Date <- NULL

## e1_flag
chl.e1_flag <- slice(e1_flag, which(e1_flag[,1] == "Chile")
                     :which(e1_flag[,1] == "Chile")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e1_flag")
chl.e1_flag <- slice(chl.e1_flag, 1:136) ## 15 May
chl.e1_flag <- data.frame(chl.e1_flag, dates_OXF)
chl.e1_flag$X <- NULL
chl.e1_flag$X.1 <- NULL
chl.e1_flag$Date <- NULL

## e2_debtrelief
chl.e2_debtrelief <- slice(e2_debtrelief, which(e2_debtrelief[,1] == "Chile")
                           :which(e2_debtrelief[,1] == "Chile")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e2_debtrelief")
chl.e2_debtrelief <- slice(chl.e2_debtrelief, 1:136) ## 15 May
chl.e2_debtrelief <- data.frame(chl.e2_debtrelief, dates_OXF)
chl.e2_debtrelief$X <- NULL
chl.e2_debtrelief$X.1 <- NULL
chl.e2_debtrelief$Date <- NULL

## Dataframe Responses Chile
chl_resp <- data.frame(chl.stringencyindex, chl.c1_schoolclosing$c1_schoolclosing,
                       chl.c1_flag$c1_flag, chl.c2_workplaceclosing$c2_workplaceclosing,
                       chl.c2_flag$c2_flag,
                       chl.c6_stayathomerequirements$c6_stayathomerequirements,
                       chl.c6_flag$c6_flag, chl.e1_incomesupport$e1_incomesupport,
                       chl.e1_flag$e1_flag, chl.e2_debtrelief$e2_debtrelief)
names(chl_resp)[1] = "stringencyindex"
names(chl_resp)[2] = "dates"
names(chl_resp)[3] = "c1_schoolclosing"
names(chl_resp)[4] = "c1_flag"
names(chl_resp)[5] = "c2_workplaceclosing"
names(chl_resp)[6] = "c2_flag"
names(chl_resp)[7] = "c6_stayathomerequirements"
names(chl_resp)[8] = "c6_flag"
names(chl_resp)[9] = "e1_incomesupport"
names(chl_resp)[10] = "e1_flag"
names(chl_resp)[11] = "e2_debtrelief"
```

Colombia Responses

```
## Code based on **source omitted because of peer-reviewing**

## stringencyindex
col.stringencyindex <- slice(stringencyindex, which(stringencyindex[,1] == "Colombia")
                             :which(stringencyindex[,1] == "Colombia")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "stringency_index")
col.stringencyindex <- slice(col.stringencyindex, 1:136) ## 15 May
col.stringencyindex <- data.frame(col.stringencyindex, dates_OXF)
col.stringencyindex$X <- NULL
col.stringencyindex$X.1 <- NULL
col.stringencyindex$Date <- NULL

## c1_schoolclosing
col.c1_schoolclosing <- slice(c1_schoolclosing, which(c1_schoolclosing[,1] == "Colombia")
                              :which(c1_schoolclosing[,1] == "Colombia")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c1_schoolclosing")
col.c1_schoolclosing <- slice(col.c1_schoolclosing, 1:136) ## 15 May
col.c1_schoolclosing <- data.frame(col.c1_schoolclosing, dates_OXF)
col.c1_schoolclosing$X <- NULL
col.c1_schoolclosing$X.1 <- NULL
col.c1_schoolclosing$Date <- NULL

## c1_flag
col.c1_flag <- slice(c1_flag, which(c1_flag[,1] == "Colombia")
                     :which(c1_flag[,1] == "Colombia")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c1_flag")
col.c1_flag <- slice(col.c1_flag, 1:136) ## 15 May
col.c1_flag <- data.frame(col.c1_flag, dates_OXF)
col.c1_flag$X <- NULL
col.c1_flag$X.1 <- NULL
col.c1_flag$Date <- NULL

## c2_workplaceclosing
col.c2_workplaceclosing <- slice(c2_workplaceclosing,
                                 which(c2_workplaceclosing[,1] == "Colombia")
                                 :which(c2_workplaceclosing[,1] == "Colombia")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c2_workplaceclosing")
col.c2_workplaceclosing <- slice(col.c2_workplaceclosing, 1:136) ## 15 May
col.c2_workplaceclosing <- data.frame(col.c2_workplaceclosing, dates_OXF)
col.c2_workplaceclosing$X <- NULL
col.c2_workplaceclosing$X.1 <- NULL
col.c2_workplaceclosing$Date <- NULL

## c2_flag
col.c2_flag <- slice(c2_flag, which(c2_flag[,1] == "Colombia")
                     :which(c2_flag[,1] == "Colombia")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c2_flag")
col.c2_flag <- slice(col.c2_flag, 1:136) ## 15 May
col.c2_flag <- data.frame(col.c2_flag, dates_OXF)
col.c2_flag$X <- NULL
col.c2_flag$X.1 <- NULL
```

```r
col.c2_flag$Date <- NULL

## c6_stayathomerequirements
col.c6_stayathomerequirements <- slice(c6_stayathomerequirements,
                                       which(c6_stayathomerequirements[,1] == "Colombia")
                                       :which(c6_stayathomerequirements[,1]
                                              == "Colombia")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c6_stayathomerequirements")
col.c6_stayathomerequirements <- slice(col.c6_stayathomerequirements, 1:136) ## 15 May
col.c6_stayathomerequirements <- data.frame(col.c6_stayathomerequirements, dates_OXF)
col.c6_stayathomerequirements$X <- NULL
col.c6_stayathomerequirements$X.1 <- NULL
col.c6_stayathomerequirements$Date <- NULL

## c6_flag
col.c6_flag <- slice(c6_flag, which(c6_flag[,1] == "Colombia")
                     :which(c6_flag[,1] == "Colombia")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c6_flag")
col.c6_flag <- slice(col.c6_flag, 1:136) ## 15 May
col.c6_flag <- data.frame(col.c6_flag, dates_OXF)
col.c6_flag$X <- NULL
col.c6_flag$X.1 <- NULL
col.c6_flag$Date <- NULL

## e1_incomesupport
col.e1_incomesupport <- slice(e1_incomesupport, which(e1_incomesupport[,1] == "Colombia")
                              :which(e1_incomesupport[,1] == "Colombia")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e1_incomesupport")
col.e1_incomesupport <- slice(col.e1_incomesupport, 1:136) ## 15 May
col.e1_incomesupport <- data.frame(col.e1_incomesupport, dates_OXF)
col.e1_incomesupport$X <- NULL
col.e1_incomesupport$X.1 <- NULL
col.e1_incomesupport$Date <- NULL

## e1_flag
col.e1_flag <- slice(e1_flag, which(e1_flag[,1] == "Colombia")
                     :which(e1_flag[,1] == "Colombia")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e1_flag")
col.e1_flag <- slice(col.e1_flag, 1:136) ## 15 May
col.e1_flag <- data.frame(col.e1_flag, dates_OXF)
col.e1_flag$X <- NULL
col.e1_flag$X.1 <- NULL
col.e1_flag$Date <- NULL

## e2_debtrelief
col.e2_debtrelief <- slice(e2_debtrelief, which(e2_debtrelief[,1] == "Colombia")
                           :which(e2_debtrelief[,1] == "Colombia")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e2_debtrelief")
col.e2_debtrelief <- slice(col.e2_debtrelief, 1:136) ## 15 May
col.e2_debtrelief <- data.frame(col.e2_debtrelief, dates_OXF)
col.e2_debtrelief$X <- NULL
col.e2_debtrelief$X.1 <- NULL
col.e2_debtrelief$Date <- NULL
```

```
## Dataframe Responses Chile
col_resp <- data.frame(col.stringencyindex, col.c1_schoolclosing$c1_schoolclosing,
                       col.c1_flag$c1_flag, col.c2_workplaceclosing$c2_workplaceclosing,
                       col.c2_flag$c2_flag,
                       col.c6_stayathomerequirements$c6_stayathomerequirements,
                       col.c6_flag$c6_flag, col.e1_incomesupport$e1_incomesupport,
                       col.e1_flag$e1_flag, col.e2_debtrelief$e2_debtrelief)
names(col_resp)[1] = "stringencyindex"
names(col_resp)[2] = "dates"
names(col_resp)[3] = "c1_schoolclosing"
names(col_resp)[4] = "c1_flag"
names(col_resp)[5] = "c2_workplaceclosing"
names(col_resp)[6] = "c2_flag"
names(col_resp)[7] = "c6_stayathomerequirements"
names(col_resp)[8] = "c6_flag"
names(col_resp)[9] = "e1_incomesupport"
names(col_resp)[10] = "e1_flag"
names(col_resp)[11] = "e2_debtrelief"
```

Peru Responses

```
## Code based on **source omitted because of peer-reviewing**

## stringencyindex
per.stringencyindex <- slice(stringencyindex, which(stringencyindex[,1] == "Peru")
                             :which(stringencyindex[,1] == "Peru")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "stringency_index")
per.stringencyindex <- slice(per.stringencyindex, 1:136) ## 15 May
per.stringencyindex <- data.frame(per.stringencyindex, dates_OXF)
per.stringencyindex$X <- NULL
per.stringencyindex$X.1 <- NULL
per.stringencyindex$Date <- NULL

## c1_schoolclosing
per.c1_schoolclosing <- slice(c1_schoolclosing, which(c1_schoolclosing[,1] == "Peru")
                              :which(c1_schoolclosing[,1] == "Peru")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c1_schoolclosing")
per.c1_schoolclosing <- slice(per.c1_schoolclosing, 1:136) ## 15 May
per.c1_schoolclosing <- data.frame(per.c1_schoolclosing, dates_OXF)
per.c1_schoolclosing$X <- NULL
per.c1_schoolclosing$X.1 <- NULL
per.c1_schoolclosing$Date <- NULL

## c1_flag
per.c1_flag <- slice(c1_flag, which(c1_flag[,1] == "Peru")
                     :which(c1_flag[,1] == "Peru")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c1_flag")
per.c1_flag <- slice(per.c1_flag, 1:136) ## 15 May
per.c1_flag <- data.frame(per.c1_flag, dates_OXF)
per.c1_flag$X <- NULL
per.c1_flag$X.1 <- NULL
```

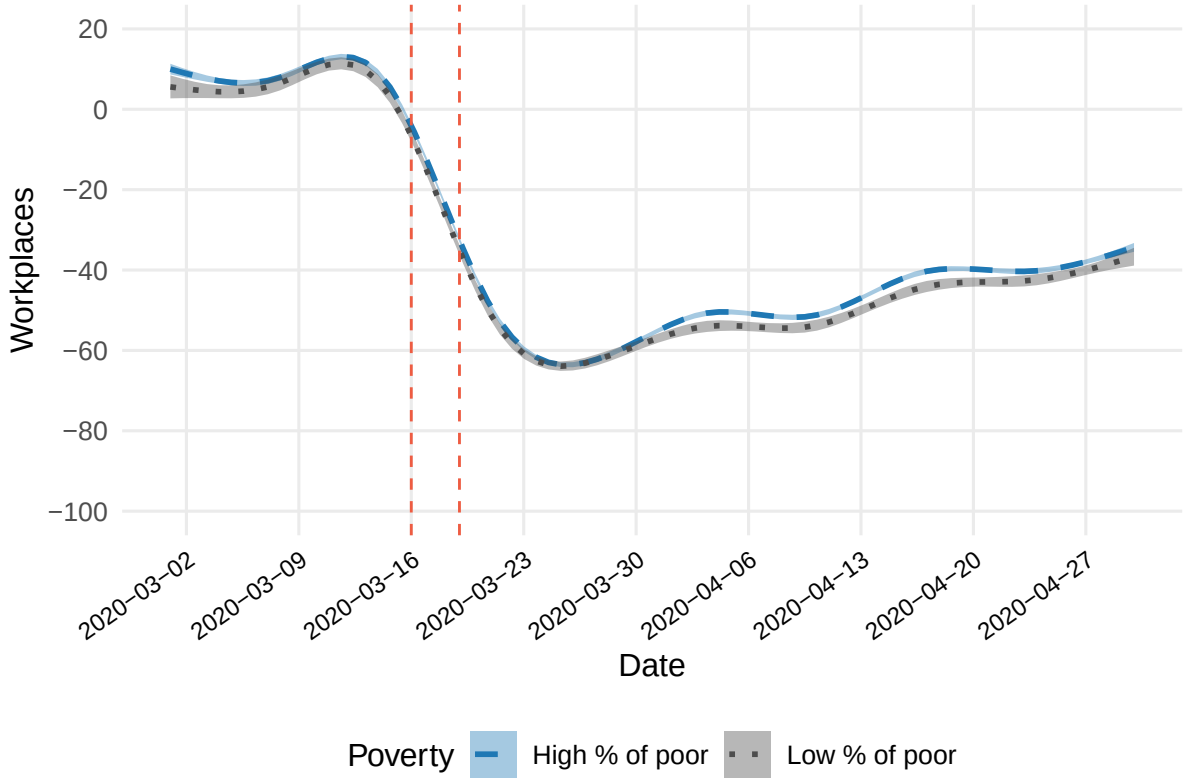
```
per.c1_flag$Date <- NULL

