HuCon ISQ R Output

April 16, 2020

1 Load Data

```
## Clear the R environment
rm(list=ls())

## Load packages
library(foreign)
library(ggplot2)
library(scales)
library(dplyr)
library(plyr)
library(car)
library(stargazer)
library(lmtest)
library(sandwich)
library(stargazer)

## Cluster SE function
cl   <- function(dat,fm, cluster){
  require(sandwich, quietly = TRUE)
  require(lmtest, quietly = TRUE)
  M <- length(unique(cluster))
  N <- length(cluster)
  K <- fm$rank
  dfc <- (M/(M-1))*((N-1)/(N-K))
  uj  <- apply(estfun(fm),2, function(x) tapply(x, cluster, sum));
  vcovCL <- dfc*sandwich(fm, meat=crossprod(uj)/N)
  coeftest(fm, vcovCL) }

## Set working directory
setwd("/Users/shu8/Dropbox/ConHu Indian Police/Data/Imputation/New Code")

## Read csv data
police.data.save <- read.csv("HuCon_ISQ_Data.csv")

police.data <- read.csv("HuCon_ISQ_Data.csv")

## Delete DAMAN & DIU 2001
police.data <- police.data[-which(is.na(police.data$death_not_remanded)), ]

###############
###Table A1###
###############
stargazer(police.data, median = T)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:13
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
```

```
## \begin{tabular}{@{\extracolsep{5pt}}lccccccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
## Statistic & \multicolumn{1}{c}{N} & \multicolumn{1}{c}{Mean} & \multicolumn{1}{c}{St. Dev.} & \multicolumn{1}{c}{c
## \hline \\[-1.8ex]
## year & 562 & 2,008.548 & 4.619 & 2,001 & 2,005 & 2,009 & 2,013 & 2,016 \\
## death\_remanded & 562 & 1.018 & 2.873 & 0 & 0 & 0 & 1 & 42 \\
## death\_not\_remanded & 562 & 1.753 & 3.842 & 0 & 0 & 0 & 1.8 & 34 \\
## ssc & 562 & 0.454 & 0.498 & 0 & 0 & 0 & 1 & 1 \\
## dgp\_tenure & 562 & 0.372 & 0.484 & 0 & 0 & 0 & 1 & 1 \\
## o\_tenure & 562 & 0.527 & 0.500 & 0 & 0 & 1 & 1 & 1 \\
## invest\_law & 562 & 0.413 & 0.493 & 0 & 0 & 0 & 1 & 1 \\
## peb & 562 & 0.562 & 0.497 & 0 & 0 & 1 & 1 & 1 \\
## district\_pca & 562 & 0.208 & 0.406 & 0 & 0 & 0 & 0 & 1 \\
## state\_pca & 562 & 0.420 & 0.494 & 0 & 0 & 0 & 1 & 1 \\
## t & 562 & 0.053 & 0.225 & 0 & 0 & 0 & 0 & 1 \\
## sc\_order1 & 562 & 0.687 & 0.464 & 0 & 0 & 1 & 1 & 1 \\
## committee1 & 562 & 0.562 & 0.497 & 0 & 0 & 1 & 1 & 1 \\
## gdp & 515 & 202,532.000 & 291,377.500 & 1,082.000 & 16,971.500 & 88,550.000 & 262,539.000 & 2,188,532.000 \\
## religion2 & 562 & 0.904 & 0.295 & 0 & 1 & 1 & 1 & 1 \\
## head\_trans\_n & 544 & 13.994 & 36.718 & 0.000 & 0.000 & 6.000 & 14.000 & 394.000 \\
## p\_dist & 562 & 16.589 & 13.543 & 0 & 4 & 13 & 27 & 59 \\
## head\_trans & 543 & 0.761 & 1.856 & 0.000 & 0.000 & 0.389 & 0.750 & 25.500 \\
## pop & 524 & 29,444,650.000 & 36,967,703.000 & 60,650.000 & 1,097,968.000 & 13,850,507.000 & 52,850,562.000 & 16
## SHRC & 562 & 0.548 & 0.498 & 0 & 0 & 1 & 1 & 1 \\
## party\_match & 562 & 0.509 & 0.500 & 0 & 0 & 1 & 1 & 1 \\
## party\_match\_2006 & 562 & 0.463 & 0.499 & 0 & 0 & 0 & 1 & 1 \\
## literacy & 559 & 71.926 & 10.596 & 47.000 & 64.700 & 70.500 & 81.200 & 94.000 \\
## media\_women & 467 & 70.848 & 15.985 & 27.300 & 61.200 & 74.000 & 83.700 & 97.000 \\
## media\_men & 85 & 85.173 & 9.875 & 59.800 & 77.900 & 87.000 & 94.000 & 99.000 \\
## pca\_bind & 562 & 0.130 & 0.336 & 0 & 0 & 0 & 0 & 1 \\
## media\_women\_0 & 467 & 70.854 & 15.945 & 27.000 & 61.000 & 74.000 & 84.000 & 97.000 \\
## pca\_ind & 562 & 0.085 & 0.280 & 0 & 0 & 0 & 0 & 1 \\
## ngo & 527 & 0.053 & 0.155 & 0.000 & 0.004 & 0.013 & 0.020 & 0.971 \\
## event & 316 & 24.579 & 37.359 & 1.000 & 2.000 & 6.000 & 30.250 & 204.000 \\
## l.event & 562 & 12.336 & 27.921 & 0 & 0 & 1 & 6 & 180 \\
## \hline \\[-1.8ex]
## \end{tabular}
## \end{table}

###############
###Figure A1###
###############

## min max for death
min(police.data$death_remanded, na.rm = T)

## [1] 0

max(police.data$death_remanded, na.rm = T)

## [1] 42

min(police.data$death_not_remanded, na.rm = T)

## [1] 0

max(police.data$death_not_remanded, na.rm = T)

## [1] 34

sum(police.data$death_remanded == 0, na.rm = T)

## [1] 384
```

```r
sum(police.data$death_not_remanded == 0, na.rm = T)
```

```
## [1] 337
```

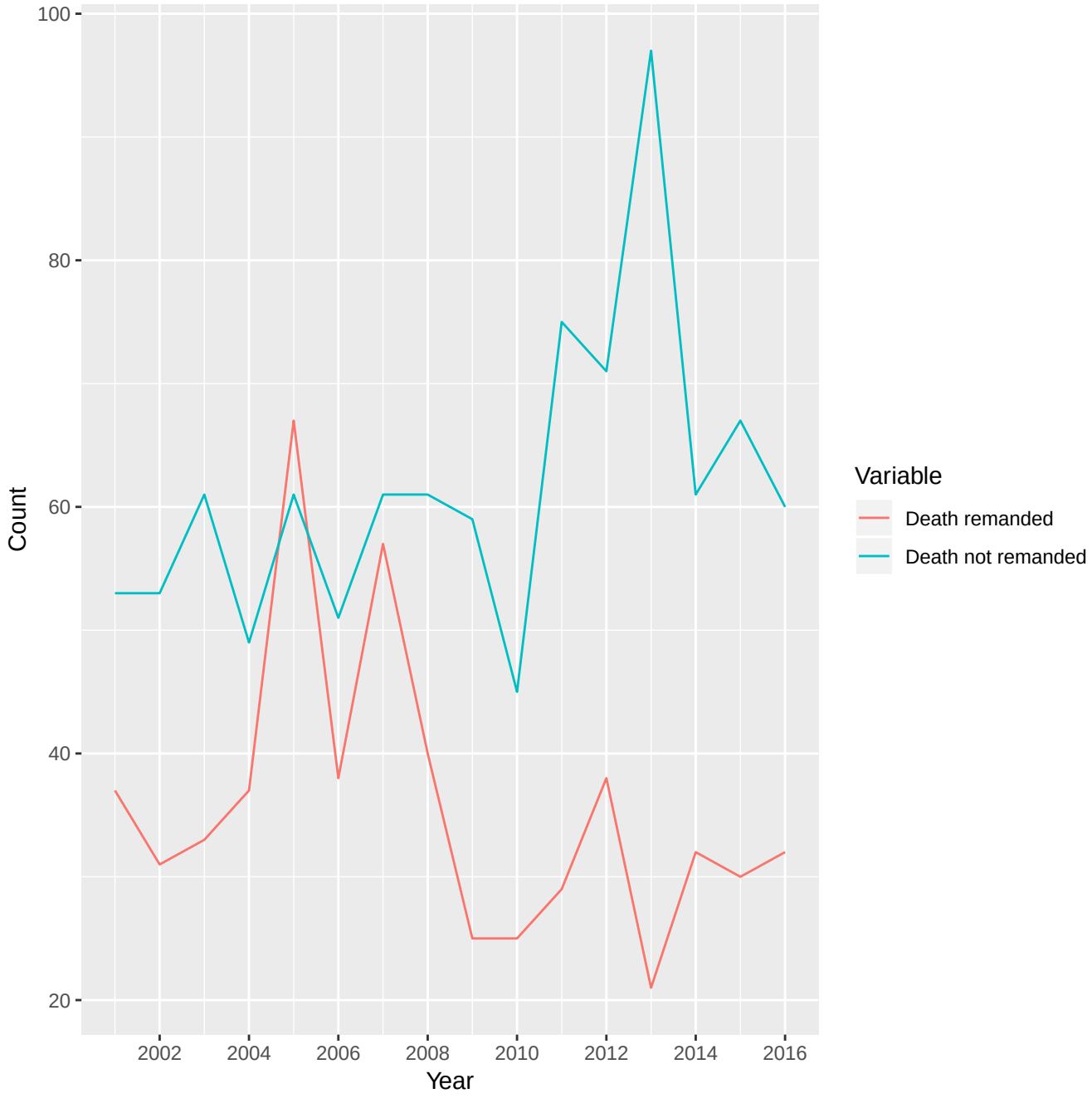
```r
library(plyr)
death.state <- ddply(police.data, .(state_ut), summarise, sum = sum(death_remanded))
death.state$not_remanded <- ddply(police.data, .(state_ut), summarise, sum = sum(death_not_remanded))

death.year <- ddply(police.data, .(year), summarise, sum = sum(death_remanded, na.rm = T))
death.year.not <- ddply(police.data, .(year), summarise, sum.not = sum(death_not_remanded, na.rm = T))

merge <- merge(death.year, death.year.not, by = "year")

library(reshape)
merge.long <- melt(merge, id = "year")
names(merge.long)[2]<-"Variable"
f.a1 <- ggplot(merge.long, aes(year, value, colour = Variable)) + geom_line() + scale_x_continuous(breaks = c(2002


f.a1
```



```r
ggsave("death_time.pdf", f.a1, width = 6, height = 4)

##############
###Table A3###
##############
police.data.2006.all <- subset(police.data, year <= 2006)

death.state.2006.all <- ddply(police.data.2006.all, .(state_ut), summarise, remanded.2006.all = sum(death_remanded
death.state.not.2006.all <- ddply(police.data.2006.all, .(state_ut), summarise, notremanded.2006.all = sum(death_r

death.state.2006.all$notremanded.2006.all <- death.state.not.2006.all$notremanded.2006.all

death.state.2006.all
```

```
##              state_ut remanded.2006.all notremanded.2006.all
## 1      ANDHRA PRADESH                76                   45
## 2  ARUNACHAL PRADESH                 3                    1
## 3               ASSAM                10                    2
## 4               BIHAR                 2                    1
## 5        CHHATTISGARH                10                    4
## 6                 GOA                 1                    1
## 7             GUJARAT                28                   35
## 8             HARYANA                 1                    5
## 9   HIMACHAL PRADESH                 5                    0
## 10   JAMMU & KASHMIR                 1                    1
## 11          JHARKHAND                 0                    0
## 12          KARNATAKA                 2                    6
## 13             KERALA                 0                    7
## 14     MADHYA PRADESH                 6                    6
## 15        MAHARASHTRA                46                   68
## 16            MANIPUR                 0                    1
## 17          MEGHALAYA                 2                    0
## 18            MIZORAM                 5                    6
## 19           NAGALAND                 0                    0
## 20             ORISSA                 0                    4
## 21             PUNJAB                 6                    5
## 22          RAJASTHAN                 7                   18
## 23             SIKKIM                 0                    0
## 24         TAMIL NADU                 2                   29
## 25            TRIPURA                 0                    4
## 26     UTTAR PRADESH                11                   24
## 27       UTTARAKHAND                 1                    0
## 28       WEST BENGAL                18                   52
## 29    Z A & N ISLANDS                 0                    0
## 30      Z CHANDIGARH                 0                    0
## 31     Z D & N HAVELI                 0                    0
## 32      Z DAMAN & DIU                 0                    0
## 33            Z DELHI                 0                    3
## 34     Z LAKSHADWEEP                 0                    0
## 35      Z PUDUCHERRY                 0                    0
```

```r
##############
###Table A4###
##############
police.data.2006 <- subset(police.data, year == 2006)

death.state.2006 <- ddply(police.data.2006, .(state_ut), summarise, remanded.2006 = sum(death_remanded, na.rm = T)
death.state.not.2006 <- ddply(police.data.2006, .(state_ut), summarise, notremanded.2006 = sum(death_not_remanded,

death.state.2006$notremanded.2006 <- death.state.not.2006$notremanded.2006

death.state.2006
```

```
##              state_ut remanded.2006 notremanded.2006
```

```
## 1      ANDHRA PRADESH            17               11
## 2  ARUNACHAL PRADESH             0                0
## 3               ASSAM            0                0
## 4               BIHAR            0                0
## 5        CHHATTISGARH            0                1
## 6                 GOA            0                0
## 7             GUJARAT            1                7
## 8             HARYANA            0                1
## 9   HIMACHAL PRADESH             0                0
## 10   JAMMU & KASHMIR             1                0
## 11          JHARKHAND            0                0
## 12         KARNATAKA             0                2
## 13            KERALA             0                1
## 14     MADHYA PRADESH            1                1
## 15        MAHARASHTRA            9                9
## 16           MANIPUR             0                0
## 17         MEGHALAYA             0                0
## 18           MIZORAM             0                0
## 19          NAGALAND             0                0
## 20            ORISSA             0                0
## 21            PUNJAB             0                0
## 22         RAJASTHAN             2                2
## 23            SIKKIM             0                0
## 24        TAMIL NADU             2                4
## 25           TRIPURA             0                1
## 26     UTTAR PRADESH             0                6
## 27       UTTARAKHAND             1                0
## 28       WEST BENGAL             4                4
## 29    Z A & N ISLANDS            0                0
## 30      Z CHANDIGARH             0                0
## 31     Z D & N HAVELI            0                0
## 32      Z DAMAN & DIU            0                0
## 33           Z DELHI             0                1
## 34     Z LAKSHADWEEP             0                0
## 35      Z PUDUCHERRY             0                0

################
## Imputation ##
################
## Because Multiple Imputation is a random process, results are slightly different every time
## Load data
police.imp <- police.data.save[,  c("state_ut", "year", "death_remanded", "death_not_remanded", "state_pca", "dist
                                  "gdp", "religion2", "head_trans")]

## Load Aelia and Zelig
library("Amelia")
library("Zelig")

## AmeliaView()

## Multiple imputation with settings below
bds.3 <- c(3, 0, 100)
bds.4 <- c(4, 0, 100)
bds.12 <- c(12, 0, 50)
bds <- rbind(bds.3, bds.4, bds.12)

a.out <- amelia(police.imp, m = 5, idvars = "type",
                ts = "year", cs = "state_ut", priors = NULL, lags = "gdp",
                empri = 0, intercs = TRUE, leads = "gdp", splinetime = 0,
                logs = c("gdp", "head_trans"), sqrts = NULL,
                lgstc = NULL, ords = NULL, noms = c("state_pca", "district_pca",
                                                    "sc_order1", "committee1", "religion2"), bounds = bds, max.res
                tolerance = 1e-04)
```

```
## -- Imputation 1 --
##
##   1  2  3  4  5  6  7  8  9 10
##
## -- Imputation 2 --
##
##   1  2  3  4  5  6  7  8  9 10
##
## -- Imputation 3 --
##
##   1  2  3  4  5  6  7  8  9 10 11
##
## -- Imputation 4 --
##
##   1  2  3  4  5  6  7  8  9 10
##
## -- Imputation 5 --
##
##   1  2  3  4  5  6  7  8  9 10 11 12 13 14 15

#write.amelia(obj = a.out, file.stem = "outdata")
```

```
#############
###Table 1###
#############

police.data.t1 <- police.data[ ,c("death_not_remanded", "death_remanded", "state_ut", "year", "state_pca", "t")]

police.data.t1 <- na.omit(police.data.t1)

## Lagged state_pca
police.data.t1 <- ddply(police.data.t1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

## fill NA with 0
police.data.t1$l.state_pca <- ifelse(is.na(police.data.t1$l.state_pca), 0, police.data.t1$l.state_pca)

## Table 1 model
model.poisson.t1 <- glm(death_not_remanded ~ 1 + l.state_pca  + state_ut + as.factor(year), data = police.data.t1,

model.poisson.t1.cl <- cl(police.data.t1, model.poisson.t1 , police.data.t1$state_ut)

stargazer(model.poisson.t1.cl)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
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## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] &   \\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$0.597$^{***}$ \\
##   & (0.164) \\
##   & \\
##  state\_utARUNACHAL PRADESH  & $-$3.510$^{***}$ \\
##   & (0.064) \\
##   & \\
```

```
##  state\_utASSAM & $-$3.105$^{***}$ \\
##   & (0.064) \\
##   & \\
##  state\_utBIHAR  & $-$2.948$^{***}$ \\
##   & (0.031) \\
##   & \\
##  state\_utCHHATTISGARH  & $-$1.496$^{***}$ \\
##   & (0.064) \\
##   & \\
##  state\_utGOA & $-$3.105$^{***}$ \\
##   & (0.064) \\
##   & \\
##  state\_utGUJARAT  & 0.613$^{***}$ \\
##   & (0.056) \\
##   & \\
##  state\_utHARYANA  & $-$1.841$^{***}$ \\
##   & (0.056) \\
##   & \\
##  state\_utHIMACHAL PRADESH  & $-$20.055$^{***}$ \\
##   & (1.064) \\
##   & \\
##  state\_utJAMMU & KASHMIR  & $-$2.766$^{***}$ \\
##   & (0.031) \\
##   & \\
##  state\_utJHARKHAND & $-$2.817$^{***}$ \\
##   & (0.064) \\
##   & \\
##  state\_utKARNATAKA  & $-$1.823$^{***}$ \\
##   & (0.016) \\
##   & \\
##  state\_utKERALA  & $-$1.719$^{***}$ \\
##   & (0.064) \\
##   & \\
##  state\_utMADHYA PRADESH & $-$0.646$^{***}$ \\
##   & (0.031) \\
##   & \\
##  state\_utMAHARASHTRA & 1.091$^{***}$ \\
##   & (0.009) \\
##   & \\
##  state\_utMANIPUR  & $-$3.510$^{***}$ \\
##   & (0.064) \\
##   & \\
##  state\_utMEGHALAYA  & $-$4.347$^{***}$ \\
##   & (0.024) \\
##   & \\
##  state\_utMIZORAM  & $-$1.862$^{***}$ \\
##   & (0.024) \\
##   & \\
##  state\_utNAGALAND  & $-$2.594$^{***}$ \\
##   & (0.064) \\
##   & \\
##  state\_utORISSA  & $-$1.639$^{***}$ \\
##   & (0.064) \\
##   & \\
##  state\_utPUNJAB  & $-$0.871$^{***}$ \\
##   & (0.056) \\
##   & \\
##  state\_utRAJASTHAN  & $-$0.707$^{***}$ \\
##   & (0.064) \\
##   & \\
##  state\_utSIKKIM  & $-$19.749$^{***}$ \\
##   & (1.065) \\
```

```
##   & \\
##  state\_utTAMIL NADU  & $-$0.099$^{***}$ \\
##   & (0.000) \\
##   & \\
##  state\_utTELANGANA & $-$1.347$^{***}$ \\
##   & (0.111) \\
##   & \\
##  state\_utTRIPURA  & $-$2.665$^{***}$ \\
##   & (0.046) \\
##   & \\
##  state\_utUTTAR PRADESH  & 0.187$^{***}$ \\
##   & (0.031) \\
##   & \\
##  state\_utUTTARAKHAND  & $-$19.749$^{***}$ \\
##   & (1.065) \\
##   & \\
##  state\_utWEST BENGAL  & 0.055 \\
##   & (0.037) \\
##   & \\
##  state\_utZ A & N ISLANDS & $-$19.822$^{***}$ \\
##   & (1.064) \\
##   & \\
##  state\_utZ CHANDIGARH  & $-$3.203$^{***}$ \\
##   & (0.037) \\
##   & \\
##  state\_utZ D & N HAVELI & $-$4.302$^{***}$ \\
##   & (0.037) \\
##   & \\
##  state\_utZ DAMAN & DIU & $-$19.824$^{***}$ \\
##   & (1.064) \\
##   & \\
##  state\_utZ DELHI  & $-$2.737$^{***}$ \\
##   & (0.024) \\
##   & \\
##  state\_utZ LAKSHADWEEP  & $-$19.822$^{***}$ \\
##   & (1.064) \\
##   & \\
##  state\_utZ PUDUCHERRY  & $-$4.302$^{***}$ \\
##   & (0.037) \\
##   & \\
##  as.factor(year)2002 & $-$0.000 \\
##   & (0.197) \\
##   & \\
##  as.factor(year)2003 & 0.141 \\
##   & (0.194) \\
##   & \\
##  as.factor(year)2004 & $-$0.078 \\
##   & (0.230) \\
##   & \\
##  as.factor(year)2005 & 0.141 \\
##   & (0.235) \\
##   & \\
##  as.factor(year)2006 & $-$0.038 \\
##   & (0.218) \\
##   & \\
##  as.factor(year)2007 & 0.141 \\
##   & (0.312) \\
##   & \\
##  as.factor(year)2008 & 0.193 \\
##   & (0.333) \\
##   & \\
##  as.factor(year)2009 & 0.259 \\
```

```
##   & (0.296) \\
##   & \\
##  as.factor(year)2010 & $-$0.009 \\
##   & (0.362) \\
##   & \\
##  as.factor(year)2011 & 0.552$^{*}$ \\
##   & (0.322) \\
##   & \\
##  as.factor(year)2012 & 0.508 \\
##   & (0.343) \\
##   & \\
##  as.factor(year)2013 & 0.828$^{***}$ \\
##   & (0.302) \\
##   & \\
##  as.factor(year)2014 & 0.427$^{*}$ \\
##   & (0.239) \\
##   & \\
##  as.factor(year)2015 & 0.680$^{***}$ \\
##   & (0.252) \\
##   & \\
##  as.factor(year)2016 & 0.570$^{**}$ \\
##   & (0.288) \\
##   & \\
##  Constant & 1.476$^{***}$ \\
##   & (0.218) \\
##   & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
## predict death count if all PCAs are inplemented on time
police.imp.p <- police.data.t1
police.imp.p$l.state_pca <- ifelse(police.imp.p$year >= 2008, 1, 0)
Y <- predict(model.poisson.t1, police.imp.p, type="response")

sum(Y)

## [1] 814.1231

sum(police.data.t1$death_not_remanded)-sum(Y)

## [1] 170.8769