## c2_workplaceclosing
per.c2_workplaceclosing <- slice(c2_workplaceclosing,
                                 which(c2_workplaceclosing[,1] == "Peru")
                                 :which(c2_workplaceclosing[,1] == "Peru")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c2_workplaceclosing")
per.c2_workplaceclosing <- slice(per.c2_workplaceclosing, 1:136) ## 15 May
per.c2_workplaceclosing <- data.frame(per.c2_workplaceclosing, dates_OXF)
per.c2_workplaceclosing$X <- NULL
per.c2_workplaceclosing$X.1 <- NULL
per.c2_workplaceclosing$Date <- NULL

## c2_flag
per.c2_flag <- slice(c2_flag, which(c2_flag[,1] == "Peru")
                     :which(c2_flag[,1] == "Peru")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c2_flag")
per.c2_flag <- slice(per.c2_flag, 1:136) ## 15 May
per.c2_flag <- data.frame(per.c2_flag, dates_OXF)
per.c2_flag$X <- NULL
per.c2_flag$X.1 <- NULL
per.c2_flag$Date <- NULL

## c6_stayathomerequirements
per.c6_stayathomerequirements <- slice(c6_stayathomerequirements,
                                       which(c6_stayathomerequirements[,1] == "Peru")
                                       :which(c6_stayathomerequirements[,1]
                                              == "Peru")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c6_stayathomerequirements")
per.c6_stayathomerequirements <- slice(per.c6_stayathomerequirements, 1:136) ## 15 May
per.c6_stayathomerequirements <- data.frame(per.c6_stayathomerequirements, dates_OXF)
per.c6_stayathomerequirements$X <- NULL
per.c6_stayathomerequirements$X.1 <- NULL
per.c6_stayathomerequirements$Date <- NULL

## c6_flag
per.c6_flag <- slice(c6_flag, which(c6_flag[,1] == "Peru")
                     :which(c6_flag[,1] == "Peru")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "c6_flag")
per.c6_flag <- slice(per.c6_flag, 1:136) ## 15 May
per.c6_flag <- data.frame(per.c6_flag, dates_OXF)
per.c6_flag$X <- NULL
per.c6_flag$X.1 <- NULL
per.c6_flag$Date <- NULL

## e1_incomesupport
per.e1_incomesupport <- slice(e1_incomesupport,
                              which(e1_incomesupport[,1] == "Peru")
                              :which(e1_incomesupport[,1] == "Peru")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e1_incomesupport")
per.e1_incomesupport <- slice(per.e1_incomesupport, 1:136) ## 15 May
per.e1_incomesupport <- data.frame(per.e1_incomesupport, dates_OXF)
per.e1_incomesupport$X <- NULL
```

```
per.e1_incomesupport$X.1 <- NULL
per.e1_incomesupport$Date <- NULL

## e1_flag
per.e1_flag <- slice(e1_flag, which(e1_flag[,1] == "Peru")
                     :which(e1_flag[,1] == "Peru")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e1_flag")
per.e1_flag <- slice(per.e1_flag, 1:136) ## 15 May
per.e1_flag <- data.frame(per.e1_flag, dates_OXF)
per.e1_flag$X <- NULL
per.e1_flag$X.1 <- NULL
per.e1_flag$Date <- NULL

## e2_debtrelief
per.e2_debtrelief <- slice(e2_debtrelief, which(e2_debtrelief[,1] == "Peru")
                           :which(e2_debtrelief[,1] == "Peru")) %>%
  pivot_longer(-c(X, X.1), names_to = "Date", values_to = "e2_debtrelief")
per.e2_debtrelief <- slice(per.e2_debtrelief, 1:136) ## 15 May
per.e2_debtrelief <- data.frame(per.e2_debtrelief, dates_OXF)
per.e2_debtrelief$X <- NULL
per.e2_debtrelief$X.1 <- NULL
per.e2_debtrelief$Date <- NULL

## Dataframe Responses Chile
per_resp <- data.frame(per.stringencyindex, per.c1_schoolclosing$c1_schoolclosing,
                       per.c1_flag$c1_flag, per.c2_workplaceclosing$c2_workplaceclosing,
                       per.c2_flag$c2_flag,
                       per.c6_stayathomerequirements$c6_stayathomerequirements,
                       per.c6_flag$c6_flag, per.e1_incomesupport$e1_incomesupport,
                       per.e1_flag$e1_flag, per.e2_debtrelief$e2_debtrelief)
names(per_resp)[1] = "stringencyindex"
names(per_resp)[2] = "dates"
names(per_resp)[3] = "c1_schoolclosing"
names(per_resp)[4] = "c1_flag"
names(per_resp)[5] = "c2_workplaceclosing"
names(per_resp)[6] = "c2_flag"
names(per_resp)[7] = "c6_stayathomerequirements"
names(per_resp)[8] = "c6_flag"
names(per_resp)[9] = "e1_incomesupport"
names(per_resp)[10] = "e1_flag"
names(per_resp)[11] = "e2_debtrelief"
```

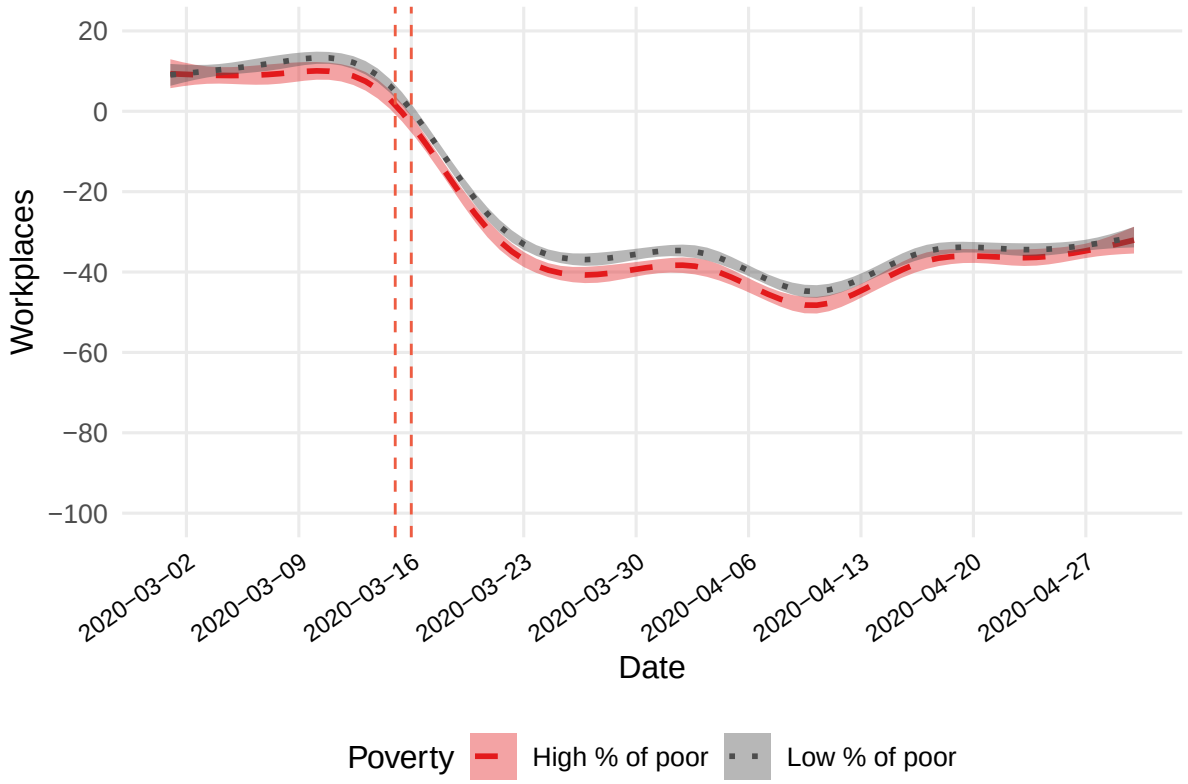
Cross-National and National Trends

```
## Checking Responses Argentina
first_ARG <- as.Date(arg_resp$dates[which(arg_resp$c1_schoolclosing == 3
                                          & arg_resp$c1_flag == 1, arr.ind = TRUE)])[1]
lock_ARG <- as.Date(arg_resp$dates[which(arg_resp$c6_stayathomerequirements == 3
                                         & arg_resp$c6_flag == 1, arr.ind = TRUE)])[1]

## Checking Responses Chile
```

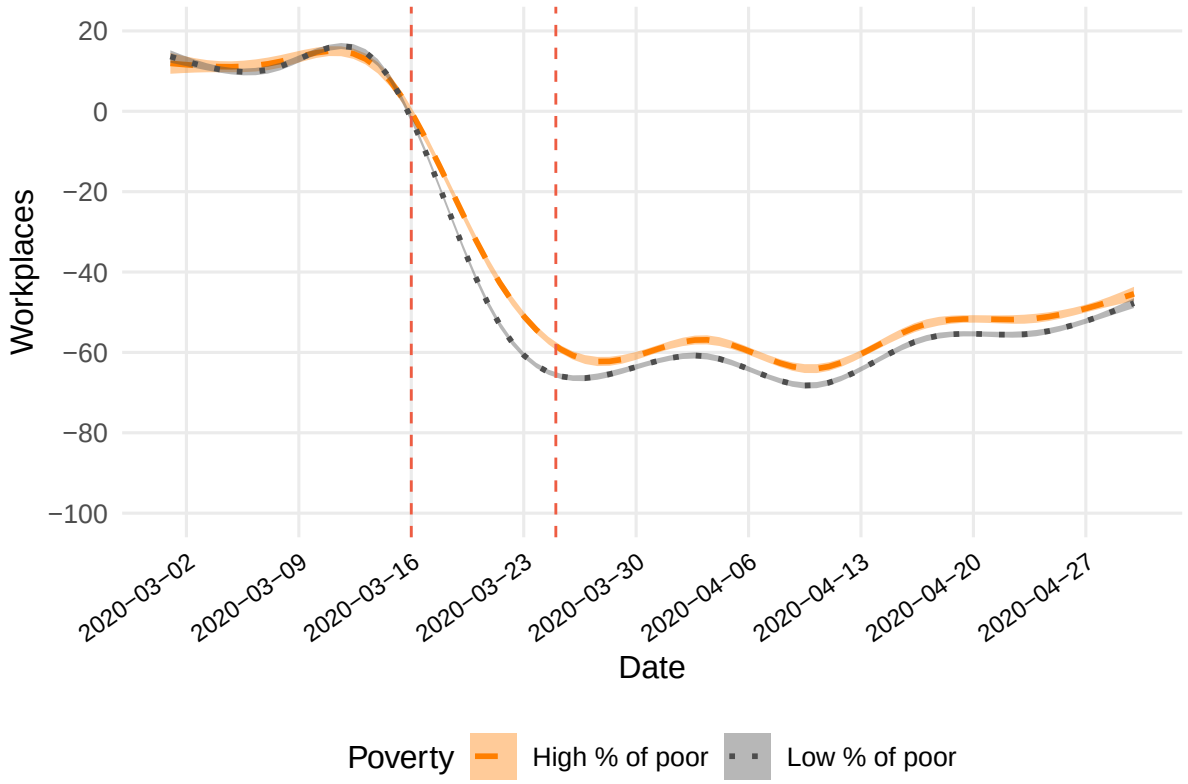
```r
first_CHL <- as.Date(chl_resp$dates[which(chl_resp$c1_schoolclosing == 3
                                          & chl_resp$c1_flag == 1, arr.ind = TRUE)])[1]

## Checking Responses Colombia
first_COL <- as.Date(col_resp$dates[which(col_resp$c1_schoolclosing == 3
                                          & col_resp$c1_flag == 1, arr.ind = TRUE)])[1]

## Checking Responses Peru
first_PER <- as.Date(per_resp$dates[which(per_resp$c1_schoolclosing == 3
                                          & per_resp$c1_flag == 1, arr.ind = TRUE)])[1]
lock_PER <- as.Date(per_resp$dates[which(per_resp$c6_stayathomerequirements == 3
                                         & per_resp$c6_flag == 1, arr.ind = TRUE)])[1]

## Plot Argentina
ggplot(ARG.vor, aes(x = as.Date(date), y = workplaces_percent_change_from_baseline,
                    col = Poverty)) + geom_smooth(aes(linetype = Poverty,
                                                      fill = Poverty)) +
  theme_minimal(base_size = 12) + theme(legend.position = "bottom") +
  theme(panel.grid.minor = element_blank()) +
  theme(axis.text.x = element_text(angle = 35, hjust = 1, color = "black",  size = 9)) +
  labs(x = "Date", y = "Workplaces", title = NULL, subtitle = NULL) +
  theme(plot.margin = unit(c(0.5,0.5,0.5,0.5), "cm")) +
  scale_x_date(date_breaks = "1 week", date_minor_breaks = "1 week",
               date_labels = "%Y-%m-%d") +
  scale_y_continuous(limits = c(-100, 20), breaks = c(-100, -80, -60, -40, -20, 0, 20)) +
  scale_colour_manual(values = c("#1f78b4","gray30")) +
  scale_fill_manual(values = c("#1f78b4","gray30")) +
  scale_linetype_manual(values = c(2,3)) +
  geom_vline(xintercept =
  as.Date(arg_resp$dates[which(arg_resp$c1_schoolclosing == 3
  & arg_resp$c1_flag == 1, arr.ind = TRUE)[1]]), col = "tomato2", lty = 2) +
  geom_vline(xintercept =
  as.Date(arg_resp$dates[which(arg_resp$c6_stayathomerequirements == 3
  & arg_resp$c6_flag == 1, arr.ind = TRUE)[1]]), col = "tomato2", lty = 2)
```



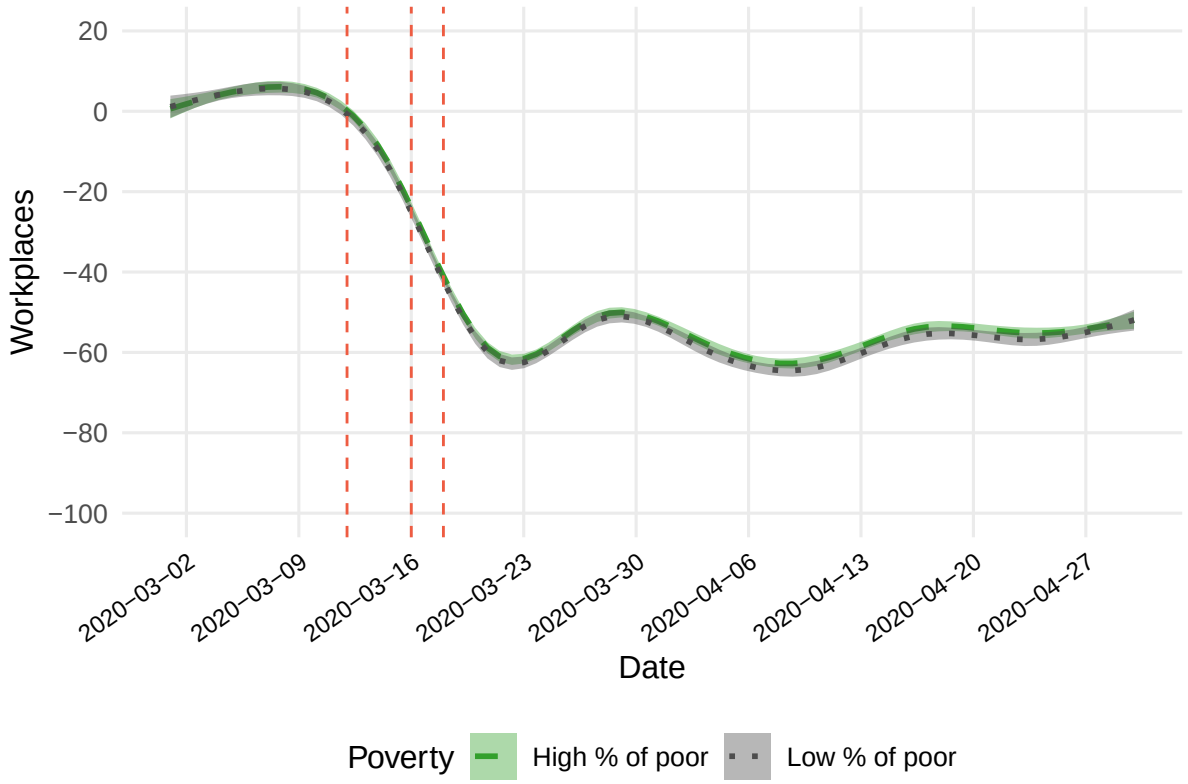

```
## Plot Chile
ggplot(CHL, aes(x = as.Date(date), y = workplaces_percent_change_from_baseline,
                    col = Poverty)) + geom_smooth(aes(linetype = Poverty,
                                                      fill = Poverty)) +
  theme_minimal(base_size = 12) + theme(legend.position = "bottom") +
  theme(panel.grid.minor = element_blank()) +
  theme(axis.text.x = element_text(angle = 35, hjust = 1, color = "black",  size = 9)) +
  labs(x = "Date", y = "Workplaces", title = NULL, subtitle = NULL) +
  theme(plot.margin = unit(c(0.5,0.5,0.5,0.5), "cm")) +
  scale_x_date(date_breaks = "1 week", date_minor_breaks = "1 week",
               date_labels = "%Y-%m-%d") +
  scale_y_continuous(limits = c(-100, 20), breaks = c(-100, -80, -60, -40, -20, 0, 20)) +
  scale_colour_manual(values = c("#e31a1c","gray30")) +
  scale_fill_manual(values = c("#e31a1c","gray30")) +
  scale_linetype_manual(values = c(2,3)) +
  geom_vline(xintercept =
  as.Date(arg_resp$dates[which(chl_resp$c1_schoolclosing == 3
  & chl_resp$c1_flag == 1, arr.ind = TRUE)[1]]), col = "tomato2", lty = 2) +
  geom_vline(xintercept =
  as.Date(arg_resp$dates[which(chl_resp$c2_workplaceclosing == 3
  & chl_resp$c2_flag == 1, arr.ind = TRUE)[1]]), col = "tomato2", lty = 2)
```



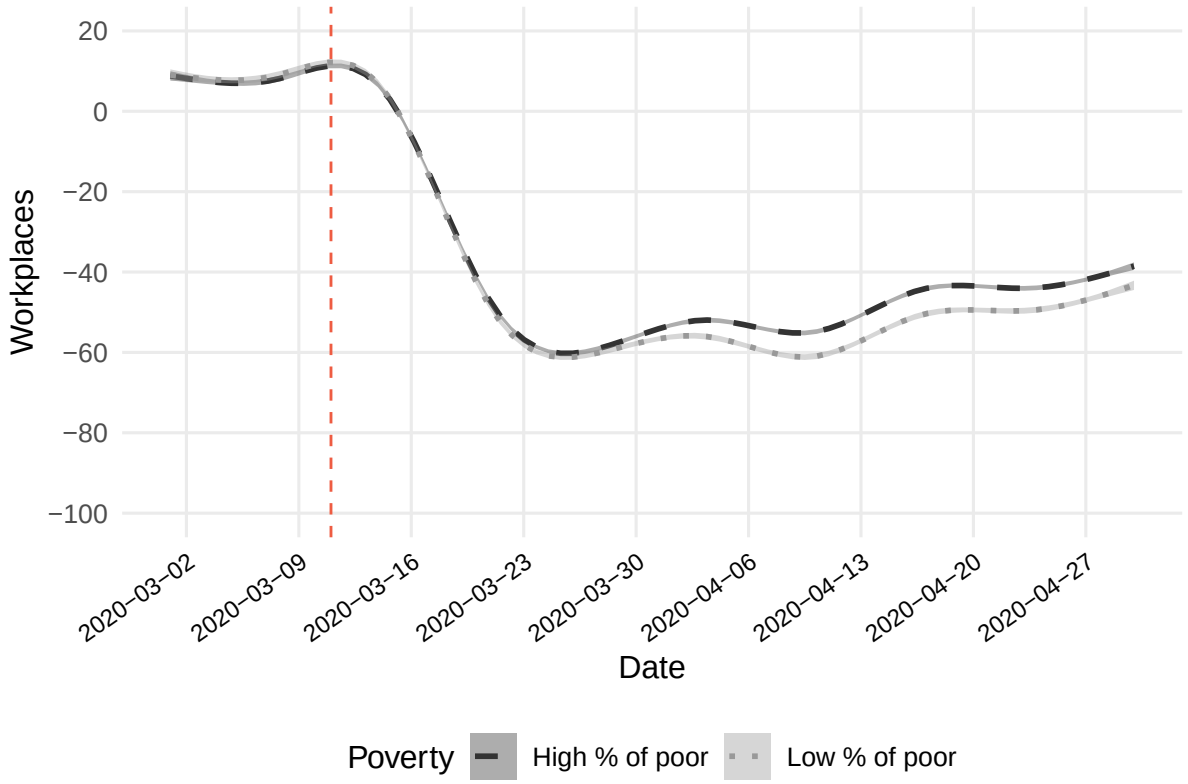

```
## Plot Colombia
ggplot(COL.vor, aes(x = as.Date(date), y = workplaces_percent_change_from_baseline,
                col = Poverty)) + geom_smooth(aes(linetype = Poverty,
                                                  fill = Poverty)) +
  theme_minimal(base_size = 12) + theme(legend.position = "bottom") +
  theme(panel.grid.minor = element_blank()) +
  theme(axis.text.x = element_text(angle = 35, hjust = 1, color = "black",  size = 9)) +
  labs(x = "Date", y = "Workplaces", title = NULL, subtitle = NULL) +
  theme(plot.margin = unit(c(0.5,0.5,0.5,0.5), "cm")) +
  scale_x_date(date_breaks = "1 week", date_minor_breaks = "1 week",
               date_labels = "%Y-%m-%d") +
  scale_y_continuous(limits = c(-100, 20), breaks = c(-100, -80, -60, -40, -20, 0, 20)) +
  scale_colour_manual(values = c("#ff7f00","gray30")) +
  scale_fill_manual(values = c("#ff7f00","gray30")) +
  scale_linetype_manual(values = c(2,3)) +
  geom_vline(xintercept =
  as.Date(arg_resp$dates[which(col_resp$c1_schoolclosing == 3
  & col_resp$c1_flag == 1, arr.ind = TRUE)[1]]), col = "tomato2", lty = 2) +
  geom_vline(xintercept =
  as.Date(arg_resp$dates[which(col_resp$c2_workplaceclosing == 3
  & col_resp$c2_flag == 1, arr.ind = TRUE)[1]]), col = "tomato2", lty = 2)
```



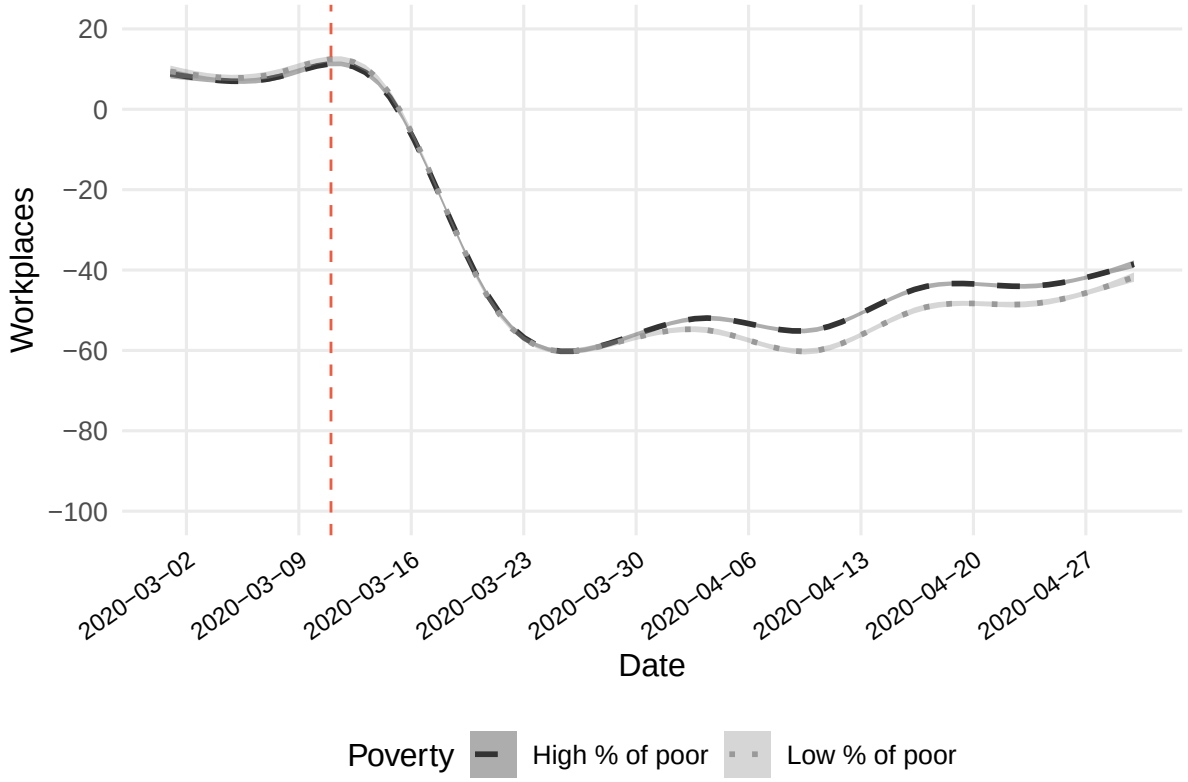