## predict death count if no PCA is inplemented.
police.imp.p <- police.data.t1
police.imp.p$l.state_pca <- 0
Y.2 <- predict(model.poisson.t1, police.imp.p, type="response")

sum(Y.2)

## [1] 1161.496

sum(Y.2)-sum(police.data.t1$death_not_remanded)

## [1] 176.4961

###############
###Figure 1###
###############

## Lagged state_pca
```

```
police.data.f1 <- ddply(police.data.t1, .(state_ut), transform, tm1 = lead(t))
police.data.f1 <- ddply(police.data.f1, .(state_ut), transform, tm2 = lead(tm1))
police.data.f1 <- ddply(police.data.f1, .(state_ut), transform, tm3 = lead(tm2))
police.data.f1 <- ddply(police.data.f1, .(state_ut), transform, tm4 = lead(tm3))

police.data.f1 <- ddply(police.data.f1, .(state_ut), transform, tp1 = lag(t))
police.data.f1 <- ddply(police.data.f1, .(state_ut), transform, tp2 = lag(tp1))
police.data.f1 <- ddply(police.data.f1, .(state_ut), transform, tp3 = lag(tp2))
police.data.f1 <- ddply(police.data.f1, .(state_ut), transform, tp4 = lag(tp3))

police.data.f1[is.na(police.data.f1)] <- 0

## Poisson Placebo Test
model.poisson.plb <- glm(death_not_remanded ~ 1 + tm3 + tm2 + tm1 + t + tp1 + tp2 + tp3 + state_ut + as.factor(yea

model.poisson.plb.cl <- cl(police.data.f1, model.poisson.plb, police.data.f1$state_ut)

stargazer(model.poisson.plb.cl)

##
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## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] &   \\
## \hline \\[-1.8ex]
##  tm3 & 0.246 \\
##   & (0.177) \\
##   & \\
##  tm2 & $-$0.055 \\
##   & (0.194) \\
##   & \\
##  tm1 & 0.064 \\
##   & (0.182) \\
##   & \\
##  t & 0.034 \\
##   & (0.238) \\
##   & \\
##  tp1 & $-$0.456$^{**}$ \\
##   & (0.210) \\
##   & \\
##  tp2 & $-$0.495$^{***}$ \\
##   & (0.127) \\
##   & \\
##  tp3 & $-$0.501$^{*}$ \\
##   & (0.272) \\
##   & \\
##  state\_utARUNACHAL PRADESH  & $-$3.762$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utASSAM & $-$3.357$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utBIHAR  & $-$2.898$^{***}$ \\
##   & (0.058) \\
##   & \\
##  state\_utCHHATTISGARH  & $-$1.747$^{***}$ \\
```
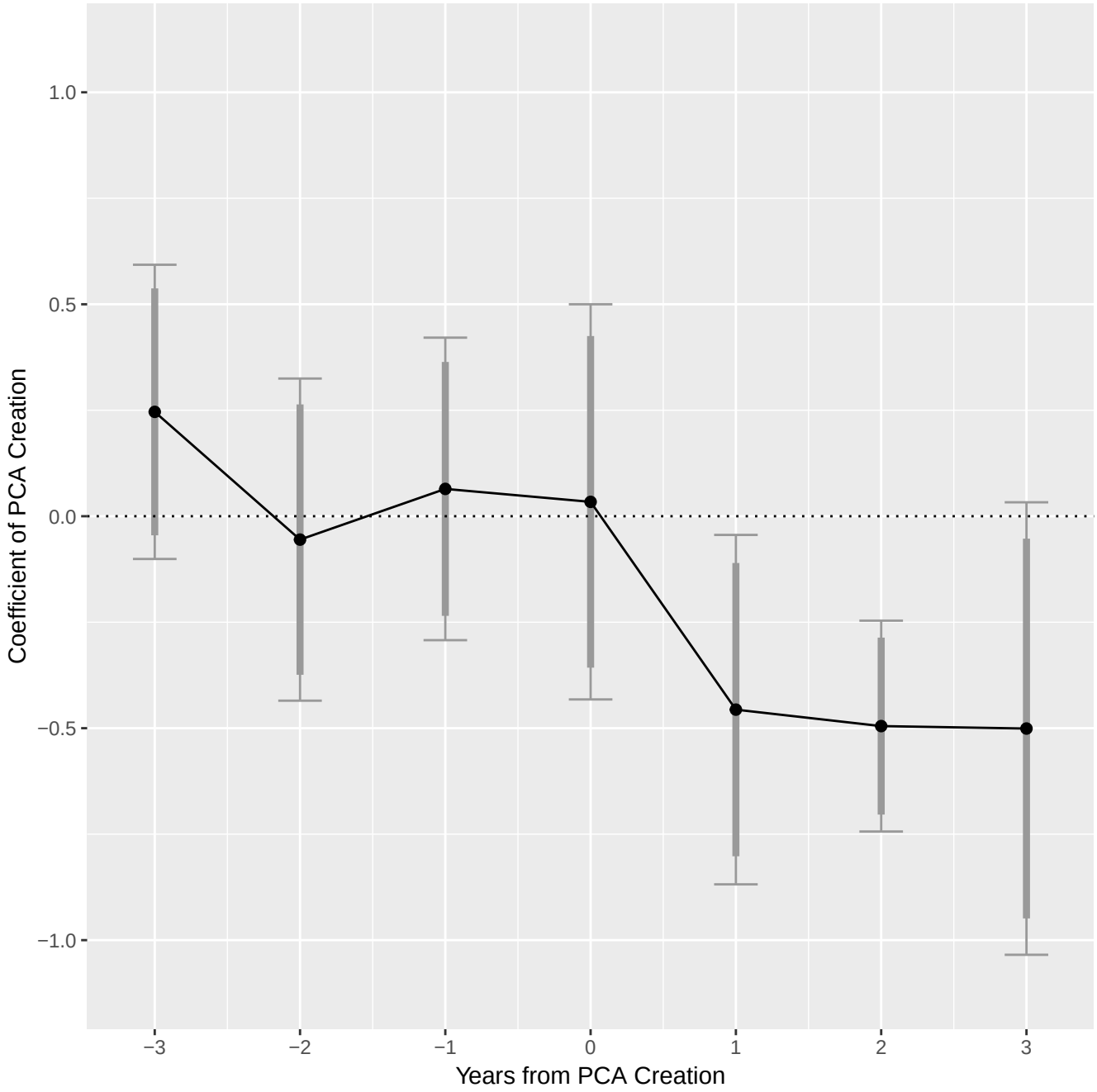

```
##   & (0.019) \\
##   & \\
##  state\_utGOA & $-$3.357$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utGUJARAT  & 0.399$^{***}$ \\
##   & (0.017) \\
##   & \\
##  state\_utHARYANA  & $-$2.055$^{***}$ \\
##   & (0.017) \\
##   & \\
##  state\_utHIMACHAL PRADESH  & $-$20.020$^{***}$ \\
##   & (1.072) \\
##   & \\
##  state\_utJAMMU & KASHMIR  & $-$2.715$^{***}$ \\
##   & (0.058) \\
##   & \\
##  state\_utJHARKHAND & $-$3.069$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utKARNATAKA  & $-$1.873$^{***}$ \\
##   & (0.007) \\
##   & \\
##  state\_utKERALA  & $-$1.970$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utMADHYA PRADESH & $-$0.595$^{***}$ \\
##   & (0.058) \\
##   & \\
##  state\_utMAHARASHTRA & 1.090$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utMANIPUR  & $-$3.762$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utMEGHALAYA  & $-$4.435$^{***}$ \\
##   & (0.014) \\
##   & \\
##  state\_utMIZORAM  & $-$1.950$^{***}$ \\
##   & (0.014) \\
##   & \\
##  state\_utNAGALAND  & $-$2.846$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utORISSA  & $-$1.890$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utPUNJAB  & $-$1.086$^{***}$ \\
##   & (0.017) \\
##   & \\
##  state\_utRAJASTHAN  & $-$0.959$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utSIKKIM  & $-$19.950$^{***}$ \\
##   & (1.070) \\
##   & \\
##  state\_utTAMIL NADU  & $-$0.099$^{***}$ \\
##   & (0.000) \\
##   & \\
##  state\_utTELANGANA & $-$1.139$^{***}$ \\
##   & (0.110) \\
##   & \\
```

```
##  state\_utTRIPURA  & $-$2.837$^{***}$ \\
##   & (0.018) \\
##   & \\
##  state\_utUTTAR PRADESH  & 0.238$^{***}$ \\
##   & (0.058) \\
##   & \\
##  state\_utUTTARAKHAND  & $-$19.950$^{***}$ \\
##   & (1.070) \\
##   & \\
##  state\_utWEST BENGAL  & $-$0.071$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utZ A & N ISLANDS & $-$19.945$^{***}$ \\
##   & (1.070) \\
##   & \\
##  state\_utZ CHANDIGARH  & $-$3.329$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utZ D & N HAVELI & $-$4.428$^{***}$ \\
##   & (0.019) \\
##   & \\
##  state\_utZ DAMAN & DIU & $-$19.951$^{***}$ \\
##   & (1.070) \\
##   & \\
##  state\_utZ DELHI  & $-$2.825$^{***}$ \\
##   & (0.014) \\
##   & \\
##  state\_utZ LAKSHADWEEP  & $-$19.945$^{***}$ \\
##   & (1.070) \\
##   & \\
##  state\_utZ PUDUCHERRY  & $-$4.428$^{***}$ \\
##   & (0.019) \\
##   & \\
##  as.factor(year)2002 & 0.000 \\
##   & (0.198) \\
##   & \\
##  as.factor(year)2003 & 0.141 \\
##   & (0.195) \\
##   & \\
##  as.factor(year)2004 & $-$0.105 \\
##   & (0.229) \\
##   & \\
##  as.factor(year)2005 & 0.098 \\
##   & (0.240) \\
##   & \\
##  as.factor(year)2006 & $-$0.037 \\
##   & (0.228) \\
##   & \\
##  as.factor(year)2007 & 0.102 \\
##   & (0.325) \\
##   & \\
##  as.factor(year)2008 & 0.169 \\
##   & (0.332) \\
##   & \\
##  as.factor(year)2009 & 0.204 \\
##   & (0.286) \\
##   & \\
##  as.factor(year)2010 & $-$0.106 \\
##   & (0.380) \\
##   & \\
##  as.factor(year)2011 & 0.384 \\
##   & (0.283) \\
```

```
##   & \\
##  as.factor(year)2012 & 0.339 \\
##   & (0.337) \\
##   & \\
##  as.factor(year)2013 & 0.628$^{**}$ \\
##   & (0.272) \\
##   & \\
##  as.factor(year)2014 & 0.179 \\
##   & (0.253) \\
##   & \\
##  as.factor(year)2015 & 0.385 \\
##   & (0.279) \\
##   & \\
##  as.factor(year)2016 & 0.276 \\
##   & (0.306) \\
##   & \\
##  Constant & 1.549$^{***}$ \\
##   & (0.225) \\
##   & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}

## Overdispersion test
library(AER)

dispersiontest(model.poisson.plb,trafo=1)

##
##  Overdispersion test
##
## data:  model.poisson.plb
## z = 3.3043, p-value = 0.0004761
## alternative hypothesis: true alpha is greater than 0
## sample estimates:
##     alpha
## 0.2404726

## Graph Placebo Test Figure 3
## Save Ts Poisson result
graph.f1 <- as.data.frame(model.poisson.plb.cl[2:8, ])
graph.f1$time <- c(-3,-2,-1,0,1,2,3)

## Calculate CIs
graph.f1$ci.l <- graph.f1[, 1] - qnorm(0.975)*graph.f1[, 2]
graph.f1$ci.u <- graph.f1[, 1] + qnorm(0.975)*graph.f1[, 2]

graph.f1$ci.l.90 <- graph.f1[, 1] - qnorm(0.95)*graph.f1[, 2]
graph.f1$ci.u.90 <- graph.f1[, 1] + qnorm(0.95)*graph.f1[, 2]

## Plot
p.placebo <- ggplot(graph.f1, aes(time, Estimate))+
  #geom_ribbon(aes(ymin=ci.l,ymax=ci.u),alpha=0.3)+
  geom_errorbar(aes(ymin=ci.l,ymax=ci.u),width=0.3, color = "#999999")+
  #geom_errorbar(aes(ymin=ci.l.90,ymax=ci.u.90),width=0.1, color = "#999999")+
  geom_pointrange(aes(ymin=ci.l.90,ymax=ci.u.90),size=1.5, shape = 46, color = "#999999")+
  geom_point(size = 2)+
  geom_line()+
  ylim(-1.1, 1.1)+
  xlab("Years from PCA Creation")+
```

```
  ylab("Coefficient of PCA Creation")+
  #geom_line(aes(y=ci.l))+
  #geom_line(aes(y=ci.u))+
  #geom_line(aes(y=ci.l.90), linetype = "dashed")+
  # geom_line(aes(y=ci.u.90), linetype = "dashed")+
  geom_hline(yintercept = 0, linetype = "dotted")+
  scale_x_continuous(breaks = c(-3, -2, -1, 0, 1, 2, 3))

p.placebo
```




```
ggsave("p_placebo_good_2016.pdf", plot = p.placebo, height = 4.5, width = 4.5)

##############
###Table 2###
##############

## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
```

```
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:4, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:4, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t2 <- matrix(NA, nrow = 3, ncol = 3)
for (i in 1:3){
  result.t2[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

## T2 results
## Row: State PCA, State Capacity, and State Desire
## Column: Effect, SE, P value
result.t2

##             [,1]       [,2]         [,3]
## [1,] -0.57451468 0.15703171 0.0002536065
## [2,]  0.19645156 0.27244217 0.4708626468
## [3,] -0.02770704 0.03577532 0.4386507530

##############
###Table 3###
##############
## Add SHRC to police data
```

```r
police.data.t1$SHRC <- police.data$SHRC

## Lagged SHRC
police.data.t1 <- ddply(police.data.t1, .(state_ut), transform, l.SHRC = c(NA, SHRC[-length(SHRC)]))

## Fill NA with 0
police.data.t1$l.SHRC <- ifelse(is.na(police.data.t1$l.SHRC), 0, police.data.t1$l.SHRC)

## Correlation check
cor.test(police.data.t1$state_pca, police.data.t1$SHRC)

##
##  Pearson's product-moment correlation
##
## data:  police.data.t1$state_pca and police.data.t1$SHRC
## t = 1.4878, df = 560, p-value = 0.1374
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  -0.02006532  0.14470438
## sample estimates:
##       cor
## 0.06274708

## Model with SHRC
model.poisson.SHRC <- glm(death_not_remanded ~ 1 + l.SHRC + state_ut + as.factor(year), data = police.data.t1, fam

model.poisson.SHRC.cl <- cl(police.data.t1, model.poisson.SHRC, police.data.t1$state_ut)

stargazer(model.poisson.SHRC.cl)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:18
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] &   \\
## \hline \\[-1.8ex]
##  l.SHRC & 0.046 \\
##   & (0.348) \\
##   & \\
##  state\_utARUNACHAL PRADESH  & $-$3.719$^{***}$ \\
##   & (0.232) \\
##   & \\
##  state\_utASSAM & $-$3.357$^{***}$ \\
##   & (0.096) \\
##   & \\
##  state\_utBIHAR  & $-$2.846$^{***}$ \\
##   & (0.096) \\
##   & \\
##  state\_utCHHATTISGARH  & $-$1.747$^{***}$ \\
##   & (0.096) \\
##   & \\
##  state\_utGOA & $-$3.330$^{***}$ \\
##   & (0.105) \\
##   & \\
##  state\_utGUJARAT  & 0.409$^{***}$ \\
##   & (0.000) \\
```

```
##   & \\
##  state\_utHARYANA  & $-$2.027$^{***}$ \\
##   & (0.130) \\
##   & \\
##  state\_utHIMACHAL PRADESH  & $-$19.969$^{***}$ \\
##   & (1.068) \\
##   & \\
##  state\_utJAMMU & KASHMIR  & $-$2.664$^{***}$ \\
##   & (0.096) \\
##   & \\
##  state\_utJHARKHAND & $-$3.046$^{***}$ \\
##   & (0.079) \\
##   & \\
##  state\_utKARNATAKA  & $-$1.880$^{***}$ \\
##   & (0.018) \\
##   & \\
##  state\_utKERALA  & $-$1.971$^{***}$ \\
##   & (0.096) \\
##   & \\
##  state\_utMADHYA PRADESH & $-$0.543$^{***}$ \\
##   & (0.096) \\
##   & \\
##  state\_utMAHARASHTRA & 1.113$^{***}$ \\
##   & (0.096) \\
##   & \\
##  state\_utMANIPUR  & $-$3.757$^{***}$ \\
##   & (0.056) \\
##   & \\
##  state\_utMEGHALAYA  & $-$4.421$^{***}$ \\
##   & (0.165) \\
##   & \\
##  state\_utMIZORAM  & $-$1.927$^{***}$ \\
##   & (0.232) \\
##   & \\
##  state\_utNAGALAND  & $-$2.803$^{***}$ \\
##   & (0.232) \\
##   & \\
##  state\_utORISSA  & $-$1.890$^{***}$ \\
##   & (0.096) \\
##   & \\
##  state\_utPUNJAB  & $-$1.088$^{***}$ \\
##   & (0.096) \\
##   & \\
##  state\_utRAJASTHAN  & $-$0.959$^{***}$ \\
##   & (0.096) \\
##   & \\
##  state\_utSIKKIM  & $-$19.949$^{***}$ \\
##   & (1.065) \\
##   & \\
##  state\_utTAMIL NADU  & $-$0.112 \\
##   & (0.096) \\
##   & \\
##  state\_utTELANGANA & $-$0.932$^{***}$ \\
##   & (0.269) \\
##   & \\
##  state\_utTRIPURA  & $-$2.805$^{***}$ \\
##   & (0.210) \\
##   & \\
##  state\_utUTTAR PRADESH  & 0.292$^{***}$ \\
##   & (0.078) \\
##   & \\
##  state\_utUTTARAKHAND  & $-$19.935$^{***}$ \\
```

```
##   & (1.076) \\
##   & \\
##  state\_utWEST BENGAL  & $-$0.099 \\
##   & (0.096) \\
##   & \\
##  state\_utZ A & N ISLANDS & $-$19.926$^{***}$ \\
##   & (1.089) \\
##   & \\
##  state\_utZ CHANDIGARH  & $-$3.313$^{***}$ \\
##   & (0.232) \\
##   & \\
##  state\_utZ D & N HAVELI & $-$4.412$^{***}$ \\
##   & (0.232) \\
##   & \\
##  state\_utZ DAMAN & DIU & $-$19.931$^{***}$ \\
##   & (1.093) \\
##   & \\
##  state\_utZ DELHI  & $-$2.803$^{***}$ \\
##   & (0.232) \\
##   & \\
##  state\_utZ LAKSHADWEEP  & $-$19.926$^{***}$ \\
##   & (1.089) \\
##   & \\
##  state\_utZ PUDUCHERRY  & $-$4.412$^{***}$ \\
##   & (0.232) \\
##   & \\
##  as.factor(year)2002 & $-$0.027 \\
##   & (0.214) \\
##   & \\
##  as.factor(year)2003 & 0.108 \\
##   & (0.295) \\
##   & \\
##  as.factor(year)2004 & $-$0.111 \\
##   & (0.298) \\
##   & \\
##  as.factor(year)2005 & 0.108 \\
##   & (0.363) \\
##   & \\
##  as.factor(year)2006 & $-$0.072 \\
##   & (0.391) \\
##   & \\
##  as.factor(year)2007 & 0.097 \\
##   & (0.422) \\
##   & \\
##  as.factor(year)2008 & 0.097 \\
##   & (0.530) \\
##   & \\
##  as.factor(year)2009 & 0.064 \\
##   & (0.470) \\
##   & \\
##  as.factor(year)2010 & $-$0.207 \\
##   & (0.551) \\
##   & \\
##  as.factor(year)2011 & 0.304 \\
##   & (0.549) \\
##   & \\
##  as.factor(year)2012 & 0.249 \\
##   & (0.504) \\
##   & \\
##  as.factor(year)2013 & 0.560 \\
##   & (0.465) \\
##   & \\
```

```
##  as.factor(year)2014 & 0.064 \\
##   & (0.423) \\
##   & \\
##  as.factor(year)2015 & 0.158 \\
##   & (0.446) \\
##   & \\
##  as.factor(year)2016 & 0.047 \\
##   & (0.413) \\
##   & \\
##  Constant & 1.534$^{***}$ \\
##   & (0.234) \\
##   & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
## Model SHRC with controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Add SHRC
  police.imp.1.l$l.SHRC <- police.data.t1$l.SHRC

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.SHRC + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:4, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:4, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
```

```r
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 3, ncol = 3)
for (i in 1:3){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

## T3 (2) results
## Row: State PCA, State Capacity, and State Desire
## Column: Effect, SE, P value
result.t3
```

```
##             [,1]       [,2]      [,3]
## [1,]  0.09147451 0.33537538 0.7850434
## [2,]  0.33028568 0.29205350 0.2580938
## [3,] -0.02844111 0.02968224 0.3379689
```

```r
###############
###Table A5###
###############
police.imp.d <-  police.data.save[,  c("state_ut", "year", "death_remanded", "death_not_remanded", "state_pca", "c
                                       "gdp", "religion2", "head_trans")]

stargazer(police.imp.d, median = T)
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:19
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lccccccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
## Statistic & \multicolumn{1}{c}{N} & \multicolumn{1}{c}{Mean} & \multicolumn{1}{c}{St. Dev.} & \multicolumn{1}{c}{
## \hline \\[-1.8ex]
## year & 563 & 2,008.535 & 4.626 & 2,001 & 2,005 & 2,009 & 2,013 & 2,016 \\
## death\_remanded & 562 & 1.018 & 2.873 & 0.000 & 0.000 & 0.000 & 1.000 & 42.000 \\
## death\_not\_remanded & 562 & 1.753 & 3.842 & 0.000 & 0.000 & 0.000 & 1.750 & 34.000 \\
## state\_pca & 563 & 0.419 & 0.494 & 0 & 0 & 0 & 1 & 1 \\
## district\_pca & 563 & 0.208 & 0.406 & 0 & 0 & 0 & 0 & 1 \\
## sc\_order1 & 563 & 0.686 & 0.465 & 0 & 0 & 1 & 1 & 1 \\
## committee1 & 563 & 0.561 & 0.497 & 0 & 0 & 1 & 1 & 1 \\
## gdp & 515 & 202,532.000 & 291,377.500 & 1,082.000 & 16,971.500 & 88,550.000 & 262,539.000 & 2,188,532.000 \\
## religion2 & 563 & 0.904 & 0.295 & 0 & 1 & 1 & 1 & 1 \\
## head\_trans & 544 & 0.760 & 1.854 & 0.000 & 0.000 & 0.389 & 0.750 & 25.500 \\
## \hline \\[-1.8ex]
## \end{tabular}
## \end{table}
```

```r
###############
###Table A6###
###############
##  OLS Placebo Test
police.data.f3 <- police.data.f1
model.ols.plb <- lm(death_not_remanded ~ 1 + tm3 + tm2 + tm1 + t + tp1 + tp2 + tp3 + state_ut + as.factor(year), d
```

```r
model.ols.plb.cl <- cl(police.data.f3, model.ols.plb, police.data.f3$state_ut)

## OLS Placebo Test with controls
## Loop models for 5 imputation datasets
i <- 1
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add t to outdata
  police.imp.1.l$t <- police.data.t1$t

  ## lags and leads
  police.data.f3 <- ddply(police.imp.1.l, .(state_ut), transform, tm1 = lead(t))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tm2 = lead(tm1))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tm3 = lead(tm2))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tm4 = lead(tm3))

  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tp1 = lag(t))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tp2 = lag(tp1))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tp3 = lag(tp2))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tp4 = lag(tp3))

  police.data.f3[is.na(police.data.f3)] <- 0

  ## Poisson Placebo Test
  imp.1.p <- lm(death_not_remanded ~ 1 + tm3 + tm2 + tm1 + t + tp1 + tp2 + tp3 + gdp +
                  head_trans+ state_ut + as.factor(year), data = police.data.f3)

  result.p.1 <- cl(police.data.f3, imp.1.p, police.data.f3$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:10, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:10, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
```

```r
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t2 <- matrix(NA, nrow = 9, ncol = 3)
for (i in 1:9){
  result.t2[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

## Replace results to model result
model.ols.plb.cl.c <- result.p.1

model.ols.plb.cl.c[2:10, 1] <- result.t2[, 1]
model.ols.plb.cl.c[2:10, 2] <- result.t2[, 2]
model.ols.plb.cl.c[2:10, 4] <- result.t2[, 3]

model.ols.plb.cl.c
```

```
##
## t test of coefficients:
##
##                               Estimate Std. Error   t value  Pr(>|t|)
## (Intercept)                   4.659621   0.560571    8.3123 8.851e-16 ***
## tm3                           0.589360   0.750304    0.8106 0.4321634
## tm2                          -0.081574   0.448382   -0.0910 0.8556373
## tm1                           0.493871   0.777052    0.6485 0.5250567
## t                             0.057026   0.645608    0.1119 0.9296152
## tp1                          -0.961184   0.604173   -1.5631 0.1116303
## tp2                          -1.057098   0.536435   -1.9442 0.0487696 *
## tp3                          -0.784396   0.466469   -1.6512 0.0926538 .
## gdp                           2.606125   1.259791    1.9343 0.0385746 *
## head_trans                   -0.064318   0.059826   -1.0783 0.2823344
## state_utARUNACHAL PRADESH    -4.417234   0.393543  -11.2243 < 2.2e-16 ***
## state_utASSAM                -4.620558   0.261561  -17.6653 < 2.2e-16 ***
## state_utBIHAR                -4.774592   0.208160  -22.9372 < 2.2e-16 ***
## state_utCHHATTISGARH         -3.867533   0.257271  -15.0329 < 2.2e-16 ***
## state_utGOA                  -4.342960   0.383296  -11.3306 < 2.2e-16 ***
## state_utGUJARAT               2.283466   0.223606   10.2120 < 2.2e-16 ***
## state_utHARYANA              -4.418167   0.100628  -43.9061 < 2.2e-16 ***
## state_utHIMACHAL PRADESH     -4.763269   0.350627  -13.5850 < 2.2e-16 ***
## state_utJAMMU & KASHMIR      -4.380873   0.351530  -12.4623 < 2.2e-16 ***
## state_utJHARKHAND            -4.558355   0.258566  -17.6293 < 2.2e-16 ***
## state_utKARNATAKA            -4.804650   0.154636  -31.0708 < 2.2e-16 ***
## state_utKERALA               -4.431499   0.064061  -69.1767 < 2.2e-16 ***
## state_utMADHYA PRADESH       -2.161101   0.151461  -14.2683 < 2.2e-16 ***
## state_utMAHARASHTRA           9.412317   0.854423   11.0160 < 2.2e-16 ***
## state_utMANIPUR              -4.441274   0.388484  -11.4323 < 2.2e-16 ***
## state_utMEGHALAYA            -4.512569   0.383617  -11.7632 < 2.2e-16 ***
## state_utMIZORAM              -3.810390   0.392170   -9.7162 < 2.2e-16 ***
## state_utNAGALAND             -4.264861   0.385619  -11.0598 < 2.2e-16 ***
## state_utORISSA               -4.167953   0.175565  -23.7403 < 2.2e-16 ***
## state_utPUNJAB               -2.850157   0.405663   -7.0259 6.962e-12 ***
## state_utRAJASTHAN            -3.262548   0.013205 -247.0745 < 2.2e-16 ***
## state_utSIKKIM               -4.569722   0.390456  -11.7035 < 2.2e-16 ***
## state_utTAMIL NADU           -1.034351   0.298605   -3.4639 0.0005779 ***
## state_utTELANGANA            -3.575627   0.187416  -19.0786 < 2.2e-16 ***
## state_utTRIPURA              -4.272246   0.378570  -11.2852 < 2.2e-16 ***
## state_utUTTAR PRADESH         1.368845   0.405934    3.3721 0.0008036 ***
## state_utUTTARAKHAND          -4.719170   0.303451  -15.5517 < 2.2e-16 ***
## state_utWEST BENGAL          -0.725709   0.148166   -4.8980 1.308e-06 ***
## state_utZ A & N ISLANDS      -4.563360   0.394541  -11.5662 < 2.2e-16 ***
## state_utZ CHANDIGARH         -4.418538   0.376022  -11.7507 < 2.2e-16 ***
```

```
## state_utZ D & N HAVELI     -4.568907   0.360999  -12.6563 < 2.2e-16 ***
## state_utZ DAMAN & DIU      -4.866790   0.232229  -20.9568 < 2.2e-16 ***
## state_utZ DELHI            -4.857673   0.076716  -63.3200 < 2.2e-16 ***
## state_utZ LAKSHADWEEP      -4.629373   0.365345  -12.6712 < 2.2e-16 ***
## state_utZ PUDUCHERRY       -4.528943   0.381939  -11.8578 < 2.2e-16 ***
## as.factor(year)2002        -0.011942   0.302787   -0.0394 0.9685552
## as.factor(year)2003         0.199178   0.341799    0.5827 0.5603343
## as.factor(year)2004        -0.331962   0.295511   -1.1233 0.2618267
## as.factor(year)2005         0.067738   0.486218    0.1393 0.8892571
## as.factor(year)2006        -0.258944   0.447233   -0.5790 0.5628549
## as.factor(year)2007        -0.114072   0.696266   -0.1638 0.8699281
## as.factor(year)2008         0.235216   0.627173    0.3750 0.7077878
## as.factor(year)2009         0.227117   0.451518    0.5030 0.6151793
## as.factor(year)2010        -0.272455   0.513908   -0.5302 0.5962334
## as.factor(year)2011         0.521423   0.663960    0.7853 0.4326349
## as.factor(year)2012         0.325532   0.587364    0.5542 0.5796715
## as.factor(year)2013         0.958225   0.714650    1.3408 0.1805814
## as.factor(year)2014        -0.357426   0.261495   -1.3669 0.1722820
## as.factor(year)2015        -0.429837   0.341793   -1.2576 0.2091222
## as.factor(year)2016        -0.698258   0.460419   -1.5166 0.1300049
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```r
## Poisson Placebo Test with controls
## Loop models for 5 imputation datasets
i <- 1
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add t to outdata
  police.imp.1.l$t <- police.data.t1$t

  ## lags and leads
  police.data.f3 <- ddply(police.imp.1.l, .(state_ut), transform, tm1 = lead(t))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tm2 = lead(tm1))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tm3 = lead(tm2))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tm4 = lead(tm3))

  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tp1 = lag(t))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tp2 = lag(tp1))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tp3 = lag(tp2))
  police.data.f3 <- ddply(police.data.f3, .(state_ut), transform, tp4 = lag(tp3))

  police.data.f3[is.na(police.data.f3)] <- 0

  ## Poisson Placebo Test
  imp.1.p <- glm(death_not_remanded ~ 1 + tm3 + tm2 + tm1 + t + tp1 + tp2 + tp3 + gdp +
                   head_trans+ state_ut + as.factor(year), data = police.data.f3, family="poisson")
```

```r
  result.p.1 <- cl(police.data.f3, imp.1.p, police.data.f3$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:10, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:10, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t2 <- matrix(NA, nrow = 9, ncol = 3)
for (i in 1:9){
  result.t2[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

## Replace results to model result
model.poisson.plb.cl.c <- result.p.1

model.poisson.plb.cl.c[2:10, 1] <- result.t2[, 1]
model.poisson.plb.cl.c[2:10, 2] <- result.t2[, 2]
model.poisson.plb.cl.c[2:10, 4] <- result.t2[, 3]

model.poisson.plb.cl.c
```