```
## Plot Peru
ggplot(PER, aes(x = as.Date(date), y = workplaces_percent_change_from_baseline,
                    col = Poverty)) + geom_smooth(aes(linetype = Poverty,
                                                      fill = Poverty)) +
  theme_minimal(base_size = 12) + theme(legend.position = "bottom") +
  theme(panel.grid.minor = element_blank()) +
  theme(axis.text.x = element_text(angle = 35, hjust = 1, color = "black",  size = 9)) +
  labs(x = "Date", y = "Workplaces", title = NULL, subtitle = NULL) +
  theme(plot.margin = unit(c(0.5,0.5,0.5,0.5), "cm")) +
  scale_x_date(date_breaks = "1 weeks", date_minor_breaks = "1 week",
               date_labels = "%Y-%m-%d") +
  scale_y_continuous(limits = c(-100, 20), breaks = c(-100, -80, -60, -40, -20, 0, 20)) +
  scale_colour_manual(values = c("#33a02c","gray30")) +
  scale_fill_manual(values = c("#33a02c","gray30")) +
  scale_linetype_manual(values = c(2,3)) +
  geom_vline(xintercept =
  as.Date(arg_resp$dates[which(per_resp$c1_schoolclosing == 3
  & per_resp$c1_flag == 1, arr.ind = TRUE)[1]]), col = "tomato2", lty = 2) +
  geom_vline(xintercept =
  as.Date(arg_resp$dates[which(per_resp$c2_workplaceclosing == 3
  & per_resp$c2_flag == 1, arr.ind = TRUE)[1]]), col = "tomato2", lty = 2) +
  geom_vline(xintercept
  = as.Date(arg_resp$dates[which(per_resp$c6_stayathomerequirements == 3
  & per_resp$c6_flag == 1, arr.ind = TRUE)[1]]), col = "tomato2", lty = 2)
```




```
## Cross-National Plot
ggplot(cross.national, aes(x = as.Date(date), y = workplaces_percent_change_from_baseline,
                           col = Poverty)) + geom_smooth(aes(linetype = Poverty,
                                                             fill = Poverty)) +
  theme_minimal(base_size = 12) + theme(legend.position = "bottom") +
  theme(panel.grid.minor = element_blank()) +
  theme(axis.text.x = element_text(angle = 35, hjust = 1, color = "black",  size = 9)) +
  labs(x = "Date", y = "Workplaces", title = NULL, subtitle = NULL) +
  theme(plot.margin = unit(c(0.5,0.5,0.5,0.5), "cm")) +
  scale_x_date(date_breaks = "1 week", date_minor_breaks = "1 week",
               date_labels = "%Y-%m-%d") +
  scale_y_continuous(limits = c(-100, 20), breaks = c(-100, -80, -60, -40, -20, 0, 20)) +
  scale_colour_manual(values = c("gray20","gray60")) +
  scale_fill_manual(values = c("gray20","gray60")) +
  scale_linetype_manual(values = c(2,3)) +
  geom_vline(xintercept = as.Date("2020-03-11"), col = "tomato2", lty = 2)
```




```
## Cross-National Plot
ggplot(subset(cross.national, sub_region_1 != "Buenos Aires"
              & sub_region_1 != "Santiago Metropolitan Region"
              & sub_region_1 != "Bogota"
              & sub_region_1 != "Metropolitan Municipality of Lima"),
       aes(x = as.Date(date), y = workplaces_percent_change_from_baseline,
           col = Poverty)) +
  geom_smooth(aes(linetype = Poverty, fill = Poverty)) +
  theme_minimal(base_size = 12) + theme(legend.position = "bottom") +
  theme(panel.grid.minor = element_blank()) +
  theme(axis.text.x = element_text(angle = 35, hjust = 1, color = "black",  size = 9)) +
  labs(x = "Date", y = "Workplaces", title = NULL, subtitle = NULL) +
  theme(plot.margin = unit(c(0.5,0.5,0.5,0.5), "cm")) +
  scale_x_date(date_breaks = "1 week", date_minor_breaks = "1 week",
               date_labels = "%Y-%m-%d") +
  scale_y_continuous(limits = c(-100, 20), breaks = c(-100, -80, -60, -40, -20, 0, 20)) +
  scale_colour_manual(values = c("gray20","gray60")) +
  scale_fill_manual(values = c("gray20","gray60")) +
  scale_linetype_manual(values = c(2,3)) +
  geom_vline(xintercept = as.Date("2020-03-11"), col = "tomato2", lty = 2)
```



JHU-CSSE COVID-19 Dataset

```
## Code based on **source omitted because of peer-reviewing**

## JHU-CSSE COVID-19 Confirmed Dataset
JHU_cases <- read.csv("https://osf.io/cpfra/download", sep = ",")

## JHU-CSSE COVID-19 Deaths Dataset
JHU_deaths <- read.csv("https://osf.io/h6yex/download", sep = ",")

## Period Coverage
dd_JHU <- as.numeric((as.Date("2020-05-19")) - as.Date("2020-01-22"))
begin_JHU <- ((as.Date("2020-05-19"))-dd_JHU) ## 22 January
dates_JHU <- seq(as.Date(begin_JHU), as.Date("2020-05-19"), by="days")

## Argentina
cases_arg <- slice(JHU_cases, which(JHU_cases[,2] == "Argentina")
                   :which(JHU_cases[,2] == "Argentina")) %>%
  pivot_longer(-c(Province.State, Country.Region, Lat, Long),
               names_to = "Date", values_to = "cumulative_cases") %>%
  mutate(incident_cases = c(0, diff(cumulative_cases)))
cases_arg <- data.frame(cases_arg, dates_JHU)
cases_arg$Province.State <- NULL
```

```
cases_arg$Lat <- NULL
cases_arg$Long <- NULL
cases_arg$Date <- NULL
cases_arg$lagged_date <- dates_JHU+1
cases_arg$incident_cases <- NULL
cases_arg$dates_JHU <- NULL

## Chile
cases_chl <- slice(JHU_cases, which(JHU_cases[,2] == "Chile")
                   :which(JHU_cases[,2] == "Chile")) %>%
  pivot_longer(-c(Province.State, Country.Region, Lat, Long),
               names_to = "Date", values_to = "cumulative_cases") %>%
  mutate(incident_cases = c(0, diff(cumulative_cases)))
cases_chl <- data.frame(cases_chl, dates_JHU)
cases_chl$Province.State <- NULL
cases_chl$Lat <- NULL
cases_chl$Long <- NULL
cases_chl$Date <- NULL
cases_chl$lagged_date <- dates_JHU+1
cases_chl$incident_cases <- NULL
cases_chl$dates_JHU <- NULL

## Colombia
cases_col <- slice(JHU_cases, which(JHU_cases[,2] == "Colombia")
                   :which(JHU_cases[,2] == "Colombia")) %>%
  pivot_longer(-c(Province.State, Country.Region, Lat, Long),
               names_to = "Date", values_to = "cumulative_cases") %>%
  mutate(incident_cases = c(0, diff(cumulative_cases)))
cases_col <- data.frame(cases_col, dates_JHU)
cases_col$Province.State <- NULL
cases_col$Lat <- NULL
cases_col$Long <- NULL
cases_col$Date <- NULL
cases_col$lagged_date <- dates_JHU+1
cases_col$incident_cases <- NULL
cases_col$dates_JHU <- NULL

## Peru
cases_per <- slice(JHU_cases, which(JHU_cases[,2] == "Peru")
                   :which(JHU_cases[,2] == "Peru")) %>%
  pivot_longer(-c(Province.State, Country.Region, Lat, Long),
               names_to = "Date", values_to = "cumulative_cases") %>%
  mutate(incident_cases = c(0, diff(cumulative_cases)))
cases_per <- data.frame(cases_per, dates_JHU)
cases_per$Province.State <- NULL
cases_per$Lat <- NULL
cases_per$Long <- NULL
cases_per$Date <- NULL
cases_per$lagged_date <- dates_JHU+1
cases_per$incident_cases <- NULL
cases_per$dates_JHU <- NULL

## Argentina
```

```r
deaths_arg <- slice(JHU_deaths, which(JHU_deaths[,2] == "Argentina")
                    :which(JHU_deaths[,2] == "Argentina")) %>%
  pivot_longer(-c(Province.State, Country.Region, Lat, Long),
               names_to = "Date", values_to = "cumulative_cases") %>%
  mutate(incident_cases = c(0, diff(cumulative_cases)))
deaths_arg <- data.frame(deaths_arg, dates_JHU)
deaths_arg$Province.State <- NULL
deaths_arg$Lat <- NULL
deaths_arg$Long <- NULL
deaths_arg$Date <- NULL
deaths_arg$lagged_date <- dates_JHU+1
deaths_arg$incident_cases <- NULL
deaths_arg$dates_JHU <- NULL

## Chile
deaths_chl <- slice(JHU_deaths, which(JHU_deaths[,2] == "Chile")
                    :which(JHU_deaths[,2] == "Chile")) %>%
  pivot_longer(-c(Province.State, Country.Region, Lat, Long),
               names_to = "Date", values_to = "cumulative_cases") %>%
  mutate(incident_cases = c(0, diff(cumulative_cases)))
deaths_chl <- data.frame(deaths_chl, dates_JHU)
deaths_chl$Province.State <- NULL
deaths_chl$Lat <- NULL
deaths_chl$Long <- NULL
deaths_chl$Date <- NULL
deaths_chl$lagged_date <- dates_JHU+1
deaths_chl$incident_cases <- NULL
deaths_chl$dates_JHU <- NULL

## Colombia
deaths_col <- slice(JHU_deaths, which(JHU_deaths[,2] == "Colombia")
                    :which(JHU_deaths[,2] == "Colombia")) %>%
  pivot_longer(-c(Province.State, Country.Region, Lat, Long),
               names_to = "Date", values_to = "cumulative_cases") %>%
  mutate(incident_cases = c(0, diff(cumulative_cases)))
deaths_col <- data.frame(deaths_col, dates_JHU)
deaths_col$Province.State <- NULL
deaths_col$Lat <- NULL
deaths_col$Long <- NULL
deaths_col$Date <- NULL
deaths_col$lagged_date <- dates_JHU+1
deaths_col$incident_cases <- NULL
deaths_col$dates_JHU <- NULL

## Peru
deaths_per <- slice(JHU_deaths, which(JHU_deaths[,2] == "Peru")
                    :which(JHU_deaths[,2] == "Peru")) %>%
  pivot_longer(-c(Province.State, Country.Region, Lat, Long),
               names_to = "Date", values_to = "cumulative_cases") %>%
  mutate(incident_cases = c(0, diff(cumulative_cases)))
deaths_per <- data.frame(deaths_per, dates_JHU)
deaths_per$Province.State <- NULL
deaths_per$Lat <- NULL
```

```
deaths_per$Long <- NULL
deaths_per$Date <- NULL
deaths_per$lagged_date <- dates_JHU+1
deaths_per$incident_cases <- NULL
deaths_per$dates_JHU <- NULL
```

Difference-in-Differences (DiD)

DiD Precoding

```
## Economic Measures
ecc_ARG <- as.Date(arg_resp$dates[which(arg_resp$e1_incomesupport == 1
                                        & arg_resp$e1_flag == 1, arr.ind = TRUE)])[1]
ecc_CHL <- as.Date(chl_resp$dates[which(chl_resp$e1_incomesupport == 1
                                        & chl_resp$e1_flag == 1, arr.ind = TRUE)])[1]
ecc_COL <- as.Date(col_resp$dates[which(col_resp$e1_incomesupport == 1
                                        & col_resp$e1_flag == 1, arr.ind = TRUE)])[1]
ecc_PER <- as.Date(per_resp$dates[which(per_resp$e1_incomesupport == 1
                                        & per_resp$e1_flag == 1, arr.ind = TRUE)])[1]
debt_ARG <- as.Date(arg_resp$dates[which(arg_resp$e2_debtrelief == 2, arr.ind = TRUE)])[1]
debt_COL <-as.Date(col_resp$dates[which(col_resp$e2_debtrelief == 2, arr.ind = TRUE)])[1]
debt_PER <- as.Date(per_resp$dates[which(per_resp$e2_debtrelief == 2, arr.ind = TRUE)])[1]

## Cross National Data Frame
cross.national_cases <- bind_rows(cases_arg, cases_chl, cases_col, cases_per)
cross.national_deaths <- bind_rows(deaths_arg, deaths_chl, deaths_col, deaths_per)
names(cross.national_deaths)[2] = "cumulative_deaths"
cross.national$date <- as.Date(cross.national$date)
cross.national <- left_join(cross.national, cross.national_cases,
                            by = c("Country" = "Country.Region", "date" = "lagged_date"))
cross.national <- left_join(cross.national, cross.national_deaths,
                            by = c("Country" = "Country.Region", "date" = "lagged_date"))
cross.national$income <- ifelse((cross.national$date > ecc_ARG) & cross.national$Country
                                == "Argentina", 1, ifelse((cross.national$date > ecc_CHL)
                                       & cross.national$Country == "Chile", 1,
                                       ifelse((cross.national$date > ecc_COL)
                                              & cross.national$Country == "Colombia", 1,
                                              ifelse((cross.national$date > ecc_PER)
                                                     & cross.national$Country
                                                     == "Peru", 1, 0))))
cross.national$debt <- ifelse((cross.national$date > debt_ARG) & cross.national$Country
                              == "Argentina", 1, ifelse((cross.national$date > debt_COL)
                                    & cross.national$Country == "Colombia", 1,
                                    ifelse((cross.national$date > debt_PER)
                                           & cross.national$Country == "Peru", 1, 0)))
cs.baseline <- cross.national