```
##
## z test of coefficients:
##
##                               Estimate Std. Error  z value  Pr(>|z|)
## (Intercept)                   1.614704   0.192343   8.3949 < 2.2e-16 ***
## tm3                           0.146071   0.149161   0.9645 0.3274393
## tm2                          -0.150137   0.216711  -0.7090 0.4884342
## tm1                          -0.068500   0.184298  -0.3752 0.7101329
## t                            -0.097651   0.279737  -0.3515 0.7270267
## tp1                          -0.624643   0.263187  -2.3773 0.0176260 *
## tp2                          -0.671265   0.176514  -3.8126 0.0001430 ***
## tp3                          -0.537728   0.251761  -2.1468 0.0326901 *
## gdp                           0.585995   0.348773   1.6819 0.0929262 .
## head_trans                   -0.034234   0.030223  -1.1623 0.2573315
## state_utARUNACHAL PRADESH    -3.561754   0.104210 -34.1785 < 2.2e-16 ***
## state_utASSAM                -3.227568   0.074040 -43.5924 < 2.2e-16 ***
## state_utBIHAR                -2.856311   0.045370 -62.9563 < 2.2e-16 ***
## state_utCHHATTISGARH         -1.611135   0.071915 -22.4032 < 2.2e-16 ***
## state_utGOA                  -3.154220   0.099494 -31.7026 < 2.2e-16 ***
## state_utGUJARAT               0.305484   0.066614   4.5859 4.521e-06 ***
## state_utHARYANA              -1.992047   0.031676 -62.8882 < 2.2e-16 ***
## state_utHIMACHAL PRADESH   -19.905691   1.073949 -18.5350 < 2.2e-16 ***
## state_utJAMMU & KASHMIR     -2.593048   0.064294 -40.3314 < 2.2e-16 ***
## state_utJHARKHAND           -2.936321   0.071823 -40.8827 < 2.2e-16 ***
```

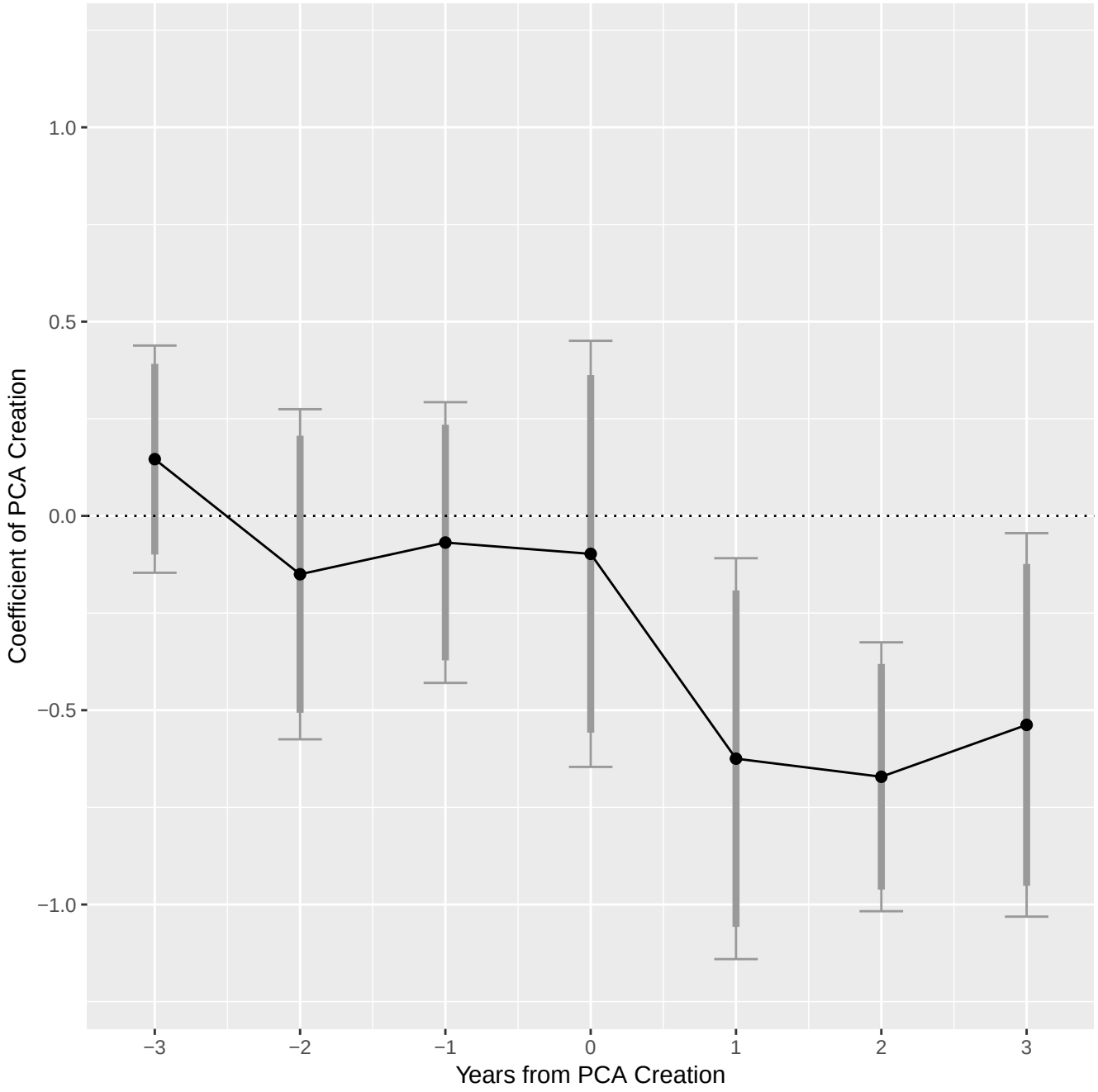
```
## state_utKARNATAKA           -1.940942   0.029477 -65.8449 < 2.2e-16 ***
## state_utKERALA              -1.929625   0.027977 -68.9710 < 2.2e-16 ***
## state_utMADHYA PRADESH      -0.605535   0.046598 -12.9948 < 2.2e-16 ***
## state_utMAHARASHTRA          0.705102   0.227295   3.1021 0.0019212 **
## state_utMANIPUR             -3.576684   0.106359 -33.6284 < 2.2e-16 ***
## state_utMEGHALAYA           -4.264893   0.095794 -44.5214 < 2.2e-16 ***
## state_utMIZORAM             -1.775448   0.099037 -17.9271 < 2.2e-16 ***
## state_utNAGALAND            -2.666573   0.105669 -25.2351 < 2.2e-16 ***
## state_utORISSA              -1.805444   0.053959 -33.4596 < 2.2e-16 ***
## state_utPUNJAB              -0.813257   0.166005  -4.8990 9.633e-07 ***
## state_utRAJASTHAN           -0.953454   0.021330 -44.6998 < 2.2e-16 ***
## state_utSIKKIM             -19.767072   1.077214 -18.3502 < 2.2e-16 ***
## state_utTAMIL NADU          -0.200423   0.079653  -2.5162 0.0118624 *
## state_utTELANGANA           -1.038184   0.164353  -6.3168 2.671e-10 ***
## state_utTRIPURA             -2.662492   0.099348 -26.7997 < 2.2e-16 ***
## state_utUTTAR PRADESH        0.154579   0.195202   0.7919 0.4284226
## state_utUTTARAKHAND        -19.795462   1.075079 -18.4130 < 2.2e-16 ***
## state_utWEST BENGAL         -0.134551   0.037078  -3.6289 0.0002846 ***
## state_utZ A & N ISLANDS    -19.761887   1.077055 -18.3481 < 2.2e-16 ***
## state_utZ CHANDIGARH        -3.169527   0.099173 -31.9597 < 2.2e-16 ***
## state_utZ D & N HAVELI      -4.274248   0.093379 -45.7731 < 2.2e-16 ***
## state_utZ DAMAN & DIU      -19.835029   1.073879 -18.4705 < 2.2e-16 ***
## state_utZ DELHI             -2.789060   0.031355 -88.9498 < 2.2e-16 ***
## state_utZ LAKSHADWEEP      -19.781428   1.076584 -18.3743 < 2.2e-16 ***
## state_utZ PUDUCHERRY        -4.263474   0.100249 -42.5290 < 2.2e-16 ***
## as.factor(year)2002         -0.039693   0.212816  -0.1865 0.8520437
## as.factor(year)2003          0.092441   0.187768   0.4923 0.6224969
## as.factor(year)2004         -0.149695   0.211657  -0.7073 0.4794099
## as.factor(year)2005          0.043744   0.235909   0.1854 0.8528949
## as.factor(year)2006         -0.071397   0.217573  -0.3282 0.7427979
## as.factor(year)2007          0.050439   0.327631   0.1540 0.8776480
## as.factor(year)2008          0.088201   0.327887   0.2690 0.7879303
## as.factor(year)2009          0.076559   0.324070   0.2362 0.8132437
## as.factor(year)2010         -0.298326   0.372628  -0.8006 0.4233633
## as.factor(year)2011          0.162435   0.311960   0.5207 0.6025809
## as.factor(year)2012          0.059565   0.348459   0.1709 0.8642732
## as.factor(year)2013          0.286388   0.330977   0.8653 0.3868851
## as.factor(year)2014         -0.259060   0.380943  -0.6801 0.4964726
## as.factor(year)2015         -0.096578   0.447947  -0.2156 0.8292989
## as.factor(year)2016         -0.306178   0.529537  -0.5782 0.5631294
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

## Make table
stargazer(model.ols.plb.cl, model.ols.plb.cl.c, model.poisson.plb.cl, model.poisson.plb.cl.c)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:22
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  tm3 & 0.826 & 0.589 & 0.246 & 0.146 \\
##   & (0.910) & (0.750) & (0.177) & (0.149) \\
##   & & & & \\
```

```
##  tm2 & 0.174 & $-$0.082 & $-$0.055 & $-$0.150 \\
##   & (0.561) & (0.448) & (0.194) & (0.217) \\
##   & & & & \\
##  tm1 & 0.704 & 0.494 & 0.064 & $-$0.068 \\
##   & (0.942) & (0.777) & (0.182) & (0.184) \\
##   & & & & \\
##  t & 0.348 & 0.057 & 0.034 & $-$0.098 \\
##   & (0.691) & (0.646) & (0.238) & (0.280) \\
##   & & & & \\
##  tp1 & $-$0.661 & $-$0.961 & $-$0.456$^{**}$ & $-$0.625$^{**}$ \\
##   & (0.487) & (0.604) & (0.210) & (0.263) \\
##   & & & & \\
##  tp2 & $-$0.754$^{**}$ & $-$1.057$^{**}$ & $-$0.495$^{***}$ & $-$0.671$^{***}$ \\
##   & (0.368) & (0.536) & (0.127) & (0.177) \\
##   & & & & \\
##  tp3 & $-$0.588 & $-$0.784$^{*}$ & $-$0.501$^{*}$ & $-$0.538$^{**}$ \\
##   & (0.403) & (0.466) & (0.272) & (0.252) \\
##   & & & & \\
##  gdp &  & 2.606$^{**}$ &  & 0.586$^{*}$ \\
##   &  & (1.260) &  & (0.349) \\
##   & & & & \\
##  head\_trans &  & $-$0.064 &  & $-$0.034 \\
##   &  & (0.060) &  & (0.030) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$5.187$^{***}$ & $-$4.417$^{***}$ & $-$3.762$^{***}$ & $-$3.562$^{***}$ \\
##   & (0.000) & (0.394) & (0.019) & (0.104) \\
##   & & & & \\
##  state\_utASSAM & $-$5.125$^{***}$ & $-$4.621$^{***}$ & $-$3.357$^{***}$ & $-$3.228$^{***}$ \\
##   & (0.000) & (0.262) & (0.019) & (0.074) \\
##   & & & & \\
##  state\_utBIHAR  & $-$4.997$^{***}$ & $-$4.775$^{***}$ & $-$2.898$^{***}$ & $-$2.856$^{***}$ \\
##   & (0.180) & (0.208) & (0.058) & (0.045) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$4.375$^{***}$ & $-$3.868$^{***}$ & $-$1.747$^{***}$ & $-$1.611$^{***}$ \\
##   & (0.000) & (0.257) & (0.019) & (0.072) \\
##   & & & & \\
##  state\_utGOA & $-$5.125$^{***}$ & $-$4.343$^{***}$ & $-$3.357$^{***}$ & $-$3.154$^{***}$ \\
##   & (0.000) & (0.383) & (0.019) & (0.099) \\
##   & & & & \\
##  state\_utGUJARAT  & 2.687$^{***}$ & 2.283$^{***}$ & 0.399$^{***}$ & 0.305$^{***}$ \\
##   & (0.000) & (0.224) & (0.017) & (0.067) \\
##   & & & & \\
##  state\_utHARYANA  & $-$4.625$^{***}$ & $-$4.418$^{***}$ & $-$2.055$^{***}$ & $-$1.992$^{***}$ \\
##   & (0.000) & (0.101) & (0.017) & (0.032) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.309$^{***}$ & $-$4.763$^{***}$ & $-$20.020$^{***}$ & $-$19.906$^{***}$ \\
##   & (0.180) & (0.351) & (1.072) & (1.074) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$4.934$^{***}$ & $-$4.381$^{***}$ & $-$2.715$^{***}$ & $-$2.593$^{***}$ \\
##   & (0.180) & (0.352) & (0.058) & (0.064) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$5.062$^{***}$ & $-$4.558$^{***}$ & $-$3.069$^{***}$ & $-$2.936$^{***}$ \\
##   & (0.000) & (0.259) & (0.019) & (0.072) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.500$^{***}$ & $-$4.805$^{***}$ & $-$1.873$^{***}$ & $-$1.941$^{***}$ \\
##   & (0.000) & (0.155) & (0.007) & (0.029) \\
##   & & & & \\
##  state\_utKERALA  & $-$4.563$^{***}$ & $-$4.431$^{***}$ & $-$1.970$^{***}$ & $-$1.930$^{***}$ \\
##   & (0.000) & (0.064) & (0.019) & (0.028) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$2.184$^{***}$ & $-$2.161$^{***}$ & $-$0.595$^{***}$ & $-$0.606$^{***}$ \\
##   & (0.180) & (0.151) & (0.058) & (0.047) \\
```

```
##   & & & & \\
##  state\_utMAHARASHTRA & 11.026$^{***}$ & 9.412$^{***}$ & 1.090$^{***}$ & 0.705$^{***}$ \\
##   & (0.025) & (0.854) & (0.019) & (0.227) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$5.188$^{***}$ & $-$4.441$^{***}$ & $-$3.762$^{***}$ & $-$3.577$^{***}$ \\
##   & (0.000) & (0.388) & (0.019) & (0.106) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$5.250$^{***}$ & $-$4.513$^{***}$ & $-$4.435$^{***}$ & $-$4.265$^{***}$ \\
##   & (0.000) & (0.384) & (0.014) & (0.096) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$4.563$^{***}$ & $-$3.810$^{***}$ & $-$1.950$^{***}$ & $-$1.775$^{***}$ \\
##   & (0.000) & (0.392) & (0.014) & (0.099) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$5.000$^{***}$ & $-$4.265$^{***}$ & $-$2.846$^{***}$ & $-$2.667$^{***}$ \\
##   & (0.000) & (0.386) & (0.019) & (0.106) \\
##   & & & & \\
##  state\_utORISSA  & $-$4.500$^{***}$ & $-$4.168$^{***}$ & $-$1.890$^{***}$ & $-$1.805$^{***}$ \\
##   & (0.000) & (0.176) & (0.019) & (0.054) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$3.500$^{***}$ & $-$2.850$^{***}$ & $-$1.086$^{***}$ & $-$0.813$^{***}$ \\
##   & (0.000) & (0.406) & (0.017) & (0.166) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$3.250$^{***}$ & $-$3.263$^{***}$ & $-$0.959$^{***}$ & $-$0.953$^{***}$ \\
##   & (0.000) & (0.013) & (0.019) & (0.021) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$5.313$^{***}$ & $-$4.570$^{***}$ & $-$19.950$^{***}$ & $-$19.767$^{***}$ \\
##   & (0.000) & (0.390) & (1.070) & (1.077) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$0.500$^{***}$ & $-$1.034$^{***}$ & $-$0.099$^{***}$ & $-$0.200$^{**}$ \\
##   & (0.000) & (0.299) & (0.000) & (0.080) \\
##   & & & & \\
##  state\_utTELANGANA & $-$3.377$^{***}$ & $-$3.576$^{***}$ & $-$1.139$^{***}$ & $-$1.038$^{***}$ \\
##   & (0.148) & (0.187) & (0.110) & (0.164) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$5.000$^{***}$ & $-$4.272$^{***}$ & $-$2.837$^{***}$ & $-$2.662$^{***}$ \\
##   & (0.000) & (0.379) & (0.018) & (0.099) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 1.878$^{***}$ & 1.369$^{***}$ & 0.238$^{***}$ & 0.155 \\
##   & (0.180) & (0.406) & (0.058) & (0.195) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$5.312$^{***}$ & $-$4.719$^{***}$ & $-$19.950$^{***}$ & $-$19.795$^{***}$ \\
##   & (0.000) & (0.303) & (1.070) & (1.075) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$0.438$^{***}$ & $-$0.726$^{***}$ & $-$0.071$^{***}$ & $-$0.135$^{***}$ \\
##   & (0.000) & (0.148) & (0.019) & (0.037) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$5.312$^{***}$ & $-$4.563$^{***}$ & $-$19.945$^{***}$ & $-$19.762$^{***}$ \\
##   & (0.000) & (0.395) & (1.070) & (1.077) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$5.125$^{***}$ & $-$4.419$^{***}$ & $-$3.329$^{***}$ & $-$3.170$^{***}$ \\
##   & (0.000) & (0.376) & (0.019) & (0.099) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$5.250$^{***}$ & $-$4.569$^{***}$ & $-$4.428$^{***}$ & $-$4.274$^{***}$ \\
##   & (0.000) & (0.361) & (0.019) & (0.093) \\
##   & & & & \\
##  state\_utZ DAMAN & DIU & $-$5.329$^{***}$ & $-$4.867$^{***}$ & $-$19.951$^{***}$ & $-$19.835$^{***}$ \\
##   & (0.027) & (0.232) & (1.070) & (1.074) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$5.000$^{***}$ & $-$4.858$^{***}$ & $-$2.825$^{***}$ & $-$2.789$^{***}$ \\
##   & (0.000) & (0.077) & (0.014) & (0.031) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$5.313$^{***}$ & $-$4.629$^{***}$ & $-$19.945$^{***}$ & $-$19.781$^{***}$ \\
```

```
##   & (0.000) & (0.365) & (1.070) & (1.077) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$5.250$^{***}$ & $-$4.529$^{***}$ & $-$4.428$^{***}$ & $-$4.263$^{***}$ \\
##   & (0.000) & (0.382) & (0.019) & (0.100) \\
##   & & & & \\
##  as.factor(year)2002 & 0.007 & $-$0.012 & 0.000 & $-$0.040 \\
##   & (0.302) & (0.303) & (0.198) & (0.213) \\
##   & & & & \\
##  as.factor(year)2003 & 0.236 & 0.199 & 0.141 & 0.092 \\
##   & (0.363) & (0.342) & (0.195) & (0.188) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.343 & $-$0.332 & $-$0.105 & $-$0.150 \\
##   & (0.314) & (0.296) & (0.229) & (0.212) \\
##   & & & & \\
##  as.factor(year)2005 & 0.068 & 0.068 & 0.098 & 0.044 \\
##   & (0.512) & (0.486) & (0.240) & (0.236) \\
##   & & & & \\
##  as.factor(year)2006 & $-$0.299 & $-$0.259 & $-$0.037 & $-$0.071 \\
##   & (0.485) & (0.447) & (0.228) & (0.218) \\
##   & & & & \\
##  as.factor(year)2007 & $-$0.134 & $-$0.114 & 0.102 & 0.050 \\
##   & (0.740) & (0.696) & (0.325) & (0.328) \\
##   & & & & \\
##  as.factor(year)2008 & 0.249 & 0.235 & 0.169 & 0.088 \\
##   & (0.643) & (0.627) & (0.332) & (0.328) \\
##   & & & & \\
##  as.factor(year)2009 & 0.299 & 0.227 & 0.204 & 0.077 \\
##   & (0.475) & (0.452) & (0.286) & (0.324) \\
##   & & & & \\
##  as.factor(year)2010 & $-$0.109 & $-$0.272 & $-$0.106 & $-$0.298 \\
##   & (0.582) & (0.514) & (0.380) & (0.373) \\
##   & & & & \\
##  as.factor(year)2011 & 0.790 & 0.521 & 0.384 & 0.162 \\
##   & (0.800) & (0.664) & (0.283) & (0.312) \\
##   & & & & \\
##  as.factor(year)2012 & 0.691 & 0.326 & 0.339 & 0.060 \\
##   & (0.763) & (0.587) & (0.337) & (0.348) \\
##   & & & & \\
##  as.factor(year)2013 & 1.425 & 0.958 & 0.628$^{**}$ & 0.286 \\
##   & (0.978) & (0.715) & (0.272) & (0.331) \\
##   & & & & \\
##  as.factor(year)2014 & 0.279 & $-$0.357 & 0.179 & $-$0.259 \\
##   & (0.483) & (0.261) & (0.253) & (0.381) \\
##   & & & & \\
##  as.factor(year)2015 & 0.425 & $-$0.430 & 0.385 & $-$0.097 \\
##   & (0.473) & (0.342) & (0.279) & (0.448) \\
##   & & & & \\
##  as.factor(year)2016 & 0.208 & $-$0.698 & 0.276 & $-$0.306 \\
##   & (0.502) & (0.460) & (0.306) & (0.530) \\
##   & & & & \\
##  Constant & 5.072$^{***}$ & 4.660$^{***}$ & 1.549$^{***}$ & 1.615$^{***}$ \\
##   & (0.406) & (0.561) & (0.225) & (0.192) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}

###############
###Figure A3###
###############
```

```r
## Save Ts Poisson result
graph.a1 <- as.data.frame(model.poisson.plb.cl.c[2:8, ])
graph.a1$time <- c(-3,-2,-1,0,1,2,3)

## Calculate CIs
graph.a1$ci.l <- graph.a1[, 1] - qnorm(0.975)*graph.a1[, 2]
graph.a1$ci.u <- graph.a1[, 1] + qnorm(0.975)*graph.a1[, 2]

graph.a1$ci.l.90 <- graph.a1[, 1] - qnorm(0.95)*graph.a1[, 2]
graph.a1$ci.u.90 <- graph.a1[, 1] + qnorm(0.95)*graph.a1[, 2]

## Plot
p.placebo.a3 <- ggplot(graph.a1, aes(time, Estimate))+
  #geom_ribbon(aes(ymin=ci.l,ymax=ci.u),alpha=0.3)+
  geom_errorbar(aes(ymin=ci.l,ymax=ci.u),width=0.3, color = "#999999")+
  #geom_errorbar(aes(ymin=ci.l.90,ymax=ci.u.90),width=0.1, color = "#999999")+
  geom_pointrange(aes(ymin=ci.l.90,ymax=ci.u.90),size=1.5, shape = 46, color = "#999999")+
  geom_point(size = 2)+
  geom_line()+
  ylim(-1.2, 1.2)+
  xlab("Years from PCA Creation")+
  ylab("Coefficient of PCA Creation")+
  #geom_line(aes(y=ci.l))+
  #geom_line(aes(y=ci.u))+
  #geom_line(aes(y=ci.l.90), linetype = "dashed")+
  # geom_line(aes(y=ci.u.90), linetype = "dashed")+
  geom_hline(yintercept = 0, linetype = "dotted")+
  scale_x_continuous(breaks = c(-3, -2, -1, 0, 1, 2, 3))

p.placebo.a3
```




```
ggsave("p_placebo_controls_2016.pdf", plot = p.placebo.a3, height = 4.8, width = 4.5)
```

```
###############
###Table A7###
###############
## Load GTD data
police.data.ta5 <- police.data.t1

police.data.ta5$l.event <- police.data$l.event

#police.data.save <- merge(police.data, gtd.sum.l, by = c("state_ut", "year"), all.x = T)

#police.data.save  <- subset(police.data.save, select=-c(iyear, provstate))

#write.csv(police.data.save, "final1.csv")

## fill NA with 0
#police.data.save$l.event <- ifelse(is.na(police.data.save$l.event), 0, police.data.save$l.event)
```

```r
##Correlation check
cor.test(police.data.ta5$l.event, police.data.ta5$l.state_pca)

##
##  Pearson's product-moment correlation
##
## data:  police.data.ta5$l.event and police.data.ta5$l.state_pca
## t = 5.3157, df = 560, p-value = 1.537e-07
## alternative hypothesis: true correlation is not equal to 0
## 95 percent confidence interval:
##  0.1389809 0.2965034
## sample estimates:
##       cor
## 0.2191698

## OLS with GTD
model.ols.GTD <- lm(death_not_remanded ~ 1 + l.state_pca + l.event + state_ut + as.factor(year), data = police.dat

model.ols.GTD.cl <- cl(police.data.ta5, model.ols.GTD, police.data.ta5$state_ut)

## Poisson with GTD
model.poisson.GTD <- glm(death_not_remanded ~ 1 + l.state_pca + l.event + state_ut + as.factor(year), data = polic

model.p.GTD.cl <- cl(police.data.ta5, model.poisson.GTD, police.data.ta5$state_ut)

## Poisson with GTD and Controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add GTD l.event to outdata
  police.imp.1.l$l.event <- police.data.ta5$l.event

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + l.event + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)
```

```r
beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t2 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t2[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t2
```

```
##               [,1]        [,2]       [,3]
## [1,] -1.4308158663 0.762986009 0.06075359
## [2,] -0.0001879508 0.007416328 0.97978151
## [3,]  2.0802611074 1.059706692 0.04963994
## [4,] -0.0549221687 0.057351107 0.33824033
```

```r
## Replace results to model result
model.ols.GTD.cl.c <- result.p.1

model.ols.GTD.cl.c[2:5, 1] <- result.t2[, 1]
model.ols.GTD.cl.c[2:5, 2] <- result.t2[, 2]
model.ols.GTD.cl.c[2:5, 4] <- result.t2[, 3]

model.ols.GTD.cl.c
```

```
##
## t test of coefficients:
##
##                               Estimate  Std. Error  t value  Pr(>|t|)
## (Intercept)                 4.46177116  0.64866932   6.8783 1.790e-11 ***
## l.state_pca                -1.43081587  0.76298601  -1.8886 0.0607536 .
## l.event                    -0.00018795  0.00741633   0.0018 0.9797815
## gdp                         2.08026111  1.05970669   1.8715 0.0496399 *
## head_trans                 -0.05492217  0.05735111  -0.9602 0.3382403
## state_utARUNACHAL PRADESH  -4.01323145  0.62951546  -6.3751 4.116e-10 ***
## state_utASSAM              -4.17015579  0.41198158 -10.1222 < 2.2e-16 ***
## state_utBIHAR              -5.00548585  0.15232985 -32.8595 < 2.2e-16 ***
## state_utCHHATTISGARH       -3.41682872  0.41033481  -8.3269 7.779e-16 ***
## state_utGOA                -3.93845923  0.62641413  -6.2873 6.975e-10 ***
## state_utGUJARAT             2.80884096  0.17126498  16.4006 < 2.2e-16 ***
## state_utHARYANA            -4.00280842  0.35539450 -11.2630 < 2.2e-16 ***
## state_utHIMACHAL PRADESH   -5.05243681  0.25793120 -19.5883 < 2.2e-16 ***
## state_utJAMMU & KASHMIR    -4.67199554  0.42844777 -10.9045 < 2.2e-16 ***
## state_utJHARKHAND          -4.10747904  0.40901187 -10.0424 < 2.2e-16 ***
## state_utKARNATAKA          -4.65992039  0.07905315 -58.9467 < 2.2e-16 ***
## state_utKERALA             -3.91276655  0.36139544 -10.8268 < 2.2e-16 ***
## state_utMADHYA PRADESH     -2.35654374  0.11919136 -19.7711 < 2.2e-16 ***
## state_utMAHARASHTRA         9.65740876  0.74892342  12.8951 < 2.2e-16 ***
## state_utMANIPUR            -4.03450292  0.48687366  -8.2866 1.049e-15 ***
## state_utMEGHALAYA          -4.46473019  0.39121649 -11.4124 < 2.2e-16 ***
## state_utMIZORAM            -3.76510848  0.46160862  -8.1565 2.733e-15 ***
## state_utNAGALAND           -3.85577999  0.60155410  -6.4097 3.339e-10 ***
## state_utORISSA             -3.68669055  0.36024800 -10.2338 < 2.2e-16 ***
```

```
## state_utPUNJAB             -2.49953524  0.57049186  -4.3814 1.434e-05 ***
## state_utRAJASTHAN          -2.71818003  0.32178753  -8.4471 3.171e-16 ***
## state_utSIKKIM             -4.25229886  0.58596986  -7.2569 1.496e-12 ***
## state_utTAMIL NADU         -0.93620013  0.22662977  -4.1310 4.225e-05 ***
## state_utTELANGANA          -4.38879086  0.43181143 -10.1637 < 2.2e-16 ***
## state_utTRIPURA            -4.04201542  0.51042289  -7.9190 1.524e-14 ***
## state_utUTTAR PRADESH       1.27794773  0.37936010   3.3687 0.0008127 ***
## state_utUTTARAKHAND        -4.37382514  0.51603917  -8.4758 2.557e-16 ***
## state_utWEST BENGAL        -0.40349844  0.16906801  -2.3866 0.0173705 *
## state_utZ A & N ISLANDS    -4.42768546  0.50674702  -8.7375 < 2.2e-16 ***
## state_utZ CHANDIGARH       -4.27555531  0.49078150  -8.7117 < 2.2e-16 ***
## state_utZ D & N HAVELI     -4.42117805  0.47879941  -9.2339 < 2.2e-16 ***
## state_utZ DAMAN & DIU      -4.68015331  0.37229328 -12.5711 < 2.2e-16 ***
## state_utZ DELHI            -4.70289744  0.19279026 -24.3939 < 2.2e-16 ***
## state_utZ LAKSHADWEEP      -4.48233143  0.48212833  -9.2970 < 2.2e-16 ***
## state_utZ PUDUCHERRY       -4.38842120  0.49582110  -8.8508 < 2.2e-16 ***
## as.factor(year)2002        -0.00903659  0.30803725  -0.0293 0.9766081
## as.factor(year)2003         0.20542485  0.34208391   0.6005 0.5484346
## as.factor(year)2004        -0.14792122  0.30656661  -0.4825 0.6296525
## as.factor(year)2005         0.15948688  0.38070996   0.4189 0.6754523
## as.factor(year)2006        -0.09102819  0.30624349  -0.2972 0.7664041
## as.factor(year)2007         0.12511103  0.50766056   0.2464 0.8054366
## as.factor(year)2008         0.48711192  0.66299605   0.7347 0.4628539
## as.factor(year)2009         0.58349061  0.60006129   0.9724 0.3313227
## as.factor(year)2010         0.15327059  0.56951995   0.2691 0.7879450
## as.factor(year)2011         1.25570256  1.01250678   1.2402 0.2154781
## as.factor(year)2012         1.20625599  0.87799335   1.3739 0.1700866
## as.factor(year)2013         1.92520834  1.19890507   1.6058 0.1089393
## as.factor(year)2014         0.81858331  0.65431406   1.2511 0.2114912
## as.factor(year)2015         0.85902894  0.50740151   1.6930 0.0910704 .
## as.factor(year)2016         0.63133350  0.54464911   1.1592 0.2469381
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
```

```
## Poisson with GTD and Controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add GTD l.event to outdata
  police.imp.1.l$l.event <- police.data.ta5$l.event

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + l.event + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)
```

```
  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t2 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t2[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t2

##               [,1]        [,2]         [,3]
## [1,] -0.566085534 0.157206849 0.0003171223
## [2,] -0.002110064 0.005395269 0.6957268925
## [3,]  0.210303491 0.298960128 0.4817753791
## [4,] -0.028193445 0.036102015 0.4348388053

## Replace results to model result
model.p.GTD.cl.c <- result.p.1

model.p.GTD.cl.c[2:5, 1] <- result.t2[, 1]
model.p.GTD.cl.c[2:5, 2] <- result.t2[, 2]
model.p.GTD.cl.c[2:5, 4] <- result.t2[, 3]

stargazer(model.ols.GTD.cl, model.ols.GTD.cl.c, model.p.GTD.cl, model.p.GTD.cl.c)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:24
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.562$^{*}$ & $-$1.431$^{*}$ & $-$0.591$^{***}$ & $-$0.566$^{***}$ \\
##   & (0.876) & (0.763) & (0.162) & (0.157) \\
##   & & & & \\
##  l.event & $-$0.0004 & $-$0.0002 & $-$0.002 & $-$0.002 \\
```

```
##   & (0.007) & (0.007) & (0.005) & (0.005) \\
##   & & & & \\
##  gdp &  & 2.080$^{**}$ &  & 0.210 \\
##   &  & (1.060) &  & (0.299) \\
##   & & & & \\
##  head\_trans &  & $-$0.055 &  & $-$0.028 \\
##   &  & (0.057) &  & (0.036) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.606$^{***}$ & $-$4.013$^{***}$ & $-$3.531$^{***}$ & $-$3.474$^{***}$ \\
##   & (0.368) & (0.630) & (0.088) & (0.085) \\
##   & & & & \\
##  state\_utASSAM & $-$4.526$^{***}$ & $-$4.170$^{***}$ & $-$3.042$^{***}$ & $-$3.004$^{***}$ \\
##   & (0.327) & (0.412) & (0.180) & (0.205) \\
##   & & & & \\
##  state\_utBIHAR  & $-$5.286$^{***}$ & $-$5.005$^{***}$ & $-$2.904$^{***}$ & $-$2.853$^{***}$ \\
##   & (0.259) & (0.152) & (0.128) & (0.162) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$3.779$^{***}$ & $-$3.417$^{***}$ & $-$1.447$^{***}$ & $-$1.407$^{***}$ \\
##   & (0.305) & (0.410) & (0.140) & (0.153) \\
##   & & & & \\
##  state\_utGOA & $-$4.543$^{***}$ & $-$3.938$^{***}$ & $-$3.126$^{***}$ & $-$3.057$^{***}$ \\
##   & (0.371) & (0.626) & (0.090) & (0.087) \\
##   & & & & \\
##  state\_utGUJARAT  & 3.173$^{***}$ & 2.809$^{***}$ & 0.598$^{***}$ & 0.563$^{***}$ \\
##   & (0.301) & (0.171) & (0.071) & (0.113) \\
##   & & & & \\
##  state\_utHARYANA  & $-$4.141$^{***}$ & $-$4.003$^{***}$ & $-$1.860$^{***}$ & $-$1.847$^{***}$ \\
##   & (0.315) & (0.355) & (0.079) & (0.075) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.609$^{***}$ & $-$5.052$^{***}$ & $-$20.076$^{***}$ & $-$20.016$^{***}$ \\
##   & (0.149) & (0.258) & (1.067) & (1.070) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$5.206$^{***}$ & $-$4.672$^{***}$ & $-$2.648$^{***}$ & $-$2.552$^{***}$ \\
##   & (0.580) & (0.428) & (0.329) & (0.405) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$4.466$^{***}$ & $-$4.107$^{***}$ & $-$2.765$^{***}$ & $-$2.726$^{***}$ \\
##   & (0.311) & (0.409) & (0.151) & (0.167) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.406$^{***}$ & $-$4.660$^{***}$ & $-$1.841$^{***}$ & $-$1.875$^{***}$ \\
##   & (0.103) & (0.079) & (0.050) & (0.079) \\
##   & & & & \\
##  state\_utKERALA  & $-$3.980$^{***}$ & $-$3.913$^{***}$ & $-$1.734$^{***}$ & $-$1.731$^{***}$ \\
##   & (0.357) & (0.361) & (0.079) & (0.078) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$2.484$^{***}$ & $-$2.357$^{***}$ & $-$0.664$^{***}$ & $-$0.645$^{***}$ \\
##   & (0.149) & (0.119) & (0.056) & (0.050) \\
##   & & & & \\
##  state\_utMAHARASHTRA & 10.965$^{***}$ & 9.657$^{***}$ & 1.096$^{***}$ & 0.958$^{***}$ \\
##   & (0.058) & (0.749) & (0.017) & (0.198) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$4.588$^{***}$ & $-$4.035$^{***}$ & $-$3.443$^{***}$ & $-$3.389$^{***}$ \\
##   & (0.330) & (0.487) & (0.187) & (0.216) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$5.054$^{***}$ & $-$4.465$^{***}$ & $-$4.344$^{***}$ & $-$4.293$^{***}$ \\
##   & (0.103) & (0.391) & (0.025) & (0.077) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$4.371$^{***}$ & $-$3.765$^{***}$ & $-$1.882$^{***}$ & $-$1.831$^{***}$ \\
##   & (0.159) & (0.462) & (0.059) & (0.070) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$4.417$^{***}$ & $-$3.856$^{***}$ & $-$2.607$^{***}$ & $-$2.566$^{***}$ \\
##   & (0.351) & (0.602) & (0.077) & (0.083) \\
##   & & & & \\
```

```
##  state\_utORISSA  & $-$3.907$^{***}$ & $-$3.687$^{***}$ & $-$1.603$^{***}$ & $-$1.586$^{***}$ \\
##   & (0.298) & (0.360) & (0.114) & (0.121) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$3.015$^{***}$ & $-$2.500$^{***}$ & $-$0.889$^{***}$ & $-$0.716$^{***}$ \\
##   & (0.311) & (0.570) & (0.076) & (0.206) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$2.668$^{***}$ & $-$2.718$^{***}$ & $-$0.727$^{***}$ & $-$0.738$^{***}$ \\
##   & (0.369) & (0.322) & (0.089) & (0.096) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$4.828$^{***}$ & $-$4.252$^{***}$ & $-$19.770$^{***}$ & $-$19.725$^{***}$ \\
##   & (0.318) & (0.586) & (1.068) & (1.070) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$0.503$^{***}$ & $-$0.936$^{***}$ & $-$0.112$^{***}$ & $-$0.140 \\
##   & (0.052) & (0.227) & (0.037) & (0.105) \\
##   & & & & \\
##  state\_utTELANGANA & $-$4.347$^{***}$ & $-$4.389$^{***}$ & $-$1.372$^{***}$ & $-$1.302$^{***}$ \\
##   & (0.512) & (0.432) & (0.103) & (0.158) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$4.612$^{***}$ & $-$4.042$^{***}$ & $-$2.677$^{***}$ & $-$2.630$^{***}$ \\
##   & (0.243) & (0.510) & (0.057) & (0.072) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 1.580$^{***}$ & 1.278$^{***}$ & 0.175$^{***}$ & 0.218 \\
##   & (0.150) & (0.379) & (0.042) & (0.158) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$4.828$^{***}$ & $-$4.374$^{***}$ & $-$19.770$^{***}$ & $-$19.728$^{***}$ \\
##   & (0.317) & (0.516) & (1.068) & (1.069) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$0.139 & $-$0.403$^{**}$ & 0.080 & 0.049 \\
##   & (0.155) & (0.169) & (0.075) & (0.068) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$5.024$^{***}$ & $-$4.428$^{***}$ & $-$19.843$^{***}$ & $-$19.795$^{***}$ \\
##   & (0.213) & (0.507) & (1.067) & (1.069) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.836$^{***}$ & $-$4.276$^{***}$ & $-$3.224$^{***}$ & $-$3.187$^{***}$ \\
##   & (0.213) & (0.491) & (0.068) & (0.073) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$4.961$^{***}$ & $-$4.421$^{***}$ & $-$4.322$^{***}$ & $-$4.286$^{***}$ \\
##   & (0.213) & (0.479) & (0.069) & (0.071) \\
##   & & & & \\
##  state\_utZ DAMAN & DIU & $-$5.039$^{***}$ & $-$4.680$^{***}$ & $-$19.846$^{***}$ & $-$19.825$^{***}$ \\
##   & (0.198) & (0.372) & (1.067) & (1.069) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$4.808$^{***}$ & $-$4.703$^{***}$ & $-$2.754$^{***}$ & $-$2.754$^{***}$ \\
##   & (0.148) & (0.193) & (0.051) & (0.047) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$5.024$^{***}$ & $-$4.482$^{***}$ & $-$19.843$^{***}$ & $-$19.805$^{***}$ \\
##   & (0.213) & (0.482) & (1.067) & (1.069) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$4.961$^{***}$ & $-$4.388$^{***}$ & $-$4.322$^{***}$ & $-$4.283$^{***}$ \\
##   & (0.213) & (0.496) & (0.068) & (0.074) \\
##   & & & & \\
##  as.factor(year)2002 & 0.008 & $-$0.009 & 0.001 & $-$0.033 \\
##   & (0.307) & (0.308) & (0.197) & (0.216) \\
##   & & & & \\
##  as.factor(year)2003 & 0.236 & 0.205 & 0.142 & 0.108 \\
##   & (0.360) & (0.342) & (0.195) & (0.191) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.107 & $-$0.148 & $-$0.075 & $-$0.108 \\
##   & (0.333) & (0.307) & (0.230) & (0.220) \\
##   & & & & \\
##  as.factor(year)2005 & 0.235 & 0.159 & 0.139 & 0.091 \\
##   & (0.400) & (0.381) & (0.236) & (0.230) \\
```

```
##   & & & & \\
##  as.factor(year)2006 & $-$0.050 & $-$0.091 & $-$0.039 & $-$0.061 \\
##   & (0.331) & (0.306) & (0.219) & (0.212) \\
##   & & & & \\
##  as.factor(year)2007 & 0.236 & 0.125 & 0.140 & 0.105 \\
##   & (0.531) & (0.508) & (0.313) & (0.319) \\
##   & & & & \\
##  as.factor(year)2008 & 0.682 & 0.487 & 0.194 & 0.145 \\
##   & (0.790) & (0.663) & (0.333) & (0.347) \\
##   & & & & \\
##  as.factor(year)2009 & 0.851 & 0.583 & 0.278 & 0.205 \\
##   & (0.764) & (0.600) & (0.288) & (0.338) \\
##   & & & & \\
##  as.factor(year)2010 & 0.498 & 0.153 & 0.020 & $-$0.088 \\
##   & (0.775) & (0.570) & (0.352) & (0.383) \\
##   & & & & \\
##  as.factor(year)2011 & 1.667 & 1.256 & 0.585$^{*}$ & 0.470 \\
##   & (1.280) & (1.013) & (0.315) & (0.356) \\
##   & & & & \\
##  as.factor(year)2012 & 1.686 & 1.206 & 0.538 & 0.397 \\
##   & (1.182) & (0.878) & (0.350) & (0.389) \\
##   & & & & \\
##  as.factor(year)2013 & 2.474 & 1.925 & 0.850$^{***}$ & 0.683$^{*}$ \\
##   & (1.539) & (1.199) & (0.312) & (0.396) \\
##   & & & & \\
##  as.factor(year)2014 & 1.480 & 0.819 & 0.446$^{*}$ & 0.245 \\
##   & (1.038) & (0.654) & (0.237) & (0.399) \\
##   & & & & \\
##  as.factor(year)2015 & 1.692$^{*}$ & 0.859$^{*}$ & 0.702$^{***}$ & 0.477 \\
##   & (0.979) & (0.507) & (0.235) & (0.436) \\
##   & & & & \\
##  as.factor(year)2016 & 1.498 & 0.631 & 0.603$^{**}$ & 0.340 \\
##   & (0.991) & (0.545) & (0.288) & (0.504) \\
##   & & & & \\
##  Constant & 4.792$^{***}$ & 4.462$^{***}$ & 1.482$^{***}$ & 1.527$^{***}$ \\
##   & (0.526) & (0.649) & (0.222) & (0.217) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
##############
###Table A8###
##############
## Add religion to police data
police.data.t1$religion2 <- police.data$religion2

## OLS Model with religion
model.ols.religion <- lm(death_not_remanded ~ 1 + l.state_pca + religion2 + state_ut + as.factor(year), data = pol

model.ols.religion.cl <- cl(police.data.t1, model.ols.religion, police.data.t1$state_ut)

## Poisson Model with religion
model.poisson.religion <- glm(death_not_remanded ~ 1 + l.state_pca + religion2 + state_ut + as.factor(year), data

model.poisson.religion.cl <- cl(police.data.t1, model.poisson.religion, police.data.t1$state_ut)

## OLS Model with religion
## Loop models for 5 imputation datasets
for (i in c(1:5)){
```

```
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add religion
  police.imp.1.l$religion2 <- police.data.t1$religion2

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + religion2 + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##             [,1]       [,2]       [,3]
## [1,] -1.43189181 0.74680128 0.05519138
## [2,] -0.10959259 0.16697578 0.51160650
## [3,]  2.08774550 1.05211139 0.04721808
## [4,] -0.05511046 0.05735905 0.33665373

## Replace results to model result
```

```r
model.ols.religion.cl.c <- result.p.1

model.ols.religion.cl.c[2:5, 1] <- result.t3[, 1]
model.ols.religion.cl.c[2:5, 2] <- result.t3[, 2]
model.ols.religion.cl.c[2:5, 4] <- result.t3[, 3]

## Poisson Model with religion and controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add religion
  police.imp.1.l$religion2 <- police.data.t1$religion2

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + religion2 + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}
```

```
result.t3
```

```
##             [,1]       [,2]         [,3]
## [1,] -0.57525165 0.15748531 0.0002594649
## [2,] -0.56151973 0.28604206 0.0496383841
## [3,]  0.20172322 0.27483096 0.4629547321
## [4,] -0.02773948 0.03582105 0.4386999209
```

```
## Replace results to model result
model.poisson.religion.cl.c <- result.p.1

model.poisson.religion.cl.c[2:5, 1] <- result.t3[, 1]
model.poisson.religion.cl.c[2:5, 2] <- result.t3[, 2]
model.poisson.religion.cl.c[2:5, 4] <- result.t3[, 3]

stargazer(model.ols.religion.cl, model.ols.religion.cl.c, model.poisson.religion.cl, model.poisson.religion.cl.c)
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:25
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.563$^{*}$ & $-$1.432$^{*}$ & $-$0.598$^{***}$ & $-$0.575$^{***}$ \\
##   & (0.856) & (0.747) & (0.164) & (0.157) \\
##   & & & & \\
##  religion2 & 0.335 & $-$0.110 & $-$0.430$^{***}$ & $-$0.562$^{**}$ \\
##   & (0.319) & (0.167) & (0.161) & (0.286) \\
##   & & & & \\
##  gdp &  & 2.088$^{**}$ &  & 0.202 \\
##   &  & (1.052) &  & (0.275) \\
##   & & & & \\
##  head\_trans &  & $-$0.055 &  & $-$0.028 \\
##   &  & (0.057) &  & (0.036) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.476$^{***}$ & $-$4.052$^{***}$ & $-$3.702$^{***}$ & $-$3.695$^{***}$ \\
##   & (0.422) & (0.575) & (0.079) & (0.062) \\
##   & & & & \\
##  state\_utASSAM & $-$4.539$^{***}$ & $-$4.168$^{***}$ & $-$3.105$^{***}$ & $-$3.076$^{***}$ \\
##   & (0.321) & (0.465) & (0.065) & (0.070) \\
##   & & & & \\
##  state\_utBIHAR  & $-$5.293$^{***}$ & $-$5.004$^{***}$ & $-$2.949$^{***}$ & $-$2.905$^{***}$ \\
##   & (0.160) & (0.096) & (0.031) & (0.059) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$3.789$^{***}$ & $-$3.415$^{***}$ & $-$1.495$^{***}$ & $-$1.459$^{***}$ \\
##   & (0.321) & (0.464) & (0.065) & (0.069) \\
##   & & & & \\
##  state\_utGOA & $-$4.539$^{***}$ & $-$3.936$^{***}$ & $-$3.105$^{***}$ & $-$3.035$^{***}$ \\
##   & (0.321) & (0.565) & (0.065) & (0.083) \\
##   & & & & \\
##  state\_utGUJARAT  & 3.176$^{***}$ & 2.808$^{***}$ & 0.614$^{***}$ & 0.583$^{***}$ \\
##   & (0.267) & (0.172) & (0.056) & (0.083) \\
##   & & & & \\
##  state\_utHARYANA  & $-$4.137$^{***}$ & $-$4.002$^{***}$ & $-$1.840$^{***}$ & $-$1.825$^{***}$ \\
##   & (0.267) & (0.303) & (0.056) & (0.052) \\
```