## Codification Post Period
```

```
cs.baseline$post <- ifelse(cs.baseline$date > as.Date("2020-03-11"), 1, 0)
cross.national$post <- ifelse((cross.national$date > first_ARG) & cross.national$Country
                              == "Argentina", 1, ifelse((cross.national$date > first_CHL)
                                      & cross.national$Country == "Chile", 1,
                                      ifelse((cross.national$date > first_COL)
                                             & cross.national$Country == "Colombia", 1,
                                             ifelse((cross.national$date > first_PER)
                                                    & cross.national$Country
                                                    == "Peru", 1, 0))))
```

DiD NPIs

```
## Diff-in-Diff WHO Announcement
diff_1 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                    + I(date) + I(sub_region_1), data = cs.baseline,
                    cluster = sub_region_2)
fit_1 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post + I(date)
            + I(sub_region_1), data = cs.baseline)
vif_1 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                + I(date) + I(sub_region_1), data = cs.baseline))
robust_1 <- as.vector(summary(fit_1, robust = T)$coefficients[,"Std. Error"])

## Diff-in-Diff First Interventions
diff_2 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                    + I(date) + I(sub_region_1), data = cross.national,
                    cluster = sub_region_2)
fit_2 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post + I(date)
            + I(sub_region_1), data = cross.national)
vif_2 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                + I(date) + I(sub_region_1), data = cross.national))
robust_2 <- as.vector(summary(fit_2, robust = T)$coefficients[,"Std. Error"])

## Diff-in-Diff Controlling for Cumulative Cases
diff_3 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                    + cumulative_cases + I(date) + I(sub_region_1),
                    data = cross.national, cluster = sub_region_2)
fit_3 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
            + cumulative_cases + I(date) + I(sub_region_1), data = cross.national)
vif_3 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                + cumulative_cases + I(date) + I(sub_region_1),
                data = cross.national))
robust_3 <- as.vector(summary(fit_3, robust = T)$coefficients[,"Std. Error"])

## Diff-in-Diff Controlling for Cumulative Deaths
diff_4 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                    + cumulative_cases + cumulative_deaths + I(date)
                    + I(sub_region_1), data = cross.national, cluster = sub_region_2)
fit_4 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
            + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
            data = cross.national)
vif_4 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
```

```
               + cumulative_cases  + cumulative_deaths + I(date) + I(sub_region_1),
               data = cross.national))
robust_4 <- as.vector(summary(fit_4, robust = T)$coefficients[,"Std. Error"])

## Diff-in-Diff Argentina
diff_5 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                    + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                    data = subset(cross.national, Country == "Argentina"),
                    cluster = sub_region_2)
fit_5 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
            + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
            data = subset(cross.national, Country == "Argentina"))
vif_5 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
               + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
               data = subset(cross.national, Country == "Argentina")))
robust_5 <- as.vector(summary(fit_5, robust = T)$coefficients[,"Std. Error"])

## Diff-in-Diff Chile
diff_6 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                    + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                    data = subset(cross.national, Country == "Chile"),
                    cluster = sub_region_2)
fit_6 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
            + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
            data = subset(cross.national, Country == "Chile"))
vif_6 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
               + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
               data = subset(cross.national, Country == "Chile")))
robust_6 <- as.vector(summary(fit_6, robust = T)$coefficients[,"Std. Error"])

## Diff-in-Diff Colombia
diff_7 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                    + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                    data = subset(cross.national, Country == "Colombia"),
                    cluster = sub_region_2)
fit_7 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
            + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
            data = subset(cross.national, Country == "Colombia"))
vif_7 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
               + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
               data = subset(cross.national, Country == "Colombia")))
robust_7 <- as.vector(summary(fit_7, robust = T)$coefficients[,"Std. Error"])

## Diff-in-Diff Peru
diff_8 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                    + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                    data = subset(cross.national, Country == "Peru"),
                    cluster = sub_region_2)
fit_8 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
            + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
            data = subset(cross.national, Country == "Peru"))
vif_8 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
               + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
```

```
                data = subset(cross.national, Country == "Peru")))
robust_8 <- as.vector(summary(fit_8, robust = T)$coefficients[,"Std. Error"])

## Robust Standard Errors
robust_se <- data.frame(Model = c("Model 1", "Model 2", "Model 3", "Model 4", "Model 5",
                                  "Model 6", "Model 7", "Model 8"),
                        Term = c(rep("Poverty x Post", 8)),
                        Est = c(coeftest(fit_1, vcov = vcovHC(fit_1, type="HC1"))
                                [(length(coeftest(fit_1, vcov
                                                  = vcovHC(fit_1, type="HC1")))/4), 1],
                                coeftest(fit_2, vcov = vcovHC(fit_2, type="HC1"))
                                [(length(coeftest(fit_2, vcov
                                                  = vcovHC(fit_2, type="HC1")))/4), 1],
                                coeftest(fit_3, vcov = vcovHC(fit_3, type="HC1"))
                                [(length(coeftest(fit_3, vcov
                                                  = vcovHC(fit_3, type="HC1")))/4), 1],
                                coeftest(fit_4, vcov = vcovHC(fit_4, type="HC1"))
                                [(length(coeftest(fit_4, vcov
                                                  = vcovHC(fit_4, type="HC1")))/4), 1],
                                coeftest(fit_5, vcov = vcovHC(fit_5, type="HC1"))
                                [(length(coeftest(fit_5, vcov
                                                  = vcovHC(fit_5, type="HC1")))/4), 1],
                                coeftest(fit_6, vcov = vcovHC(fit_6, type="HC1"))
                                [(length(coeftest(fit_6, vcov
                                                  = vcovHC(fit_6, type="HC1")))/4), 1],
                                coeftest(fit_7, vcov = vcovHC(fit_7, type="HC1"))
                                [(length(coeftest(fit_7, vcov
                                                  = vcovHC(fit_7, type="HC1")))/4), 1],
                                coeftest(fit_8, vcov = vcovHC(fit_8, type="HC1"))
                                [(length(coeftest(fit_8, vcov
                                                  = vcovHC(fit_8, type="HC1")))/4), 1]),
                        SD = c(coeftest(fit_1, vcov = vcovHC(fit_1, type="HC1"))
                               [(length(coeftest(fit_1, vcov
                                                 = vcovHC(fit_1, type="HC1")))/4), 2],
                               coeftest(fit_2, vcov = vcovHC(fit_2, type="HC1"))
                               [(length(coeftest(fit_2, vcov
                                                 = vcovHC(fit_2, type="HC1")))/4), 2],
                               coeftest(fit_3, vcov = vcovHC(fit_3, type="HC1"))
                               [(length(coeftest(fit_3, vcov
                                                 = vcovHC(fit_3, type="HC1")))/4), 2],
                               coeftest(fit_4, vcov = vcovHC(fit_4, type="HC1"))
                               [(length(coeftest(fit_4, vcov
                                                 = vcovHC(fit_4, type="HC1")))/4), 2],
                               coeftest(fit_5, vcov = vcovHC(fit_5, type="HC1"))
                               [(length(coeftest(fit_5, vcov
                                                 = vcovHC(fit_5, type="HC1")))/4), 2],
                               coeftest(fit_6, vcov = vcovHC(fit_6, type="HC1"))
                               [(length(coeftest(fit_6, vcov
                                                 = vcovHC(fit_6, type="HC1")))/4), 2],
                               coeftest(fit_7, vcov = vcovHC(fit_7, type="HC1"))
                               [(length(coeftest(fit_7, vcov
                                                 = vcovHC(fit_7, type="HC1")))/4), 2],
                               coeftest(fit_8, vcov = vcovHC(fit_8, type="HC1"))
```

```
                              [(length(coeftest(fit_8, vcov
                                              = vcovHC(fit_8, type="HC1")))/4), 2]))

## Models Table
stargazer(fit_1, fit_2, fit_3, fit_4,
          type = "latex", header = FALSE, style = "ajps",
          title = "Effect of Poverty on Work Mobility I",
          dep.var.labels = "Mobility Change from Baseline",
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          column.labels = c("Model I", "Model II", "Model III", "Model IV"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths"),
          add.lines = list(c("Robust SE", format(round(robust_se$SD[1],
                                                 digits = 3), nsmall = 3),
                             format(round(robust_se$SD[2], digits = 3), nsmall = 3),
                             format(round(robust_se$SD[3], digits = 3), nsmall = 3),
                             format(round(robust_se$SD[4], digits = 3), nsmall = 3)),
                           c("Post-t", "WHO", "NPIs", "NPIs", "NPIs"),
                           c("Lagged cases", "No", "No", "Yes", "Yes"),
                           c("Lagged deaths", "No", "No", "No", "Yes"),
                           c("Day FE", "Yes", "Yes", "Yes", "Yes"),
                           c("Region FE", "Yes", "Yes", "Yes", "Yes"),
                           c("VIF", format(round(vif_1, digits = 3), nsmall = 3),
                             format(round(vif_2, digits = 3), nsmall = 3),
                             format(round(vif_3, digits = 3), nsmall = 3),
                             format(round(vif_4, digits = 3), nsmall = 3)),
                           c("Subsample", "No", "No", "No", "No"),
                           c("Exclusion", "No", "No", "No", "No")),
          covariate.labels = c("Poverty", "Post", "Poverty x Post"),
          notes = "Standard errors in parentheses")
```

```
## Models Table
stargazer(fit_5, fit_6, fit_7, fit_8,
          type = "latex", header = FALSE, style = "ajps",
          title = "Effect of Poverty on Work Mobility II",
          dep.var.labels = "Mobility Change from Baseline",
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          column.labels = c("Model V", "Model VI", "Model VII", "Model VII"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths"),
          add.lines = list(c("Robust SE", format(round(robust_se$SD[5],
                                                 digits = 3), nsmall = 3),
                             format(round(robust_se$SD[6], digits = 3), nsmall = 3),
                             format(round(robust_se$SD[7], digits = 3), nsmall = 3),
                             format(round(robust_se$SD[8], digits = 3), nsmall = 3)),
                           c("Post-t", "NPIs", "NPIs", "NPIs", "NPIs"),
                           c("Lagged cases", "Yes", "Yes", "Yes", "Yes"),
                           c("Lagged deaths", "Yes", "Yes", "Yes", "Yes"),
                           c("Day FE", "Yes", "Yes", "Yes", "Yes"),
                           c("Region FE", "Yes", "Yes", "Yes", "Yes"),
                           c("VIF", format(round(vif_5, digits = 3), nsmall = 3),
                             format(round(vif_6, digits = 3), nsmall = 3),
```

Table 1: Effect of Poverty on Work Mobility I

	Mobility Change from Baseline			
	Model I	**Model II**	**Model III**	**Model IV**
Poverty	−8.279***	−7.657***	−7.757***	−7.746***
	(1.218)	(0.927)	(0.927)	(0.908)
Post	−44.455***	−61.677***	−61.093***	−55.781***
	(0.495)	(0.366)	(0.378)	(0.397)
Poverty x Post	4.317***	4.608***	4.665***	4.399***
	(0.576)	(0.398)	(0.398)	(0.390)
Robust SE	0.388	0.338	0.337	0.347
Post-t	WHO	NPIs	NPIs	NPIs
Lagged cases	No	No	Yes	Yes
Lagged deaths	No	No	No	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	2.522	4.113	4.118	4.294
Subsample	No	No	No	No
Exclusion	No	No	No	No
N	33016	33016	33016	33016
R-squared	0.604	0.757	0.757	0.767
Adj. R-squared	0.603	0.756	0.757	0.767

***p < .01; **p < .05; *p < .1
Standard errors in parentheses

```
                          format(round(vif_7, digits = 3), nsmall = 3),
                          format(round(vif_8, digits = 3), nsmall = 3)),
                        c("Subsample", "ARG", "CHL", "COL", "PER"),
                        c("Exclusion", "No", "No", "No", "No", "No")),
          covariate.labels = c("Poverty", "Post", "Poverty x Post"),
          notes = "Standard errors in parentheses")
```