```
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.606$^{***}$ & $-$5.051$^{***}$ & $-$20.056$^{***}$ & $-$19.996$^{***}$ \\
##   & (0.160) & (0.199) & (1.065) & (1.071) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$4.895$^{***}$ & $-$4.777$^{***}$ & $-$3.197$^{***}$ & $-$3.253$^{***}$ \\
##   & (0.215) & (0.254) & (0.177) & (0.219) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$4.476$^{***}$ & $-$4.106$^{***}$ & $-$2.817$^{***}$ & $-$2.784$^{***}$ \\
##   & (0.321) & (0.464) & (0.065) & (0.069) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.402$^{***}$ & $-$4.661$^{***}$ & $-$1.823$^{***}$ & $-$1.853$^{***}$ \\
##   & (0.053) & (0.099) & (0.016) & (0.038) \\
##   & & & & \\
##  state\_utKERALA  & $-$3.976$^{***}$ & $-$3.913$^{***}$ & $-$1.718$^{***}$ & $-$1.713$^{***}$ \\
##   & (0.321) & (0.323) & (0.065) & (0.061) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$2.481$^{***}$ & $-$2.356$^{***}$ & $-$0.646$^{***}$ & $-$0.624$^{***}$ \\
##   & (0.160) & (0.107) & (0.031) & (0.040) \\
##   & & & & \\
##  state\_utMAHARASHTRA & 10.965$^{***}$ & 9.653$^{***}$ & 1.091$^{***}$ & 0.958$^{***}$ \\
##   & (0.053) & (0.734) & (0.009) & (0.189) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$4.601$^{***}$ & $-$4.032$^{***}$ & $-$3.510$^{***}$ & $-$3.463$^{***}$ \\
##   & (0.321) & (0.563) & (0.065) & (0.086) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$5.055$^{***}$ & $-$4.463$^{***}$ & $-$4.347$^{***}$ & $-$4.296$^{***}$ \\
##   & (0.107) & (0.395) & (0.024) & (0.073) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$4.367$^{***}$ & $-$3.763$^{***}$ & $-$1.862$^{***}$ & $-$1.810$^{***}$ \\
##   & (0.107) & (0.402) & (0.024) & (0.076) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$4.414$^{***}$ & $-$3.854$^{***}$ & $-$2.594$^{***}$ & $-$2.552$^{***}$ \\
##   & (0.321) & (0.561) & (0.065) & (0.086) \\
##   & & & & \\
##  state\_utORISSA  & $-$3.914$^{***}$ & $-$3.686$^{***}$ & $-$1.638$^{***}$ & $-$1.626$^{***}$ \\
##   & (0.321) & (0.400) & (0.065) & (0.064) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$2.676$^{***}$ & $-$2.606$^{***}$ & $-$1.301$^{***}$ & $-$1.261$^{***}$ \\
##   & (0.556) & (0.568) & (0.157) & (0.366) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$2.664$^{***}$ & $-$2.718$^{***}$ & $-$0.707$^{***}$ & $-$0.713$^{***}$ \\
##   & (0.321) & (0.276) & (0.065) & (0.065) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$4.824$^{***}$ & $-$4.250$^{***}$ & $-$19.749$^{***}$ & $-$19.702$^{***}$ \\
##   & (0.267) & (0.522) & (1.066) & (1.070) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$0.500$^{***}$ & $-$0.938$^{***}$ & $-$0.099$^{***}$ & $-$0.123 \\
##   & (0.000) & (0.252) & (0.000) & (0.076) \\
##   & & & & \\
##  state\_utTELANGANA & $-$4.347$^{***}$ & $-$4.387$^{***}$ & $-$1.347$^{***}$ & $-$1.277$^{***}$ \\
##   & (0.559) & (0.479) & (0.111) & (0.176) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$4.609$^{***}$ & $-$4.040$^{***}$ & $-$2.665$^{***}$ & $-$2.619$^{***}$ \\
##   & (0.214) & (0.471) & (0.046) & (0.075) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 1.582$^{***}$ & 1.277$^{***}$ & 0.187$^{***}$ & 0.232 \\
##   & (0.160) & (0.398) & (0.031) & (0.147) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$4.824$^{***}$ & $-$4.372$^{***}$ & $-$19.749$^{***}$ & $-$19.705$^{***}$ \\
##   & (0.267) & (0.455) & (1.066) & (1.069) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$0.144 & $-$0.404$^{***}$ & 0.055 & 0.023 \\
```

```
##   & (0.160) & (0.097) & (0.037) & (0.055) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$5.019$^{***}$ & $-$4.426$^{***}$ & $-$19.821$^{***}$ & $-$19.772$^{***}$ \\
##   & (0.160) & (0.443) & (1.065) & (1.070) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.832$^{***}$ & $-$4.274$^{***}$ & $-$3.203$^{***}$ & $-$3.165$^{***}$ \\
##   & (0.160) & (0.427) & (0.037) & (0.075) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$4.957$^{***}$ & $-$4.419$^{***}$ & $-$4.301$^{***}$ & $-$4.264$^{***}$ \\
##   & (0.160) & (0.415) & (0.037) & (0.071) \\
##   & & & & \\
##  state\_utZ DAMAN & DIU & $-$5.035$^{***}$ & $-$4.679$^{***}$ & $-$19.824$^{***}$ & $-$19.800$^{***}$ \\
##   & (0.143) & (0.307) & (1.065) & (1.069) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$4.805$^{***}$ & $-$4.703$^{***}$ & $-$2.737$^{***}$ & $-$2.734$^{***}$ \\
##   & (0.107) & (0.146) & (0.024) & (0.025) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$4.684$^{***}$ & $-$4.589$^{***}$ & $-$20.252$^{***}$ & $-$20.343$^{***}$ \\
##   & (0.457) & (0.455) & (1.076) & (1.090) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$4.957$^{***}$ & $-$4.387$^{***}$ & $-$4.301$^{***}$ & $-$4.261$^{***}$ \\
##   & (0.160) & (0.432) & (0.037) & (0.076) \\
##   & & & & \\
##  as.factor(year)2002 & 0.007 & $-$0.009 & 0.000 & $-$0.034 \\
##   & (0.301) & (0.301) & (0.197) & (0.217) \\
##   & & & & \\
##  as.factor(year)2003 & 0.236 & 0.205 & 0.141 & 0.106 \\
##   & (0.361) & (0.343) & (0.195) & (0.191) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.107 & $-$0.148 & $-$0.078 & $-$0.111 \\
##   & (0.334) & (0.307) & (0.230) & (0.221) \\
##   & & & & \\
##  as.factor(year)2005 & 0.236 & 0.159 & 0.141 & 0.094 \\
##   & (0.399) & (0.380) & (0.235) & (0.227) \\
##   & & & & \\
##  as.factor(year)2006 & $-$0.050 & $-$0.091 & $-$0.038 & $-$0.059 \\
##   & (0.329) & (0.305) & (0.218) & (0.210) \\
##   & & & & \\
##  as.factor(year)2007 & 0.236 & 0.125 & 0.141 & 0.107 \\
##   & (0.531) & (0.507) & (0.312) & (0.318) \\
##   & & & & \\
##  as.factor(year)2008 & 0.682 & 0.486 & 0.193 & 0.145 \\
##   & (0.782) & (0.655) & (0.333) & (0.346) \\
##   & & & & \\
##  as.factor(year)2009 & 0.848 & 0.583 & 0.259 & 0.186 \\
##   & (0.791) & (0.628) & (0.296) & (0.351) \\
##   & & & & \\
##  as.factor(year)2010 & 0.493 & 0.152 & $-$0.009 & $-$0.117 \\
##   & (0.815) & (0.608) & (0.363) & (0.406) \\
##   & & & & \\
##  as.factor(year)2011 & 1.672 & 1.251 & 0.552$^{*}$ & 0.436 \\
##   & (1.320) & (1.046) & (0.322) & (0.381) \\
##   & & & & \\
##  as.factor(year)2012 & 1.692 & 1.202 & 0.507 & 0.367 \\
##   & (1.213) & (0.901) & (0.344) & (0.401) \\
##   & & & & \\
##  as.factor(year)2013 & 2.480 & 1.921 & 0.827$^{***}$ & 0.663$^{*}$ \\
##   & (1.565) & (1.218) & (0.302) & (0.400) \\
##   & & & & \\
##  as.factor(year)2014 & 1.485 & 0.814 & 0.427$^{*}$ & 0.231 \\
##   & (1.074) & (0.679) & (0.239) & (0.400) \\
##   & & & & \\
```

```
##  as.factor(year)2015 & 1.696 & 0.853 & 0.680$^{***}$ & 0.461 \\
##   & (1.035) & (0.550) & (0.253) & (0.442) \\
##   & & & & \\
##  as.factor(year)2016 & 1.501 & 0.626 & 0.570$^{**}$ & 0.312 \\
##   & (1.041) & (0.568) & (0.289) & (0.515) \\
##   & & & & \\
##  Constant & 4.451$^{***}$ & 4.570$^{***}$ & 1.907$^{***}$ & 2.080$^{***}$ \\
##   & (0.803) & (0.671) & (0.343) & (0.436) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}

##############
###Table A9###
##############
## OLS
model.ols <- lm(death_not_remanded ~ 1 + l.state_pca + state_ut +
                      as.factor(year), data = police.data.t1)

model.ols.cl <- cl(police.data.t1, model.ols, police.data.t1$state_ut)


## OLS with logged DV
police.data.t1$death_not_remanded_ln <- log(police.data.t1$death_not_remanded+1)

model.ols.log <- lm(death_not_remanded_ln ~ 1 + l.state_pca + state_ut +
                 as.factor(year), data = police.data.t1)

model.ols.log.cl <- cl(police.data.t1, model.ols.log, police.data.t1$state_ut)

## OLS with Controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:4, 1])
```

```
  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:4, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t2 <- matrix(NA, nrow = 3, ncol = 3)
for (i in 1:3){
  result.t2[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t2

##              [,1]       [,2]       [,3]
## [1,] -1.43202146 0.74606629 0.05493003
## [2,]  2.08038837 1.05317558 0.04822866
## [3,] -0.05493869 0.05728091 0.33750337

## Replace results to model result
model.ols.cl.c <- result.p.1

model.ols.cl.c[2:4, 1] <- result.t2[, 1]
model.ols.cl.c[2:4, 2] <- result.t2[, 2]
model.ols.cl.c[2:4, 4] <- result.t2[, 3]

## OLS with logged DV and Controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Log DV
  police.imp.1$death_not_remanded_ln <- log(police.imp.1$death_not_remanded+1)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded_ln ~ 1 + l.state_pca + gdp +
```

```
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:4, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:4, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t2 <- matrix(NA, nrow = 3, ncol = 3)
for (i in 1:3){
  result.t2[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t2

##             [,1]       [,2]       [,3]
## [1,] -0.20190795 0.08216412 0.01399571
## [2,]  0.16598797 0.13405295 0.21563193
## [3,] -0.01015081 0.01039823 0.32896275

## Replace results to model result
model.ols.log.cl.c <- result.p.1

model.ols.log.cl.c[2:4, 1] <- result.t2[, 1]
model.ols.log.cl.c[2:4, 2] <- result.t2[, 2]
model.ols.log.cl.c[2:4, 4] <- result.t2[, 3]

stargazer(model.ols.cl, model.ols.cl.c,model.ols.log.cl, model.ols.log.cl.c)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:26
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
```

```
##  l.state\_pca & $-$1.564$^{*}$ & $-$1.432$^{*}$ & $-$0.212$^{**}$ & $-$0.202$^{**}$ \\
##   & (0.856) & (0.746) & (0.087) & (0.082) \\
##   & & & & \\
##  gdp &  & 2.080$^{**}$ &  & 0.166 \\
##   &  & (1.053) &  & (0.134) \\
##   & & & & \\
##  head\_trans &  & $-$0.055 &  & $-$0.010 \\
##   &  & (0.057) &  & (0.010) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.601$^{***}$ & $-$4.013$^{***}$ & $-$1.533$^{***}$ & $-$1.490$^{***}$ \\
##   & (0.321) & (0.569) & (0.033) & (0.051) \\
##   & & & & \\
##  state\_utASSAM & $-$4.538$^{***}$ & $-$4.170$^{***}$ & $-$1.508$^{***}$ & $-$1.481$^{***}$ \\
##   & (0.321) & (0.465) & (0.033) & (0.042) \\
##   & & & & \\
##  state\_utBIHAR  & $-$5.293$^{***}$ & $-$5.005$^{***}$ & $-$1.541$^{***}$ & $-$1.518$^{***}$ \\
##   & (0.160) & (0.096) & (0.016) & (0.021) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$3.788$^{***}$ & $-$3.416$^{***}$ & $-$1.086$^{***}$ & $-$1.058$^{***}$ \\
##   & (0.321) & (0.464) & (0.033) & (0.041) \\
##   & & & & \\
##  state\_utGOA & $-$4.538$^{***}$ & $-$3.939$^{***}$ & $-$1.490$^{***}$ & $-$1.439$^{***}$ \\
##   & (0.321) & (0.565) & (0.033) & (0.049) \\
##   & & & & \\
##  state\_utGUJARAT  & 3.176$^{***}$ & 2.809$^{***}$ & 0.449$^{***}$ & 0.426$^{***}$ \\
##   & (0.267) & (0.172) & (0.027) & (0.035) \\
##   & & & & \\
##  state\_utHARYANA  & $-$4.136$^{***}$ & $-$4.003$^{***}$ & $-$1.236$^{***}$ & $-$1.224$^{***}$ \\
##   & (0.267) & (0.303) & (0.027) & (0.028) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.606$^{***}$ & $-$5.053$^{***}$ & $-$1.739$^{***}$ & $-$1.699$^{***}$ \\
##   & (0.160) & (0.199) & (0.016) & (0.037) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$5.231$^{***}$ & $-$4.671$^{***}$ & $-$1.497$^{***}$ & $-$1.456$^{***}$ \\
##   & (0.160) & (0.197) & (0.016) & (0.036) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$4.476$^{***}$ & $-$4.107$^{***}$ & $-$1.465$^{***}$ & $-$1.437$^{***}$ \\
##   & (0.321) & (0.464) & (0.033) & (0.041) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.402$^{***}$ & $-$4.660$^{***}$ & $-$1.177$^{***}$ & $-$1.196$^{***}$ \\
##   & (0.053) & (0.099) & (0.005) & (0.016) \\
##   & & & & \\
##  state\_utKERALA  & $-$3.976$^{***}$ & $-$3.913$^{***}$ & $-$1.198$^{***}$ & $-$1.191$^{***}$ \\
##   & (0.321) & (0.323) & (0.033) & (0.032) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$2.481$^{***}$ & $-$2.357$^{***}$ & $-$0.510$^{***}$ & $-$0.501$^{***}$ \\
##   & (0.160) & (0.107) & (0.016) & (0.016) \\
##   & & & & \\
##  state\_utMAHARASHTRA & 10.965$^{***}$ & 9.657$^{***}$ & 1.056$^{***}$ & 0.964$^{***}$ \\
##   & (0.053) & (0.734) & (0.005) & (0.087) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$4.601$^{***}$ & $-$4.034$^{***}$ & $-$1.533$^{***}$ & $-$1.493$^{***}$ \\
##   & (0.321) & (0.563) & (0.033) & (0.052) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$5.054$^{***}$ & $-$4.465$^{***}$ & $-$1.630$^{***}$ & $-$1.588$^{***}$ \\
##   & (0.107) & (0.395) & (0.011) & (0.041) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$4.367$^{***}$ & $-$3.765$^{***}$ & $-$1.262$^{***}$ & $-$1.219$^{***}$ \\
##   & (0.107) & (0.402) & (0.011) & (0.042) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$4.413$^{***}$ & $-$3.856$^{***}$ & $-$1.447$^{***}$ & $-$1.408$^{***}$ \\
##   & (0.321) & (0.561) & (0.033) & (0.052) \\
```

```
##   & & & & \\
##  state\_utORISSA  & $-$3.913$^{***}$ & $-$3.686$^{***}$ & $-$1.136$^{***}$ & $-$1.121$^{***}$ \\
##   & (0.321) & (0.399) & (0.033) & (0.037) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$3.011$^{***}$ & $-$2.500$^{***}$ & $-$0.768$^{***}$ & $-$0.693$^{***}$ \\
##   & (0.267) & (0.537) & (0.027) & (0.068) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$2.663$^{***}$ & $-$2.718$^{***}$ & $-$0.625$^{***}$ & $-$0.628$^{***}$ \\
##   & (0.321) & (0.276) & (0.033) & (0.031) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$4.824$^{***}$ & $-$4.252$^{***}$ & $-$1.633$^{***}$ & $-$1.594$^{***}$ \\
##   & (0.267) & (0.522) & (0.027) & (0.049) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$0.500$^{***}$ & $-$0.936$^{***}$ & $-$0.121$^{***}$ & $-$0.148$^{***}$ \\
##   & (0.000) & (0.252) & (0.000) & (0.034) \\
##   & & & & \\
##  state\_utTELANGANA & $-$4.342$^{***}$ & $-$4.389$^{***}$ & $-$1.023$^{***}$ & $-$1.028$^{***}$ \\
##   & (0.555) & (0.478) & (0.075) & (0.070) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$4.609$^{***}$ & $-$4.042$^{***}$ & $-$1.448$^{***}$ & $-$1.408$^{***}$ \\
##   & (0.214) & (0.471) & (0.022) & (0.045) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 1.582$^{***}$ & 1.278$^{***}$ & 0.244$^{***}$ & 0.243$^{***}$ \\
##   & (0.160) & (0.398) & (0.016) & (0.057) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$4.824$^{***}$ & $-$4.374$^{***}$ & $-$1.633$^{***}$ & $-$1.600$^{***}$ \\
##   & (0.267) & (0.455) & (0.027) & (0.041) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$0.144 & $-$0.403$^{***}$ & $-$0.152$^{***}$ & $-$0.170$^{***}$ \\
##   & (0.160) & (0.097) & (0.016) & (0.021) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$5.019$^{***}$ & $-$4.428$^{***}$ & $-$1.660$^{***}$ & $-$1.619$^{***}$ \\
##   & (0.160) & (0.443) & (0.016) & (0.045) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.832$^{***}$ & $-$4.276$^{***}$ & $-$1.530$^{***}$ & $-$1.492$^{***}$ \\
##   & (0.160) & (0.427) & (0.016) & (0.044) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$4.957$^{***}$ & $-$4.421$^{***}$ & $-$1.617$^{***}$ & $-$1.580$^{***}$ \\
##   & (0.160) & (0.415) & (0.016) & (0.042) \\
##   & & & & \\
##  state\_utZ DAMAN & DIU & $-$5.035$^{***}$ & $-$4.680$^{***}$ & $-$1.658$^{***}$ & $-$1.635$^{***}$ \\
##   & (0.143) & (0.307) & (0.015) & (0.029) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$4.804$^{***}$ & $-$4.703$^{***}$ & $-$1.456$^{***}$ & $-$1.450$^{***}$ \\
##   & (0.107) & (0.146) & (0.011) & (0.014) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$5.019$^{***}$ & $-$4.483$^{***}$ & $-$1.660$^{***}$ & $-$1.624$^{***}$ \\
##   & (0.160) & (0.418) & (0.016) & (0.043) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$4.957$^{***}$ & $-$4.389$^{***}$ & $-$1.617$^{***}$ & $-$1.578$^{***}$ \\
##   & (0.160) & (0.432) & (0.016) & (0.044) \\
##   & & & & \\
##  as.factor(year)2002 & 0.007 & $-$0.009 & $-$0.107 & $-$0.110 \\
##   & (0.300) & (0.301) & (0.100) & (0.101) \\
##   & & & & \\
##  as.factor(year)2003 & 0.236 & 0.205 & $-$0.018 & $-$0.021 \\
##   & (0.360) & (0.343) & (0.086) & (0.085) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.107 & $-$0.148 & $-$0.112 & $-$0.115 \\
##   & (0.333) & (0.307) & (0.109) & (0.107) \\
##   & & & & \\
##  as.factor(year)2005 & 0.236 & 0.159 & 0.003 & $-$0.004 \\
```

```