```
## Models Table
stargazer(fit_1, fit_2, fit_3, fit_4,
          se = starprep(diff_1, diff_2, diff_3, diff_4),
          type = "latex", header = FALSE, style = "ajps",
          title = "Effect of Poverty on Work Mobility I",
          dep.var.labels = "Mobility Change from Baseline",
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          column.labels = c("Model I", "Model II", "Model III", "Model IV"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths"),
          add.lines = list(c("Post-t", "WHO", "NPIs", "NPIs", "NPIs"),
                           c("Lagged cases", "No", "No", "Yes", "Yes"),
                           c("Lagged deaths", "No", "No", "No", "Yes"),
                           c("Day FE", "Yes", "Yes", "Yes", "Yes"),
                           c("Region FE", "Yes", "Yes", "Yes", "Yes"),
                           c("VIF", format(round(vif_1, digits = 3), nsmall = 3),
                             format(round(vif_2, digits = 3), nsmall = 3),
                             format(round(vif_3, digits = 3), nsmall = 3),
```

Table 2: Effect of Poverty on Work Mobility II

	Mobility Change from Baseline			
	Model V	**Model VI**	**Model VII**	**Model VII**
Poverty	20.521***	−0.447	0.329	15.621***
	(0.904)	(1.257)	(0.884)	(2.297)
Post	−44.121***	−23.104***	−36.284***	−28.016***
	(0.728)	(1.168)	(0.717)	(1.026)
Poverty x Post	4.390***	−2.387***	2.061***	0.933
	(0.561)	(0.880)	(0.659)	(1.019)
Robust SE	0.560	0.874	0.549	0.672
Post-t	NPIs	NPIs	NPIs	NPIs
Lagged cases	Yes	Yes	Yes	Yes
Lagged deaths	Yes	Yes	Yes	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	4.974	5.910	6.726	4.296
Subsample	ARG	CHL	COL	PER
Exclusion	No	No	No	No
N	15826	2932	9866	4392
R-squared	0.799	0.831	0.851	0.767
Adj. R-squared	0.799	0.830	0.851	0.766

***p < .01; **p < .05; *p < .1
Standard errors in parentheses

```
                          format(round(vif_4, digits = 3), nsmall = 3)),
                        c("Subsample", "No", "No", "No", "No"),
                        c("Exclusion", "No", "No", "No", "No")),
          covariate.labels = c("Poverty", "Post", "Pov. x Post"),
          notes = "Clustered standard errors by sub-national level in parentheses")
```

```
## Models Table
stargazer(fit_5, fit_6, fit_7, fit_8,
          se = starprep(diff_5, diff_6, diff_7, diff_8),
          type = "latex", header = FALSE, style = "ajps",
          title = "Effect of Poverty on Work Mobility II",
          dep.var.labels = "Mobility Change from Baseline",
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          column.labels = c("Model V", "Model VI", "Model VII", "Model VII"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths"),
          add.lines = list(c("Post-t", "NPIs", "NPIs", "NPIs", "NPIs"),
                           c("Lagged cases", "Yes", "Yes", "Yes", "Yes"),
                           c("Lagged deaths", "Yes", "Yes", "Yes", "Yes"),
                           c("Day FE", "Yes", "Yes", "Yes", "Yes"),
                           c("Region FE", "Yes", "Yes", "Yes", "Yes"),
                           c("VIF", format(round(vif_5, digits = 3), nsmall = 3),
                             format(round(vif_6, digits = 3), nsmall = 3),
                             format(round(vif_7, digits = 3), nsmall = 3),
                             format(round(vif_8, digits = 3), nsmall = 3)),
```

Table 3: Effect of Poverty on Work Mobility I

	Mobility Change from Baseline			
	Model I	**Model II**	**Model III**	**Model IV**
Poverty	−8.279***	−7.657***	−7.757***	−7.746***
	(2.256)	(2.301)	(2.300)	(2.327)
Post	−44.455***	−61.677***	−61.093***	−55.781***
	(0.651)	(0.802)	(0.829)	(0.734)
Pov. x Post	4.317***	4.608***	4.665***	4.399***
	(0.797)	(0.860)	(0.848)	(1.012)
Post-t	WHO	NPIs	NPIs	NPIs
Lagged cases	No	No	Yes	Yes
Lagged deaths	No	No	No	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	2.522	4.113	4.118	4.294
Subsample	No	No	No	No
Exclusion	No	No	No	No
N	33016	33016	33016	33016
R-squared	0.604	0.757	0.757	0.767
Adj. R-squared	0.603	0.756	0.757	0.767

***p < .01; **p < .05; *p < .1
Clustered standard errors by sub-national level in parentheses

```
                          c("Subsample", "ARG", "CHL", "COL", "PER"),
                          c("Exclusion", "No", "No", "No", "No", "No")),
          covariate.labels = c("Poverty", "Post", "Poverty x Post"),
          notes = "Clustered standard errors by sub-national level in parentheses")
```

DiD Types of Mobilities

```
## Diff-in-Diff Transit Stations
diff_9 <- lm_robust(transit_stations_percent_change_from_baseline
                    ~ binary_poverty*post + cumulative_cases + cumulative_deaths
                    + I(date) + I(sub_region_1), data = cross.national,
                    cluster = sub_region_2)
fit_9 <- lm(transit_stations_percent_change_from_baseline ~ binary_poverty*post
            + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
            data = cross.national)
vif_9 <- VIF(lm(transit_stations_percent_change_from_baseline ~ binary_poverty*post
                + cumulative_cases  + cumulative_deaths + I(date) + I(sub_region_1),
                data = cross.national))

## Diff-in-Diff Groceries
diff_10 <- lm_robust(grocery_and_pharmacy_percent_change_from_baseline
                     ~ binary_poverty*post + cumulative_cases + cumulative_deaths
                     + I(date) + I(sub_region_1), data = cross.national,
                     cluster = sub_region_2)
```

Table 4: Effect of Poverty on Work Mobility II

	Mobility Change from Baseline			
	Model V	**Model VI**	**Model VII**	**Model VII**
Poverty	20.521***	−0.447	0.329	15.621
	(2.266)	(5.089)	(1.495)	(606.873)
Post	−44.121***	−23.104***	−36.284***	−28.016***
	(0.968)	(1.132)	(0.770)	(1.490)
Poverty x Post	4.390***	−2.387	2.061*	0.933
	(1.146)	(2.140)	(1.178)	(1.915)
Post-t	NPIs	NPIs	NPIs	NPIs
Lagged cases	Yes	Yes	Yes	Yes
Lagged deaths	Yes	Yes	Yes	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	4.974	5.910	6.726	4.296
Subsample	ARG	CHL	COL	PER
Exclusion	No	No	No	No
N	15826	2932	9866	4392
R-squared	0.799	0.831	0.851	0.767
Adj. R-squared	0.799	0.830	0.851	0.766

***p < .01; **p < .05; *p < .1
Clustered standard errors by sub-national level in parentheses

```
fit_10 <- lm(grocery_and_pharmacy_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date)+ I(sub_region_1),
             data = cross.national)
vif_10 <- VIF(lm(grocery_and_pharmacy_percent_change_from_baseline
                 ~ binary_poverty*post + cumulative_cases  + cumulative_deaths
                 + I(date)+ I(sub_region_1), data = cross.national))

## Diff-in-Diff Recreation
diff_11 <- lm_robust(retail_and_recreation_percent_change_from_baseline
                     ~ binary_poverty*post + cumulative_cases + cumulative_deaths
                     + I(date) + I(sub_region_1), data = cross.national,
                     cluster = sub_region_2)
fit_11 <- lm(retail_and_recreation_percent_change_from_baseline
             ~ binary_poverty*post + cumulative_cases + cumulative_deaths + I(date)
             + I(sub_region_1), data = cross.national)
vif_11 <- VIF(lm(retail_and_recreation_percent_change_from_baseline
                 ~ binary_poverty*post + cumulative_cases  + cumulative_deaths
                 + I(date) + I(sub_region_1), data = cross.national))

## Diff-in-Diff Parks
diff_12 <- lm_robust(parks_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date)
                     + I(sub_region_1), data = cross.national,
                     cluster = sub_region_2)
fit_12 <- lm(parks_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = cross.national)
```

```
vif_12 <- VIF(lm(parks_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases  + cumulative_deaths + I(date)
                 + I(sub_region_1), data = cross.national))

## Models Table
stargazer(fit_9, fit_10, fit_11, fit_12, se = starprep(diff_9, diff_10, diff_11, diff_12),
          type = "latex", header = FALSE, style = "ajps",
          title = "Effect of Poverty on Types of Mobility",
          dep.var.labels = c("Transit", "Groceries", "Recreation", "Parks"),
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths"),
          add.lines = list(c("Post-t", "NPIs", "NPIs", "NPIs", "NPIs"),
                           c("Lagged cases", "Yes", "Yes", "Yes", "Yes"),
                           c("Lagged deaths", "Yes", "Yes", "Yes", "Yes"),
                           c("Day FE", "Yes", "Yes", "Yes", "Yes"),
                           c("Region FE", "Yes", "Yes", "Yes", "Yes"),
                           c("VIF", format(round(vif_9, digits = 3), nsmall = 3),
                             format(round(vif_10, digits = 3), nsmall = 3),
                             format(round(vif_11, digits = 3), nsmall = 3),
                             format(round(vif_12, digits = 3), nsmall = 3)),
                           c("Subsample", "No", "No", "No", "No"),
                           c("Exclusion", "No", "No", "No", "No")),
          covariate.labels = c("Poverty", "Post", "Poverty x Post"),
          notes = "Clustered standard errors by sub-national level in parentheses")
```

Table 5: Effect of Poverty on Types of Mobility

	Transit	**Groceries**	**Recreation**	**Parks**
Poverty	3.847	-8.727^{**}	11.199^{**}	23.844^{***}
	(11.008)	(4.193)	(4.552)	(3.661)
Post	-51.568^{***}	-44.337^{***}	-47.523^{***}	-35.916^{***}
	(1.669)	(0.901)	(1.071)	(0.947)
Poverty x Post	4.830^{**}	5.512^{***}	-2.247^{*}	-2.225^{*}
	(2.080)	(1.272)	(1.340)	(1.285)
Post-t	NPIs	NPIs	NPIs	NPIs
Lagged cases	Yes	Yes	Yes	Yes
Lagged deaths	Yes	Yes	Yes	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	3.204	2.408	5.036	3.165
Subsample	No	No	No	No
Exclusion	No	No	No	No
N	17664	22144	23586	38831
R-squared	0.688	0.585	0.801	0.684
Adj. R-squared	0.686	0.583	0.801	0.683

***p $<$ .01; **p $<$ .05; *p $<$ .1
Clustered standard errors by sub-national level in parentheses

Robustness Cheks

```
## Diff-in-Diff WHO Announcement
diff_13 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + I(date) + I(sub_region_1), data =
                       subset(cs.baseline, sub_region_1 != "Buenos Aires"
                              & sub_region_1 != "Santiago Metropolitan Region"
                              & sub_region_1 != "Bogota"
                              & sub_region_1 != "Metropolitan Municipality of Lima"),
                     cluster = sub_region_2)
fit_13 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post + I(date)
             + I(sub_region_1), data
             = subset(cs.baseline), sub_region_1 != "Buenos Aires"
             & sub_region_1 != "Santiago Metropolitan Region"
             & sub_region_1 != "Bogota"
             & sub_region_1 != "Metropolitan Municipality of Lima")
vif_13 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + I(date) + I(sub_region_1), data
                 = subset(cs.baseline, sub_region_1 != "Buenos Aires"
                          & sub_region_1 != "Santiago Metropolitan Region"
                          & sub_region_1 != "Bogota"
                          & sub_region_1 != "Metropolitan Municipality of Lima")))

## Diff-in-Diff First Interventions
diff_14 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + I(date) + I(sub_region_1), data
                     = subset(cross.national, sub_region_1 != "Buenos Aires"
                              & sub_region_1 != "Santiago Metropolitan Region"
                              & sub_region_1 != "Bogota"
                              & sub_region_1 != "Metropolitan Municipality of Lima"),
                     cluster = sub_region_2)
fit_14 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post + I(date)
             + I(sub_region_1), data
             = subset(cross.national, sub_region_1 != "Buenos Aires"
                      & sub_region_1 != "Santiago Metropolitan Region"
                      & sub_region_1 != "Bogota"
                      & sub_region_1 != "Metropolitan Municipality of Lima"))
vif_14 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + I(date) + I(sub_region_1), data
                 = subset(cross.national, sub_region_1 != "Buenos Aires"
                          & sub_region_1 != "Santiago Metropolitan Region"
                          & sub_region_1 != "Bogota"
                          & sub_region_1 != "Metropolitan Municipality of Lima")))

## Diff-in-Diff Controlling for Cumulative Cases
diff_15 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + I(date)  + I(sub_region_1), data
                     = subset(cross.national, sub_region_1 != "Buenos Aires"
                              & sub_region_1 != "Santiago Metropolitan Region"
                              & sub_region_1 != "Bogota"
                              & sub_region_1 != "Metropolitan Municipality of Lima"),
                     cluster = sub_region_2)
fit_15 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
```