##   & (0.399) & (0.380) & (0.114) & (0.112) \\
##   & & & & \\
##  as.factor(year)2006 & $-$0.050 & $-$0.091 & $-$0.059 & $-$0.056 \\
##   & (0.329) & (0.305) & (0.103) & (0.099) \\
##   & & & & \\
##  as.factor(year)2007 & 0.236 & 0.125 & $-$0.051 & $-$0.057 \\
##   & (0.531) & (0.507) & (0.138) & (0.135) \\
##   & & & & \\
##  as.factor(year)2008 & 0.682 & 0.487 & $-$0.014 & $-$0.028 \\
##   & (0.781) & (0.655) & (0.126) & (0.118) \\
##   & & & & \\
##  as.factor(year)2009 & 0.849 & 0.584 & 0.079 & 0.060 \\
##   & (0.790) & (0.627) & (0.120) & (0.110) \\
##   & & & & \\
##  as.factor(year)2010 & 0.493 & 0.153 & $-$0.067 & $-$0.093 \\
##   & (0.815) & (0.607) & (0.134) & (0.123) \\
##   & & & & \\
##  as.factor(year)2011 & 1.663 & 1.256 & 0.107 & 0.077 \\
##   & (1.311) & (1.044) & (0.139) & (0.123) \\
##   & & & & \\
##  as.factor(year)2012 & 1.683 & 1.206 & 0.074 & 0.040 \\
##   & (1.204) & (0.899) & (0.160) & (0.140) \\
##   & & & & \\
##  as.factor(year)2013 & 2.471 & 1.925 & 0.197 & 0.158 \\
##   & (1.557) & (1.215) & (0.163) & (0.145) \\
##   & & & & \\
##  as.factor(year)2014 & 1.477 & 0.819 & 0.189 & 0.142 \\
##   & (1.066) & (0.676) & (0.153) & (0.135) \\
##   & & & & \\
##  as.factor(year)2015 & 1.687 & 0.859 & 0.290$^{*}$ & 0.230$^{*}$ \\
##   & (1.027) & (0.547) & (0.149) & (0.129) \\
##   & & & & \\
##  as.factor(year)2016 & 1.492 & 0.632 & 0.217 & 0.154 \\
##   & (1.033) & (0.563) & (0.162) & (0.138) \\
##   & & & & \\
##  Constant & 4.790$^{***}$ & 4.462$^{***}$ & 1.694$^{***}$ & 1.673$^{***}$ \\
##   & (0.509) & (0.625) & (0.090) & (0.102) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
###############
###Table A10###
###############
## OLS no lag
model.ols.nl <- lm(death_not_remanded ~ 1 + state_pca + state_ut +
                  as.factor(year), data = police.data.t1)

model.ols.nl.cl <- cl(police.data.t1, model.ols.nl, police.data.t1$state_ut)

## Poisson no lag
model.p.nl <- glm(death_not_remanded ~ 1 + state_pca + state_ut +
                     as.factor(year), data = police.data.t1, family="poisson")

model.p.nl.cl <- cl(police.data.t1, model.p.nl, police.data.t1$state_ut)

## OLS no lag with Controls
## Loop models for 5 imputation datasets
```

```r
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + state_pca + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:4, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:4, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t2 <- matrix(NA, nrow = 3, ncol = 3)
for (i in 1:3){
  result.t2[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t2
```

```
##            [,1]       [,2]       [,3]
## [1,] -1.2525890 0.81582589 0.12469466
## [2,]  2.2347157 1.12768977 0.04751552
## [3,] -0.0630906 0.05824742 0.27874257
```

```r
## Replace results to model result
model.ols.nl.cl.c <- result.p.1

model.ols.cl.c[2:4, 1] <- result.t2[, 1]
```

```r
model.ols.cl.c[2:4, 2] <- result.t2[, 2]
model.ols.cl.c[2:4, 4] <- result.t2[, 3]

## Poisson no lag with Controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + state_pca + gdp +
                 head_trans + state_ut +
                 as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:4, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:4, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t2 <- matrix(NA, nrow = 3, ncol = 3)
for (i in 1:3){
  result.t2[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t2
```

```
##            [,1]       [,2]       [,3]
## [1,] -0.5001251 0.20534439 0.01486946
## [2,]  0.2913028 0.25796014 0.25879018
## [3,] -0.0319439 0.03372827 0.34359008
```

```r
## Replace results to model result
model.p.nl.cl.c <- result.p.1

model.ols.log.cl.c[2:4, 1] <- result.t2[, 1]
model.ols.log.cl.c[2:4, 2] <- result.t2[, 2]
model.ols.log.cl.c[2:4, 4] <- result.t2[, 3]

stargazer(model.ols.nl.cl, model.ols.nl.cl.c, model.p.nl.cl, model.p.nl.cl.c)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:28
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  state\_pca & $-$1.322 & $-$1.270 & $-$0.505$^{**}$ & $-$0.500$^{**}$ \\
##   & (0.881) & (0.819) & (0.217) & (0.205) \\
##   & & & & \\
##  gdp &  & 2.165$^{*}$ &  & 0.291 \\
##   &  & (1.142) &  & (0.258) \\
##   & & & & \\
##  head\_trans &  & $-$0.064 &  & $-$0.032 \\
##   &  & (0.058) &  & (0.033) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.692$^{***}$ & $-$4.029$^{***}$ & $-$3.563$^{***}$ & $-$3.466$^{***}$ \\
##   & (0.330) & (0.620) & (0.077) & (0.110) \\
##   & & & & \\
##  state\_utASSAM & $-$4.629$^{***}$ & $-$4.204$^{***}$ & $-$3.157$^{***}$ & $-$3.099$^{***}$ \\
##   & (0.330) & (0.508) & (0.077) & (0.095) \\
##   & & & & \\
##  state\_utBIHAR  & $-$5.331$^{***}$ & $-$5.030$^{***}$ & $-$2.981$^{***}$ & $-$2.924$^{***}$ \\
##   & (0.220) & (0.136) & (0.063) & (0.063) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$3.879$^{***}$ & $-$3.449$^{***}$ & $-$1.548$^{***}$ & $-$1.482$^{***}$ \\
##   & (0.330) & (0.506) & (0.077) & (0.093) \\
##   & & & & \\
##  state\_utGOA & $-$4.629$^{***}$ & $-$3.948$^{***}$ & $-$3.157$^{***}$ & $-$3.049$^{***}$ \\
##   & (0.330) & (0.615) & (0.077) & (0.109) \\
##   & & & & \\
##  state\_utGUJARAT  & 3.101$^{***}$ & 2.732$^{***}$ & 0.566$^{***}$ & 0.529$^{***}$ \\
##   & (0.275) & (0.176) & (0.065) & (0.069) \\
##   & & & & \\
##  state\_utHARYANA  & $-$4.212$^{***}$ & $-$4.042$^{***}$ & $-$1.888$^{***}$ & $-$1.855$^{***}$ \\
##   & (0.275) & (0.330) & (0.065) & (0.065) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.643$^{***}$ & $-$5.058$^{***}$ & $-$20.090$^{***}$ & $-$20.005$^{***}$ \\
##   & (0.220) & (0.201) & (1.066) & (1.069) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$5.268$^{***}$ & $-$4.675$^{***}$ & $-$2.799$^{***}$ & $-$2.698$^{***}$ \\
##   & (0.220) & (0.201) & (0.063) & (0.086) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$4.567$^{***}$ & $-$4.140$^{***}$ & $-$2.869$^{***}$ & $-$2.808$^{***}$ \\
##   & (0.330) & (0.506) & (0.077) & (0.093) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.417$^{***}$ & $-$4.691$^{***}$ & $-$1.843$^{***}$ & $-$1.882$^{***}$ \\
```

```
##   & (0.055) & (0.107) & (0.011) & (0.027) \\
##   & & & & \\
##  state\_utKERALA  & $-$4.067$^{***}$ & $-$3.969$^{***}$ & $-$1.771$^{***}$ & $-$1.750$^{***}$ \\
##   & (0.330) & (0.353) & (0.077) & (0.076) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$2.518$^{***}$ & $-$2.395$^{***}$ & $-$0.678$^{***}$ & $-$0.652$^{***}$ \\
##   & (0.220) & (0.166) & (0.063) & (0.055) \\
##   & & & & \\
##  state\_utMAHARASHTRA & 10.980$^{***}$ & 9.569$^{***}$ & 1.077$^{***}$ & 0.884$^{***}$ \\
##   & (0.055) & (0.790) & (0.019) & (0.181) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$4.692$^{***}$ & $-$4.053$^{***}$ & $-$3.563$^{***}$ & $-$3.478$^{***}$ \\
##   & (0.330) & (0.614) & (0.077) & (0.113) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$5.085$^{***}$ & $-$4.441$^{***}$ & $-$4.370$^{***}$ & $-$4.290$^{***}$ \\
##   & (0.110) & (0.427) & (0.028) & (0.078) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$4.397$^{***}$ & $-$3.741$^{***}$ & $-$1.885$^{***}$ & $-$1.804$^{***}$ \\
##   & (0.110) & (0.434) & (0.028) & (0.081) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$4.504$^{***}$ & $-$3.877$^{***}$ & $-$2.646$^{***}$ & $-$2.567$^{***}$ \\
##   & (0.330) & (0.610) & (0.077) & (0.113) \\
##   & & & & \\
##  state\_utORISSA  & $-$4.004$^{***}$ & $-$3.732$^{***}$ & $-$1.691$^{***}$ & $-$1.655$^{***}$ \\
##   & (0.330) & (0.437) & (0.077) & (0.088) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$3.087$^{***}$ & $-$2.480$^{***}$ & $-$0.918$^{***}$ & $-$0.703$^{***}$ \\
##   & (0.275) & (0.561) & (0.065) & (0.183) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$2.754$^{***}$ & $-$2.784$^{***}$ & $-$0.759$^{***}$ & $-$0.756$^{***}$ \\
##   & (0.330) & (0.302) & (0.077) & (0.072) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$4.899$^{***}$ & $-$4.262$^{***}$ & $-$19.798$^{***}$ & $-$19.717$^{***}$ \\
##   & (0.275) & (0.567) & (1.066) & (1.071) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$0.500$^{***}$ & $-$0.965$^{***}$ & $-$0.099$^{***}$ & $-$0.140$^{**}$ \\
##   & (0.000) & (0.266) & (0.000) & (0.069) \\
##   & & & & \\
##  state\_utTELANGANA & $-$4.205$^{***}$ & $-$4.307$^{***}$ & $-$1.357$^{***}$ & $-$1.273$^{***}$ \\
##   & (0.588) & (0.547) & (0.173) & (0.186) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$4.669$^{***}$ & $-$4.041$^{***}$ & $-$2.708$^{***}$ & $-$2.629$^{***}$ \\
##   & (0.220) & (0.512) & (0.052) & (0.090) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 1.544$^{***}$ & 1.225$^{***}$ & 0.155$^{**}$ & 0.190 \\
##   & (0.220) & (0.461) & (0.063) & (0.166) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$4.899$^{***}$ & $-$4.391$^{***}$ & $-$19.798$^{***}$ & $-$19.725$^{***}$ \\
##   & (0.275) & (0.495) & (1.066) & (1.069) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$0.190 & $-$0.454$^{***}$ & 0.009 & $-$0.028 \\
##   & (0.165) & (0.104) & (0.040) & (0.043) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$5.065$^{***}$ & $-$4.415$^{***}$ & $-$19.860$^{***}$ & $-$19.779$^{***}$ \\
##   & (0.165) & (0.479) & (1.064) & (1.069) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.877$^{***}$ & $-$4.267$^{***}$ & $-$3.249$^{***}$ & $-$3.181$^{***}$ \\
##   & (0.165) & (0.462) & (0.040) & (0.087) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$5.002$^{***}$ & $-$4.413$^{***}$ & $-$4.347$^{***}$ & $-$4.281$^{***}$ \\
##   & (0.165) & (0.450) & (0.040) & (0.083) \\
##   & & & & \\
```

```
##  state\_utZ DAMAN & DIU & $-$5.079$^{***}$ & $-$4.686$^{***}$ & $-$19.863$^{***}$ & $-$19.816$^{***}$ \\
##   & (0.150) & (0.336) & (1.065) & (1.068) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$4.835$^{***}$ & $-$4.717$^{***}$ & $-$2.761$^{***}$ & $-$2.749$^{***}$ \\
##   & (0.110) & (0.160) & (0.028) & (0.034) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$5.065$^{***}$ & $-$4.475$^{***}$ & $-$19.860$^{***}$ & $-$19.791$^{***}$ \\
##   & (0.165) & (0.453) & (1.064) & (1.069) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$5.002$^{***}$ & $-$4.378$^{***}$ & $-$4.347$^{***}$ & $-$4.277$^{***}$ \\
##   & (0.165) & (0.468) & (0.040) & (0.087) \\
##   & & & & \\
##  as.factor(year)2002 & 0.007 & $-$0.012 & $-$0.000 & $-$0.038 \\
##   & (0.300) & (0.300) & (0.197) & (0.216) \\
##   & & & & \\
##  as.factor(year)2003 & 0.235 & 0.202 & 0.141 & 0.100 \\
##   & (0.360) & (0.340) & (0.194) & (0.189) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.108 & $-$0.151 & $-$0.078 & $-$0.119 \\
##   & (0.333) & (0.304) & (0.230) & (0.218) \\
##   & & & & \\
##  as.factor(year)2005 & 0.235 & 0.152 & 0.141 & 0.083 \\
##   & (0.399) & (0.379) & (0.235) & (0.225) \\
##   & & & & \\
##  as.factor(year)2006 & $-$0.050 & $-$0.089 & $-$0.038 & $-$0.070 \\
##   & (0.329) & (0.303) & (0.218) & (0.210) \\
##   & & & & \\
##  as.factor(year)2007 & 0.613 & 0.481 & 0.186 & 0.140 \\
##   & (0.639) & (0.572) & (0.309) & (0.315) \\
##   & & & & \\
##  as.factor(year)2008 & 0.802 & 0.606 & 0.271 & 0.207 \\
##   & (0.897) & (0.770) & (0.354) & (0.360) \\
##   & & & & \\
##  as.factor(year)2009 & 0.782 & 0.528 & 0.240 & 0.144 \\
##   & (0.810) & (0.657) & (0.293) & (0.337) \\
##   & & & & \\
##  as.factor(year)2010 & 0.647 & 0.304 & 0.011 & $-$0.131 \\
##   & (0.986) & (0.784) & (0.356) & (0.379) \\
##   & & & & \\
##  as.factor(year)2011 & 1.617 & 1.224 & 0.531 & 0.378 \\
##   & (1.378) & (1.123) & (0.327) & (0.359) \\
##   & & & & \\
##  as.factor(year)2012 & 1.541 & 1.083 & 0.483 & 0.297 \\
##   & (1.199) & (0.899) & (0.333) & (0.370) \\
##   & & & & \\
##  as.factor(year)2013 & 2.359 & 1.828 & 0.876$^{***}$ & 0.653$^{**}$ \\
##   & (1.564) & (1.222) & (0.261) & (0.324) \\
##   & & & & \\
##  as.factor(year)2014 & 1.313 & 0.667 & 0.518 & 0.267 \\
##   & (1.105) & (0.716) & (0.315) & (0.384) \\
##   & & & & \\
##  as.factor(year)2015 & 1.479 & 0.654 & 0.612$^{**}$ & 0.323 \\
##   & (1.042) & (0.597) & (0.281) & (0.413) \\
##   & & & & \\
##  as.factor(year)2016 & 1.285 & 0.423 & 0.502$^{*}$ & 0.160 \\
##   & (1.032) & (0.581) & (0.294) & (0.466) \\
##   & & & & \\
##  Constant & 4.846$^{***}$ & 4.481$^{***}$ & 1.505$^{***}$ & 1.552$^{***}$ \\
##   & (0.499) & (0.637) & (0.215) & (0.200) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
```

```
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}

################
###Table A11###
################
## Balanced Pabel
police.data.b <- subset(police.data.t1, police.data.t1$state_ut !=  "TELANGANA")
police.data.b <- subset(police.data.b, police.data.b$state_ut !=  "Z DAMAN & DIU")

police.data.b$state_ut <- as.factor(as.character(police.data.b$state_ut))
levels(police.data.b$state_ut)

##  [1] "ANDHRA PRADESH"     "ARUNACHAL PRADESH " "ASSAM"
##  [4] "BIHAR "             "CHHATTISGARH "      "GOA"
##  [7] "GUJARAT "           "HARYANA "           "HIMACHAL PRADESH "
## [10] "JAMMU & KASHMIR "   "JHARKHAND"          "KARNATAKA "
## [13] "KERALA "            "MADHYA PRADESH"     "MAHARASHTRA"
## [16] "MANIPUR "           "MEGHALAYA "         "MIZORAM "
## [19] "NAGALAND "          "ORISSA "            "PUNJAB "
## [22] "RAJASTHAN "         "SIKKIM "            "TAMIL NADU "
## [25] "TRIPURA "           "UTTAR PRADESH "     "UTTARAKHAND "
## [28] "WEST BENGAL "       "Z A & N ISLANDS"    "Z CHANDIGARH "
## [31] "Z D & N HAVELI"     "Z DELHI "           "Z LAKSHADWEEP "
## [34] "Z PUDUCHERRY "

length(police.data.b$death_not_remanded)

## [1] 544

model.poisson.b <- glm(death_not_remanded ~ 1 + l.state_pca + state_ut + as.factor(year), data = police.data.b, fa
model.poisson.b.cl <- cl(police.data.b, model.poisson.b, police.data.b$state_ut)

##Quasi-poisson
model.qp <- glm(death_not_remanded ~ 1 + l.state_pca + state_ut + as.factor(year), data = police.data.t1, family =
model.qp.cl <- cl(police.data.t1, model.qp, police.data.t1$state_ut)

##Negative binominal
library(MASS)
model.nb <- glm.nb(death_not_remanded ~ 1 + l.state_pca + state_ut + as.factor(year), data = police.data.t1)
model.nb.cl <- cl(police.data.t1, model.nb, police.data.t1$state_ut)

## Delete new states
police.data.nn <- subset(police.data.t1, police.data.t1$state_ut !=  "TELANGANA")
police.data.nn <- police.data.nn[!police.data.nn$state_ut == "ANDHRA PRADESH", ]

police.data.nn$state_ut <- as.factor(as.character(police.data.nn$state_ut))
levels(police.data.nn$state_ut)

##  [1] "ARUNACHAL PRADESH " "ASSAM"              "BIHAR "
##  [4] "CHHATTISGARH "      "GOA"                "GUJARAT "
##  [7] "HARYANA "           "HIMACHAL PRADESH "  "JAMMU & KASHMIR "
## [10] "JHARKHAND"          "KARNATAKA "         "KERALA "
## [13] "MADHYA PRADESH"     "MAHARASHTRA"        "MANIPUR "
## [16] "MEGHALAYA "         "MIZORAM "           "NAGALAND "
## [19] "ORISSA "            "PUNJAB "            "RAJASTHAN "
## [22] "SIKKIM "            "TAMIL NADU "        "TRIPURA "
## [25] "UTTAR PRADESH "     "UTTARAKHAND "       "WEST BENGAL "
## [28] "Z A & N ISLANDS"    "Z CHANDIGARH "      "Z D & N HAVELI"
## [31] "Z DAMAN & DIU"      "Z DELHI "           "Z LAKSHADWEEP "
## [34] "Z PUDUCHERRY "

length(police.data.nn$death_not_remanded)
```

```
## [1] 543
```

```
model.poisson.nn <- glm(death_not_remanded ~ 1 + l.state_pca + state_ut + as.factor(year), data = police.data.nn,
model.poisson.nn.cl <- cl(police.data.nn, model.poisson.nn, police.data.nn$state_ut)


## Delete MAHARASHTRA
police.data.nm <- subset(police.data.t1, police.data.t1$state_ut !=  "MAHARASHTRA")

police.data.nm$state_ut <- as.factor(as.character(police.data.nm$state_ut))
levels(police.data.nm$state_ut)
```

```
##  [1] "ANDHRA PRADESH"     "ARUNACHAL PRADESH " "ASSAM"
##  [4] "BIHAR "             "CHHATTISGARH "      "GOA"
##  [7] "GUJARAT "           "HARYANA "           "HIMACHAL PRADESH "
## [10] "JAMMU & KASHMIR "   "JHARKHAND"          "KARNATAKA "
## [13] "KERALA "            "MADHYA PRADESH"     "MANIPUR "
## [16] "MEGHALAYA "         "MIZORAM "           "NAGALAND "
## [19] "ORISSA "            "PUNJAB "            "RAJASTHAN "
## [22] "SIKKIM "            "TAMIL NADU "        "TELANGANA"
## [25] "TRIPURA "           "UTTAR PRADESH "     "UTTARAKHAND "
## [28] "WEST BENGAL "       "Z A & N ISLANDS"    "Z CHANDIGARH "
## [31] "Z D & N HAVELI"     "Z DAMAN & DIU"      "Z DELHI "
## [34] "Z LAKSHADWEEP "     "Z PUDUCHERRY "
```

```
length(police.data.nm$death_not_remanded)
```

```
## [1] 546
```

```
model.poisson.nm <- glm(death_not_remanded ~ 1 + l.state_pca + state_ut + as.factor(year), data = police.data.nm,
model.poisson.nm.cl <- cl(police.data.nm, model.poisson.nm, police.data.nm$state_ut)

## Delete MAHARASHTRA and ANDHRA PRADESH
police.data.nma <- subset(police.data.t1, police.data.t1$state_ut !=  "MAHARASHTRA")
police.data.nma <- police.data.nma[!police.data.nma$state_ut == "ANDHRA PRADESH", ]

police.data.nma$state_ut <- as.factor(as.character(police.data.nma$state_ut))
levels(police.data.nma$state_ut)
```

```
##  [1] "ARUNACHAL PRADESH " "ASSAM"              "BIHAR "
##  [4] "CHHATTISGARH "      "GOA"                "GUJARAT "
##  [7] "HARYANA "           "HIMACHAL PRADESH "  "JAMMU & KASHMIR "
## [10] "JHARKHAND"          "KARNATAKA "         "KERALA "
## [13] "MADHYA PRADESH"     "MANIPUR "           "MEGHALAYA "
## [16] "MIZORAM "           "NAGALAND "          "ORISSA "
## [19] "PUNJAB "            "RAJASTHAN "         "SIKKIM "
## [22] "TAMIL NADU "        "TELANGANA"          "TRIPURA "
## [25] "UTTAR PRADESH "     "UTTARAKHAND "       "WEST BENGAL "
## [28] "Z A & N ISLANDS"    "Z CHANDIGARH "      "Z D & N HAVELI"
## [31] "Z DAMAN & DIU"      "Z DELHI "           "Z LAKSHADWEEP "
## [34] "Z PUDUCHERRY "
```

```
length(police.data.nma$death_not_remanded)
```

```
## [1] 530
```

```
model.poisson.nma <- glm(death_not_remanded ~ 1 + l.state_pca + state_ut + as.factor(year), data = police.data.nma
model.poisson.nma.cl <- cl(police.data.nma, model.poisson.nma, police.data.nma$state_ut)

##Print
stargazer(model.poisson.b, model.qp.cl, model.nb.cl, model.poisson.nn.cl , model.poisson.nm.cl, model.poisson.nma.