```
            + cumulative_cases + I(date) + I(sub_region_1), data
            = subset(cross.national, sub_region_1 != "Buenos Aires"
                     & sub_region_1 != "Santiago Metropolitan Region"
                     & sub_region_1 != "Bogota"
                     & sub_region_1 != "Metropolitan Municipality of Lima"))
vif_15 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + I(date) + I(sub_region_1), data
                 = subset(cross.national, sub_region_1 != "Buenos Aires"
                          & sub_region_1 != "Santiago Metropolitan Region"
                          & sub_region_1 != "Bogota"
                          & sub_region_1 != "Metropolitan Municipality of Lima")))

## Diff-in-Diff Controlling for Cumulative Deaths
diff_16 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                     data = subset(cross.national, sub_region_1 != "Buenos Aires"
                                   & sub_region_1 != "Santiago Metropolitan Region"
                                   & sub_region_1 != "Bogota"
                                   & sub_region_1 != "Metropolitan Municipality of Lima"),
                     cluster = sub_region_2)
fit_16 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = subset(cross.national, sub_region_1 != "Buenos Aires"
                           & sub_region_1 != "Santiago Metropolitan Region"
                           & sub_region_1 != "Bogota"
                           & sub_region_1 != "Metropolitan Municipality of Lima"))
vif_16 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases  + cumulative_deaths + I(date) + I(sub_region_1),
                 data = subset(cross.national, sub_region_1 != "Buenos Aires"
                               & sub_region_1 != "Santiago Metropolitan Region"
                               & sub_region_1 != "Bogota"
                               & sub_region_1 != "Metropolitan Municipality of Lima")))

## Diff-in-Diff Argentina
diff_17 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                     data = subset(cross.national, Country == "Argentina"
                                   & sub_region_1 != "Buenos Aires"),
                     cluster = sub_region_2)
fit_17 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = subset(cross.national, Country == "Argentina"
                           & sub_region_1 != "Buenos Aires"))
vif_17 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                 data = subset(cross.national, Country == "Argentina"
                               & sub_region_1 != "Buenos Aires")))

## Diff-in-Diff Chile
diff_18 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                     data = subset(cross.national, Country == "Chile"
                                   & sub_region_1 != "Santiago Metropolitan Region"),
```

```
                    cluster = sub_region_2)
fit_18 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = subset(cross.national, Country == "Chile"
                           & sub_region_1 != "Santiago Metropolitan Region"))
vif_18 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                 data = subset(cross.national, Country == "Chile"
                               & sub_region_1 != "Santiago Metropolitan Region")))

## Diff-in-Diff Colombia
diff_19 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                     data = subset(cross.national, Country == "Colombia"
                                   & sub_region_1 != "Bogota"), cluster = sub_region_2)
fit_19 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = subset(cross.national, Country == "Colombia"
                           & sub_region_1 != "Bogota"))
vif_19 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                 data = subset(cross.national, Country == "Colombia"
                               & sub_region_1 != "Bogota")))

## Diff-in-Diff Peru
diff_20 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date)
                     + I(sub_region_1), data
                     = subset(cross.national, Country == "Peru"
                              & sub_region_1 != "Metropolitan Municipality of Lima"),
                     cluster = sub_region_2)
fit_20 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = subset(cross.national, Country == "Peru"
                           & sub_region_1 != "Metropolitan Municipality of Lima"))
vif_20 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                 data = subset(cross.national, Country == "Peru"
                               & sub_region_1 != "Metropolitan Municipality of Lima")))

## Models Table
stargazer(fit_13, fit_14, fit_15, fit_16,
          se = starprep(diff_13, diff_14, diff_15, diff_16),
          type = "latex", header = FALSE, style = "ajps",
          title = "Effect of Poverty on Work Mobility Excluding Capitals I",
          dep.var.labels = "Mobility Change from Baseline",
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          column.labels = c("Model I", "Model II", "Model III", "Model IV"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths"),
          add.lines = list(c("Post-t", "WHO", "NPIs", "NPIs", "NPIs"),
                           c("Lagged cases", "No", "No", "Yes", "Yes"),
                           c("Lagged deaths", "No", "No", "No", "Yes"),
```

```
                        c("Day FE", "Yes", "Yes", "Yes", "Yes"),
                        c("Region FE", "Yes", "Yes", "Yes", "Yes"),
                        c("VIF", format(round(vif_13, digits = 3), nsmall = 3),
                          format(round(vif_14, digits = 3), nsmall = 3),
                          format(round(vif_15, digits = 3), nsmall = 3),
                          format(round(vif_16, digits = 3), nsmall = 3)),
                        c("Subsample", "No", "No", "No", "No"),
                        c("Exclusion", "Capital", "Capital", "Capital", "Capital")),
          covariate.labels = c("Poverty", "Post", "Poverty x Post"),
          notes = "Clustered standard errors by sub-national level in parentheses")
```

Table 6: Effect of Poverty on Work Mobility Excluding Capitals I

	Mobility Change from Baseline			
	Model I	**Model II**	**Model III**	**Model IV**
Poverty	−7.832***	−7.172***	−7.265***	−7.386***
	(2.255)	(2.302)	(2.301)	(2.331)
Post	−44.225***	−61.186***	−60.653***	−55.159***
	(0.666)	(0.823)	(0.848)	(0.771)
Poverty x Post	3.769***	3.958***	4.012***	3.919***
	(0.808)	(0.877)	(0.867)	(1.043)
Post-t	WHO	NPIs	NPIs	NPIs
Lagged cases	No	No	Yes	Yes
Lagged deaths	No	No	No	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	2.482	4.015	4.019	4.201
Subsample	No	No	No	No
Exclusion	Capital	Capital	Capital	Capital
N	31613	31613	31613	31613
R-squared	0.597	0.751	0.751	0.762
Adj. R-squared	0.596	0.750	0.751	0.761

***p $<$ .01; **p $<$ .05; *p $<$ .1
Clustered standard errors by sub-national level in parentheses

```
## Models Table
stargazer(fit_17, fit_18, fit_19, fit_20,
          se = starprep(diff_17, diff_18, diff_19, diff_20),
          type = "latex", header = FALSE, style = "ajps",
          title = "Effect of Poverty on Work Mobility Excluding Capitals II",
          dep.var.labels = "Mobility Change from Baseline",
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          column.labels = c("Model V", "Model VI", "Model VII", "Model VII"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths"),
          add.lines = list(c("Post-t", "NPIs", "NPIs", "NPIs", "NPIs"),
                           c("Lagged cases", "Yes", "Yes", "Yes", "Yes"),
                           c("Lagged deaths", "Yes", "Yes", "Yes", "Yes"),
                           c("Day FE", "Yes", "Yes", "Yes", "Yes"),
                           c("Region FE", "Yes", "Yes", "Yes", "Yes"),
```

```
                          c("VIF", format(round(vif_17, digits = 3), nsmall = 3),
                            format(round(vif_18, digits = 3), nsmall = 3),
                            format(round(vif_19, digits = 3), nsmall = 3),
                            format(round(vif_20, digits = 3), nsmall = 3)),
                          c("Subsample", "ARG", "CHL", "COL", "PER"),
                          c("Exclusion", "Capital", "Capital", "Capital", "Capital")),
          covariate.labels = c("Poverty", "Post", "Poverty x Post"),
          notes = "Clustered standard errors by sub-national level in parentheses")
```

Table 7: Effect of Poverty on Work Mobility Excluding Capitals II

	Mobility Change from Baseline			
	Model V	**Model VI**	**Model VII**	**Model VII**
Poverty	-5.022^{*}	0.853	0.418	16.124
	(2.714)	(5.084)	(2.823)	(610.051)
Post	-41.255^{***}	-21.681^{***}	-36.156^{***}	-27.502^{***}
	(0.909)	(1.265)	(0.767)	(1.439)
Poverty x Post	1.103	-4.082^{*}	1.947^{*}	0.302
	(1.017)	(2.203)	(1.176)	(1.852)
Post-t	NPIs	NPIs	NPIs	NPIs
Lagged cases	Yes	Yes	Yes	Yes
Lagged deaths	Yes	Yes	Yes	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	4.722	5.892	6.710	4.264
Subsample	ARG	CHL	COL	PER
Exclusion	Capital	Capital	Capital	Capital
N	14911	2566	9805	4331
R-squared	0.788	0.830	0.851	0.765
Adj. R-squared	0.788	0.829	0.851	0.764

$^{***}p < .01$; $^{**}p < .05$; $^{*}p < .1$
Clustered standard errors by sub-national level in parentheses

```
## Diff-in-Diff WHO Announcement
diff_21 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + income + debt + I(date) + I(sub_region_1), data = cs.baseline,
                     cluster = sub_region_2)
fit_21 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post + income
             + debt + I(date) + I(sub_region_1), data = cs.baseline)
vif_21 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + income + debt + I(date) + I(sub_region_1), data = cs.baseline))

## Diff-in-Diff First Interventions
diff_22 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + income + debt + I(date) + I(sub_region_1),
                     data = cross.national, cluster = sub_region_2)
fit_22 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + income + debt + I(date) + I(sub_region_1), data = cross.national)
vif_22 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + income + debt + I(date) + I(sub_region_1), data = cross.national))
```

```
## Diff-in-Diff Controlling for Cumulative Cases
diff_23 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + income + debt + I(date) + I(sub_region_1),
                     data = cross.national, cluster = sub_region_2)
fit_23 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + income + debt + I(date) + I(sub_region_1),
             data = cross.national)
vif_23 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + income + debt + I(date) + I(sub_region_1),
                 data = cross.national))

## Diff-in-Diff Controlling for Cumulative Deaths
diff_24 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + income + debt + I(date)
                     + I(sub_region_1), data = cross.national, cluster = sub_region_2)
fit_24 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + income + debt + I(date)
             + I(sub_region_1), data = cross.national)
vif_24 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases  + cumulative_deaths + income + debt + I(date)
                 + I(sub_region_1), data = cross.national))

## Diff-in-Diff Argentina
diff_25 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + income + debt
                     + I(date)+ I(sub_region_1), data
                     = subset(cross.national, Country == "Argentina"),
                     cluster = sub_region_2)
fit_25 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + income + debt + I(date)
             + I(sub_region_1), data = subset(cross.national, Country == "Argentina"))
vif_25 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + cumulative_deaths + income + debt + I(date)
                 + I(sub_region_1), data
                 = subset(cross.national, Country == "Argentina")))

## Diff-in-Diff Chile
diff_26 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + income + debt
                     + I(date)  + I(sub_region_1), data
                     = subset(cross.national, Country == "Chile"),
                     cluster = sub_region_2)
fit_26 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + income + debt + I(date)
             + I(sub_region_1), data = subset(cross.national, Country == "Chile"))
vif_26 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + cumulative_deaths + income + debt
                 + I(date) + I(sub_region_1), data
                 = subset(cross.national, Country == "Chile")))

## Diff-in-Diff Colombia
diff_27 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + income + debt
```

```
                    + I(date) + I(sub_region_1), data
                    = subset(cross.national, Country == "Colombia"),
                    cluster = sub_region_2)
fit_27 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
            + cumulative_cases + cumulative_deaths + income + debt+ I(date)
            + I(sub_region_1), data = subset(cross.national, Country == "Colombia"))
vif_27 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                + cumulative_cases + cumulative_deaths + income + debt + I(date)
                + I(sub_region_1), data
                = subset(cross.national, Country == "Colombia")))

## Diff-in-Diff Peru
diff_28 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                    + cumulative_cases + cumulative_deaths + income + debt
                    + I(date)  + I(sub_region_1), data
                    = subset(cross.national, Country == "Peru"),
                    cluster = sub_region_2)
fit_28 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
            + cumulative_cases + cumulative_deaths + income + debt + I(date)
            + I(sub_region_1), data = subset(cross.national, Country == "Peru"))
vif_28 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                + cumulative_cases + cumulative_deaths + income + debt
                + I(date)+ I(sub_region_1), data
                = subset(cross.national, Country == "Peru")))

## Models Table
stargazer(fit_21, fit_22, fit_23, fit_24,
          se = starprep(diff_21, diff_22, diff_23, diff_24),
          type = "latex", header = FALSE, style = "ajps",
          title = "Effect of Poverty on Work Mobility Considering Economic Measures I",
          dep.var.labels = "Mobility Change from Baseline",
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          column.labels = c("Model I", "Model II", "Model III", "Model IV"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths", "income", "debt"),
          add.lines = list(c("Post-t", "WHO", "NPIs", "NPIs", "NPIs"),
                           c("Lagged cases", "No", "No", "Yes", "Yes"),
                           c("Lagged deaths", "No", "No", "No", "Yes"),
                           c("Income support", "Yes", "Yes", "Yes", "Yes"),
                           c("Debt relief", "Yes", "Yes", "Yes", "Yes"),
                           c("Day FE", "Yes", "Yes", "Yes", "Yes"),
                           c("Region FE", "Yes", "Yes", "Yes", "Yes"),
                           c("VIF", format(round(vif_21, digits = 3), nsmall = 3),
                             format(round(vif_22, digits = 3), nsmall = 3),
                             format(round(vif_23, digits = 3), nsmall = 3),
                             format(round(vif_24, digits = 3), nsmall = 3)),
                           c("Subsample", "No", "No", "No", "No"),
                           c("Exclusion", "No", "No", "No", "No")),
          covariate.labels = c("Poverty", "Post", "Poverty x Post"),
          notes = "Clustered standard errors by sub-national level in parentheses")
```

Table 8: Effect of Poverty on Work Mobility Considering Economic Measures I

	Mobility Change from Baseline			
	Model I	**Model II**	**Model III**	**Model IV**
Poverty	−8.303***	−9.376***	−9.281***	−8.483***
	(2.272)	(2.297)	(2.297)	(2.307)
Post	−39.668***	−56.813***	−57.323***	−51.803***
	(0.778)	(0.903)	(0.895)	(0.870)
Poverty x Post	4.829***	5.390***	5.340***	4.866***
	(0.737)	(0.804)	(0.815)	(0.891)
Post-t	WHO	NPIs	NPIs	NPIs
Lagged cases	No	No	Yes	Yes
Lagged deaths	No	No	No	Yes
Income support	Yes	Yes	Yes	Yes
Debt relief	Yes	Yes	Yes	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	3.111	4.474	4.482	4.667
Subsample	No	No	No	No
Exclusion	No	No	No	No
N	33016	33016	33016	33016
R-squared	0.679	0.777	0.777	0.786
Adj. R-squared	0.678	0.776	0.776	0.785

***p < .01; **p < .05; *p < .1
Clustered standard errors by sub-national level in parentheses

```
## Models Table
stargazer(fit_25, fit_26, fit_27, fit_28,
          se = starprep(diff_25, diff_26, diff_27, diff_28),
          type = "latex", header = FALSE, style = "ajps",
          title = "Effect of Poverty on Work Mobility Considering Economic Measures II",
          dep.var.labels = "Mobility Change from Baseline",
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          column.labels = c("Model V", "Model VI", "Model VII", "Model VII"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths", "income", "debt"),
          add.lines = list(c("Post-t", "NPIs", "NPIs", "NPIs", "NPIs"),
                           c("Lagged cases", "Yes", "Yes", "Yes", "Yes"),
                           c("Lagged deaths", "Yes", "Yes", "Yes", "Yes"),
                           c("Income support", "Yes", "Yes", "Yes", "Yes"),
                           c("Debt relief", "Yes", "Yes", "Yes", "Yes"),
                           c("Day FE",  "Yes", "Yes", "Yes", "Yes"),
                           c("Region FE", "Yes", "Yes", "Yes", "Yes"),
                           c("VIF", format(round(vif_25, digits = 3), nsmall = 3),
                             format(round(vif_26, digits = 3), nsmall = 3),
                             format(round(vif_27, digits = 3), nsmall = 3),
                             format(round(vif_28, digits = 3), nsmall = 3)),
                           c("Subsample", "ARG", "CHL", "COL", "PER"),
                           c("Exclusion", "No", "No", "No", "No")),
          covariate.labels = c("Poverty", "Post", "Poverty x Post"),
```

```
          notes = "Clustered standard errors by sub-national level in parentheses")
```

Table 9: Effect of Poverty on Work Mobility Considering Economic Measures II

	Mobility Change from Baseline			
	Model V	**Model VI**	**Model VII**	**Model VII**
Poverty	20.560***	−0.450	0.328	16.618
	(2.274)	(5.088)	(2.954)	(365.301)
Post	−42.309***	−22.438***	−10.881***	−7.641***
	(0.966)	(1.129)	(0.610)	(1.314)
Poverty x Post	4.364***	−2.383	2.080*	1.128
	(1.148)	(2.140)	(1.180)	(1.954)
Post-t	NPIs	NPIs	NPIs	NPIs
Lagged cases	Yes	Yes	Yes	Yes
Lagged deaths	Yes	Yes	Yes	Yes
Income support	Yes	Yes	Yes	Yes
Debt relief	Yes	Yes	Yes	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	5.345	6.014	7.484	7.866
Subsample	ARG	CHL	COL	PER
Exclusion	No	No	No	No
N	15826	2932	9866	4392
R-squared	0.813	0.834	0.866	0.873
Adj. R-squared	0.813	0.833	0.866	0.872

***p < .01; **p < .05; *p < .1
Clustered standard errors by sub-national level in parentheses

Placebo Tests

```
## Placebo Data Frame
placebo.data <- bind_rows(placebo_ARG, placebo_CHL, placebo_COL, placebo_PER)
names(placebo.data)[2] = "Country"

## Codification Post Period
placebo.data$post <- ifelse(placebo.data$date > as.Date("2020-02-18"), 1, 0)
placebo.data$date <- as.Date(placebo.data$date)
placebo.data <- left_join(placebo.data, cross.national_cases,
                          by = c("Country" = "Country.Region", "date" = "lagged_date"))
placebo.data <- left_join(placebo.data, cross.national_deaths,
                          by = c("Country" = "Country.Region", "date" = "lagged_date"))

## Diff-in-Diff WHO Announcement
diff_29 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + I(date) + I(sub_region_1), data = placebo.data,
                     cluster = sub_region_2)
fit_29 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post + I(date)
             + I(sub_region_1), data = placebo.data)
vif_29 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
```

```
                + I(date) + I(sub_region_1), data = placebo.data))

## Diff-in-Diff First Interventions
diff_30 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + I(date) + I(sub_region_1), data = placebo.data,
                     cluster = sub_region_2)
fit_30 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + I(date) + I(sub_region_1), data = placebo.data)
vif_30 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + I(date) + I(sub_region_1), data = placebo.data))

## Diff-in-Diff Controlling for Cumulative Cases
diff_31 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + I(date) + I(sub_region_1),
                     data = placebo.data, cluster = sub_region_2)
fit_31 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + I(date) + I(sub_region_1), data = placebo.data)
vif_31 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + I(date) + I(sub_region_1), data = placebo.data))

## Diff-in-Diff Controlling for Cumulative Deaths
diff_32 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date)
                     + I(sub_region_1), data = placebo.data, cluster = sub_region_2)
fit_32 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = placebo.data)
vif_32 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases  + cumulative_deaths + I(date) + I(sub_region_1),
                 data = placebo.data))

## Diff-in-Diff Argentina
diff_33 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date)  + I(sub_region_1),
                     data = subset(placebo.data, Country == "Argentina"),
                     cluster = sub_region_2)
fit_33 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = subset(placebo.data, Country == "Argentina"))
vif_33 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                 data = subset(placebo.data, Country == "Argentina")))

## Diff-in-Diff Chile
diff_34 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                     data = subset(placebo.data, Country == "Chile"),
                     cluster = sub_region_2)
fit_34 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = subset(placebo.data, Country == "Chile"))
vif_34 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
```

```
                data = subset(placebo.data, Country == "Chile")))

## Diff-in-Diff Colombia
diff_35 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date)
                     + I(sub_region_1),
                     data = subset(placebo.data, Country == "Colombia"),
                     cluster = sub_region_2)
fit_35 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = subset(placebo.data, Country == "Colombia"))
vif_35 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                 data = subset(placebo.data, Country == "Colombia")))

## Diff-in-Diff Peru
diff_36 <- lm_robust(workplaces_percent_change_from_baseline ~ binary_poverty*post
                     + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                     data = subset(placebo.data, Country == "Peru"),
                     cluster = sub_region_2)
fit_36 <- lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
             + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
             data = subset(placebo.data, Country == "Peru"))
vif_36 <- VIF(lm(workplaces_percent_change_from_baseline ~ binary_poverty*post
                 + cumulative_cases + cumulative_deaths + I(date) + I(sub_region_1),
                 data = subset(placebo.data, Country == "Peru")))

## Models Table
stargazer(fit_29, fit_30, fit_31, fit_32,
          se = starprep(diff_29, diff_30, diff_31, diff_32),
          type = "latex", header = FALSE, style = "ajps",
          title = "Placebo on Work Mobility I",
          dep.var.labels = "Mobility Change from Baseline",
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          column.labels = c("Model I", "Model II", "Model III", "Model IV"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths"),
          add.lines = list(c("Post-t-1", "Placebo", "Placebo", "Placebo", "Placebo"),
                           c("Lagged cases", "No", "No", "Yes", "Yes"),
                           c("Lagged deaths", "No", "No", "No", "Yes"),
                           c("Day FE", "Yes", "Yes", "Yes", "Yes"),
                           c("Region FE", "Yes", "Yes", "Yes", "Yes"),
                           c("VIF", format(round(vif_29, digits = 3), nsmall = 3),
                             format(round(vif_30, digits = 3), nsmall = 3),
                             format(round(vif_31, digits = 3), nsmall = 3),
                             format(round(vif_32, digits = 3), nsmall = 3)),
                           c("Subsample", "No", "No", "No", "No"),
                           c("Exclusion", "No", "No", "No", "No")),
          covariate.labels = c("Poverty", "Post", "Poverty x Post"),
          notes = "Clustered standard errors by sub-national level in parentheses")
```

Table 10: Placebo on Work Mobility I

	Mobility Change from Baseline			
	Model I	**Model II**	**Model III**	**Model IV**
Poverty	5.639***	5.639***	5.780***	5.628***
	(1.429)	(1.429)	(1.424)	(1.425)
Post	−7.412***	−7.412***	−7.211***	−7.913***
	(0.410)	(0.410)	(0.421)	(0.450)
Poverty x Post	−0.337	−0.337	−0.375	−0.384
	(0.387)	(0.387)	(0.386)	(0.402)
Post-t-1	Placebo	Placebo	Placebo	Placebo
Lagged cases	No	No	Yes	Yes
Lagged deaths	No	No	No	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	1.253	1.253	1.253	1.272
Subsample	No	No	No	No
Exclusion	No	No	No	No
N	12284	12284	12284	12284
R-squared	0.202	0.202	0.202	0.214
Adj. R-squared	0.196	0.196	0.196	0.209

***p < .01; **p < .05; *p < .1
Clustered standard errors by sub-national level in parentheses

```
## Models Table
stargazer(fit_33, fit_34, fit_35, fit_36,
          se = starprep(diff_33, diff_34, diff_35, diff_36),
          type = "latex", header = FALSE, style = "ajps",
          title = "Placebo on Work Mobility II",
          dep.var.labels = "Mobility Change from Baseline",
          notes.align = "c", model.numbers = FALSE, omit.stat = c("f", "ser"),
          column.labels = c("Model V", "Model VI", "Model VII", "Model VII"),
          omit = c("Constant", "date", "sub_region_1", "cumulative_cases",
                   "cumulative_deaths"),
          add.lines = list(c("Post-t-1", "Placebo", "Placebo", "Placebo", "Placebo"),
                           c("Lagged cases", "Yes", "Yes", "Yes", "Yes"),
                           c("Lagged deaths", "Yes", "Yes", "Yes", "Yes"),
                           c("Day FE", "Yes", "Yes", "Yes", "Yes"),
                           c("Region FE", "Yes", "Yes", "Yes", "Yes"),
                           c("VIF", format(round(vif_33, digits = 3), nsmall = 3),
                             format(round(vif_34, digits = 3), nsmall = 3),
                             format(round(vif_35, digits = 3), nsmall = 3),
                             format(round(vif_36, digits = 3), nsmall = 3)),
                           c("Subsample", "ARG", "CHL", "COL", "PER"),
                           c("Exclusion", "No", "No", "No", "No")),
          covariate.labels = c("Poverty", "Post", "Poverty x Post"),
          notes = "Clustered standard errors by sub-national level in parentheses")
```

Table 11: Placebo on Work Mobility II

	Mobility Change from Baseline			
	Model V	**Model VI**	**Model VII**	**Model VII**
Poverty	9.068^{***}	-4.305	-2.386^{***}	4.514
	(0.928)	(2.905)	(0.787)	(465.787)
Post	-14.472^{***}	-5.384^{***}	-6.238^{***}	-2.011^{***}
	(0.567)	(0.622)	(0.648)	(0.436)
Poverty x Post	-0.292	0.955	1.170^{*}	0.144
	(0.534)	(0.767)	(0.700)	(0.568)
Post-t-1	Placebo	Placebo	Placebo	Placebo
Lagged cases	Yes	Yes	Yes	Yes
Lagged deaths	Yes	Yes	Yes	Yes
Day FE	Yes	Yes	Yes	Yes
Region FE	Yes	Yes	Yes	Yes
VIF	1.215	2.873	1.302	1.347
Subsample	ARG	CHL	COL	PER
Exclusion	No	No	No	No
N	6063	1175	3377	1669
R-squared	0.177	0.652	0.232	0.258
Adj. R-squared	0.174	0.646	0.226	0.245

$^{***}p < .01$; $^{**}p < .05$; $^{*}p < .1$
Clustered standard errors by sub-national level in parentheses