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:29
```

```
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{6}{c}{\textit{Dependent variable:}} \\
## \cline{2-7}
## \\[-1.8ex] & death\_not\_remanded & \multicolumn{5}{c}{ } \\
## \\[-1.8ex] & \textit{Poisson} & \multicolumn{5}{c}{\textit{coefficient}} \\
##  & \textit{} & \multicolumn{5}{c}{\textit{test}} \\
## \\[-1.8ex] & (1) & (2) & (3) & (4) & (5) & (6)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$0.598$^{***}$ & $-$0.597$^{***}$ & $-$0.582$^{***}$ & $-$0.645$^{***}$ & $-$0.477$^{***}$ &
##   & (0.121) & (0.164) & (0.172) & (0.145) & (0.185) & (0.155) \\
##   & & & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$3.510$^{***}$ & $-$3.510$^{***}$ & $-$3.556$^{***}$ &  & $-$3.574$^{***}$ &
##   & (0.717) & (0.064) & (0.058) &  & (0.064) &  \\
##   & & & & & & \\
##  state\_utASSAM & $-$3.105$^{***}$ & $-$3.105$^{***}$ & $-$3.154$^{***}$ & 0.405$^{***}$ & $-$3.168$^{***}$ & 0
##   & (0.589) & (0.064) & (0.058) & (0.000) & (0.064) & (0.000) \\
##   & & & & & & \\
##  state\_utBIHAR  & $-$2.949$^{***}$ & $-$2.948$^{***}$ & $-$2.984$^{***}$ & 0.521$^{***}$ & $-$2.928$^{***}$ &
##   & (0.461) & (0.031) & (0.039) & (0.078) & (0.037) & (0.078) \\
##   & & & & & & \\
##  state\_utCHHATTISGARH  & $-$1.495$^{***}$ & $-$1.496$^{***}$ & $-$1.549$^{***}$ & 2.015$^{***}$ & $-$1.559$^{*
##   & (0.284) & (0.064) & (0.059) & (0.000) & (0.064) & (0.000) \\
##   & & & & & & \\
##  state\_utGOA & $-$3.105$^{***}$ & $-$3.105$^{***}$ & $-$3.150$^{***}$ & 0.405$^{***}$ & $-$3.168$^{***}$ & 0.4
##   & (0.589) & (0.064) & (0.058) & (0.000) & (0.064) & (0.000) \\
##   & & & & & & \\
##  state\_utGUJARAT  & 0.614$^{***}$ & 0.613$^{***}$ & 0.574$^{***}$ & 4.122$^{***}$ & 0.560$^{***}$ & 4.132$^{**
##   & (0.146) & (0.056) & (0.052) & (0.010) & (0.059) & (0.006) \\
##   & & & & & & \\
##  state\_utHARYANA  & $-$1.840$^{***}$ & $-$1.841$^{***}$ & $-$1.885$^{***}$ & 1.668$^{***}$ & $-$1.894$^{***}$
##   & (0.323) & (0.056) & (0.051) & (0.010) & (0.059) & (0.006) \\
##   & & & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$20.056 & $-$20.055$^{***}$ & $-$38.822$^{***}$ & $-$16.571$^{***}$ & $-$20.042
##   & (1,406.492) & (1.064) & (1.064) & (1.067) & (1.065) & (1.068) \\
##   & & & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$2.766$^{***}$ & $-$2.766$^{***}$ & $-$2.785$^{***}$ & 0.703$^{***}$ & $-$2.746$
##   & (0.423) & (0.031) & (0.039) & (0.078) & (0.037) & (0.078) \\
##   & & & & & & \\
##  state\_utJHARKHAND & $-$2.817$^{***}$ & $-$2.817$^{***}$ & $-$2.865$^{***}$ & 0.693$^{***}$ & $-$2.881$^{***}$
##   & (0.514) & (0.064) & (0.059) & (0.000) & (0.064) & (0.000) \\
##   & & & & & & \\
##  state\_utKARNATAKA  & $-$1.823$^{***}$ & $-$1.823$^{***}$ & $-$1.846$^{***}$ & 1.668$^{***}$ & $-$1.837$^{***}
##   & (0.298) & (0.016) & (0.014) & (0.043) & (0.020) & (0.036) \\
##   & & & & & & \\
##  state\_utKERALA  & $-$1.718$^{***}$ & $-$1.719$^{***}$ & $-$1.762$^{***}$ & 1.792$^{***}$ & $-$1.782$^{***}$ &
##   & (0.312) & (0.064) & (0.059) & (0.000) & (0.064) & (0.000) \\
##   & & & & & & \\
##  state\_utMADHYA PRADESH & $-$0.646$^{***}$ & $-$0.646$^{***}$ & $-$0.680$^{***}$ & 2.823$^{***}$ & $-$0.625$^{
##   & (0.180) & (0.031) & (0.036) & (0.078) & (0.037) & (0.078) \\
##   & & & & & & \\
##  state\_utMAHARASHTRA & 1.091$^{***}$ & 1.091$^{***}$ & 1.053$^{***}$ & 4.570$^{***}$ &  &  \\
##   & (0.125) & (0.009) & (0.011) & (0.059) &  &  \\
##   & & & & & & \\
##  state\_utMANIPUR  & $-$3.510$^{***}$ & $-$3.510$^{***}$ & $-$3.556$^{***}$ & $-$0.000 & $-$3.574$^{***}$ & $-$
##   & (0.717) & (0.064) & (0.058) & (0.000) & (0.064) & (0.000) \\
##   & & & & & & \\
##  state\_utMEGHALAYA  & $-$4.347$^{***}$ & $-$4.347$^{***}$ & $-$4.383$^{***}$ & $-$0.851$^{***}$ & $-$4.367$^{*
```

```
##   & (1.006) & (0.024) & (0.023) & (0.039) & (0.031) & (0.027) \\
##   & & & & & & \\
##  state\_utMIZORAM  & $-$1.862$^{***}$ & $-$1.862$^{***}$ & $-$1.899$^{***}$ & 1.633$^{***}$ & $-$1.882$^{***}$
##   & (0.309) & (0.024) & (0.023) & (0.039) & (0.031) & (0.027) \\
##   & & & & & & \\
##  state\_utNAGALAND  & $-$2.594$^{***}$ & $-$2.594$^{***}$ & $-$2.640$^{***}$ & 0.916$^{***}$ & $-$2.658$^{***}$
##   & (0.463) & (0.064) & (0.059) & (0.000) & (0.064) & (0.000) \\
##   & & & & & & \\
##  state\_utORISSA  & $-$1.638$^{***}$ & $-$1.639$^{***}$ & $-$1.686$^{***}$ & 1.872$^{***}$ & $-$1.702$^{***}$ &
##   & (0.302) & (0.064) & (0.059) & (0.000) & (0.064) & (0.000) \\
##   & & & & & & \\
##  state\_utPUNJAB  & $-$0.871$^{***}$ & $-$0.871$^{***}$ & $-$0.897$^{***}$ & 2.637$^{***}$ & $-$0.925$^{***}$ &
##   & (0.219) & (0.056) & (0.051) & (0.010) & (0.059) & (0.006) \\
##   & & & & & & \\
##  state\_utRAJASTHAN  & $-$0.707$^{***}$ & $-$0.707$^{***}$ & $-$0.755$^{***}$ & 2.803$^{***}$ & $-$0.771$^{***}
##   & (0.210) & (0.064) & (0.060) & (0.000) & (0.064) & (0.000) \\
##   & & & & & & \\
##  state\_utSIKKIM  & $-$19.749 & $-$19.749$^{***}$ & $-$38.531$^{***}$ & $-$16.237$^{***}$ & $-$19.798$^{***}$ &
##   & (1,415.767) & (1.065) & (1.065) & (1.064) & (1.066) & (1.066) \\
##   & & & & & & \\
##  state\_utTAMIL NADU  & $-$0.099 & $-$0.099$^{***}$ & $-$0.137$^{***}$ & 3.384$^{***}$ & $-$0.099$^{***}$ & 3.4
##   & (0.157) & (0.000) & (0.0004) & (0.054) & (0.000) & (0.052) \\
##   & & & & & & \\
##  state\_utTELANGANA &  & $-$1.347$^{***}$ & $-$1.462$^{***}$ &  & $-$1.310$^{***}$ & 2.141$^{***}$ \\
##   &  & (0.111) & (0.141) &  & (0.142) & (0.135) \\
##   & & & & & & \\
##  state\_utTRIPURA  & $-$2.665$^{***}$ & $-$2.665$^{***}$ & $-$2.710$^{***}$ & 0.838$^{***}$ & $-$2.710$^{***}$
##   & (0.461) & (0.046) & (0.041) & (0.018) & (0.048) & (0.014) \\
##   & & & & & & \\
##  state\_utUTTAR PRADESH  & 0.187 & 0.187$^{***}$ & 0.156$^{***}$ & 3.656$^{***}$ & 0.208$^{***}$ & 3.729$^{***}
##   & (0.145) & (0.031) & (0.034) & (0.078) & (0.037) & (0.078) \\
##   & & & & & & \\
##  state\_utUTTARAKHAND  & $-$19.749 & $-$19.749$^{***}$ & $-$38.531$^{***}$ & $-$16.237$^{***}$ & $-$19.798$^{**
##   & (1,415.767) & (1.065) & (1.065) & (1.064) & (1.066) & (1.066) \\
##   & & & & & & \\
##  state\_utWEST BENGAL  & 0.055 & 0.055 & 0.017 & 3.556$^{***}$ & 0.019 & 3.581$^{***}$ \\
##   & (0.159) & (0.037) & (0.033) & (0.026) & (0.041) & (0.019) \\
##   & & & & & & \\
##  state\_utZ A & N ISLANDS & $-$19.822 & $-$19.822$^{***}$ & $-$38.603$^{***}$ & $-$16.316$^{***}$ & $-$19.854$^
##   & (1,422.403) & (1.064) & (1.064) & (1.065) & (1.065) & (1.066) \\
##   & & & & & & \\
##  state\_utZ CHANDIGARH  & $-$3.203$^{***}$ & $-$3.203$^{***}$ & $-$3.247$^{***}$ & 0.297$^{***}$ & $-$3.239$^{*
##   & (0.588) & (0.037) & (0.033) & (0.026) & (0.041) & (0.019) \\
##   & & & & & & \\
##  state\_utZ D & N HAVELI & $-$4.301$^{***}$ & $-$4.302$^{***}$ & $-$4.343$^{***}$ & $-$0.801$^{***}$ & $-$4.338
##   & (1.006) & (0.037) & (0.033) & (0.026) & (0.041) & (0.019) \\
##   & & & & & & \\
##  state\_utZ DAMAN & DIU &  & $-$19.824$^{***}$ & $-$38.600$^{***}$ & $-$16.323$^{***}$ & $-$19.851$^{***}$ & $-
##   &  & (1.064) & (1.064) & (1.065) & (1.065) & (1.066) \\
##   & & & & & & \\
##  state\_utZ DELHI  & $-$2.737$^{***}$ & $-$2.737$^{***}$ & $-$2.768$^{***}$ & 0.758$^{***}$ & $-$2.758$^{***}$
##   & (0.461) & (0.024) & (0.023) & (0.039) & (0.031) & (0.027) \\
##   & & & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$19.822 & $-$19.822$^{***}$ & $-$38.603$^{***}$ & $-$16.316$^{***}$ & $-$19.854$^{
##   & (1,422.403) & (1.064) & (1.064) & (1.065) & (1.065) & (1.066) \\
##   & & & & & & \\
##  state\_utZ PUDUCHERRY  & $-$4.301$^{***}$ & $-$4.302$^{***}$ & $-$4.340$^{***}$ & $-$0.801$^{***}$ & $-$4.338
##   & (1.006) & (0.037) & (0.033) & (0.026) & (0.041) & (0.019) \\
##   & & & & & & \\
##  as.factor(year)2002 & $-$0.000 & $-$0.000 & $-$0.089 & 0.043 & $-$0.047 & 0.000 \\
##   & (0.194) & (0.197) & (0.248) & (0.213) & (0.245) & (0.278) \\
##   & & & & & & \\
```

```
##  as.factor(year)2003 & 0.141 & 0.141 & 0.019 & 0.201 & $-$0.023 & 0.027 \\
##   & (0.188) & (0.194) & (0.198) & (0.202) & (0.182) & (0.206) \\
##   & & & & & & \\
##  as.factor(year)2004 & $-$0.078 & $-$0.078 & $-$0.219 & 0.022 & $-$0.201 & $-$0.087 \\
##   & (0.198) & (0.230) & (0.253) & (0.218) & (0.269) & (0.271) \\
##   & & & & & & \\
##  as.factor(year)2005 & 0.141 & 0.141 & 0.077 & 0.105 & 0.186 & 0.154 \\
##   & (0.188) & (0.235) & (0.254) & (0.279) & (0.270) & (0.335) \\
##   & & & & & & \\
##  as.factor(year)2006 & $-$0.038 & $-$0.038 & $-$0.131 & $-$0.118 & $-$0.047 & $-$0.150 \\
##   & (0.196) & (0.218) & (0.242) & (0.255) & (0.264) & (0.322) \\
##   & & & & & & \\
##  as.factor(year)2007 & 0.141 & 0.141 & 0.067 & 0.219 & 0.186 & 0.288 \\
##   & (0.188) & (0.312) & (0.328) & (0.338) & (0.361) & (0.396) \\
##   & & & & & & \\
##  as.factor(year)2008 & 0.193 & 0.193 & 0.024 & 0.244 & $-$0.039 & $-$0.015 \\
##   & (0.188) & (0.333) & (0.314) & (0.373) & (0.386) & (0.471) \\
##   & & & & & & \\
##  as.factor(year)2009 & 0.259 & 0.259 & 0.200 & 0.417 & 0.095 & 0.296 \\
##   & (0.192) & (0.296) & (0.298) & (0.266) & (0.353) & (0.336) \\
##   & & & & & & \\
##  as.factor(year)2010 & $-$0.008 & $-$0.009 & $-$0.192 & 0.091 & $-$0.319 & $-$0.228 \\
##   & (0.205) & (0.362) & (0.356) & (0.377) & (0.413) & (0.476) \\
##   & & & & & & \\
##  as.factor(year)2011 & 0.552$^{***}$ & 0.552$^{*}$ & 0.330 & 0.672$^{**}$ & 0.202 & 0.323 \\
##   & (0.184) & (0.322) & (0.293) & (0.310) & (0.302) & (0.328) \\
##   & & & & & & \\
##  as.factor(year)2012 & 0.508$^{***}$ & 0.508 & 0.318 & 0.625$^{*}$ & 0.385 & 0.535 \\
##   & (0.187) & (0.343) & (0.371) & (0.357) & (0.449) & (0.496) \\
##   & & & & & & \\
##  as.factor(year)2013 & 0.828$^{***}$ & 0.828$^{***}$ & 0.613$^{*}$ & 1.003$^{***}$ & 0.605 & 0.835$^{**}$ \\
##   & (0.176) & (0.302) & (0.315) & (0.239) & (0.382) & (0.331) \\
##   & & & & & & \\
##  as.factor(year)2014 & 0.423$^{**}$ & 0.427$^{*}$ & 0.381 & 0.554$^{**}$ & 0.313 & 0.501 \\
##   & (0.199) & (0.239) & (0.287) & (0.217) & (0.334) & (0.307) \\
##   & & & & & & \\
##  as.factor(year)2015 & 0.654$^{***}$ & 0.680$^{***}$ & 0.670$^{**}$ & 0.761$^{***}$ & 0.499$^{*}$ & 0.635$^{**}
##   & (0.209) & (0.252) & (0.275) & (0.250) & (0.279) & (0.291) \\
##   & & & & & & \\
##  as.factor(year)2016 & 0.605$^{***}$ & 0.570$^{**}$ & 0.518$^{*}$ & 0.795$^{***}$ & 0.400 & 0.635$^{**}$ \\
##   & (0.211) & (0.288) & (0.296) & (0.216) & (0.346) & (0.285) \\
##   & & & & & & \\
##  Constant & 1.476$^{***}$ & 1.476$^{***}$ & 1.617$^{***}$ & $-$2.093$^{***}$ & 1.596$^{***}$ & $-$2.040$^{***}$
##   & (0.173) & (0.218) & (0.209) & (0.224) & (0.250) & (0.270) \\
##   & & & & & & \\
## \hline \\[-1.8ex]
## Observations & 544 &  &  &  &  &  \\
## Log Likelihood & $-$589.214 &  &  &  &  &  \\
## Akaike Inf. Crit. & 1,278.428 &  &  &  &  &  \\
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{6}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
###############
###Table A12###
###############

## OLS Model with SHRC
model.ols.SHRCc <- lm(death_not_remanded ~ 1 + l.state_pca + l.SHRC + state_ut + as.factor(year), data = police.da

model.ols.SHRCc.cl <- cl(police.data.t1, model.ols.SHRCc, police.data.t1$state_ut)
```

```r
## Poisson Model with SHRC
model.poisson.SHRCc <- glm(death_not_remanded ~ 1 + l.state_pca + l.SHRC + state_ut + as.factor(year), data = poli

model.poisson.SHRCc.cl <- cl(police.data.t1, model.poisson.SHRCc, police.data.t1$state_ut)

## OLS Model with SHRC
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add SHRC
  police.imp.1.l$l.SHRC <- police.data.t1$l.SHRC

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + l.SHRC + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}
```

```
result.t3

##              [,1]       [,2]       [,3]
## [1,] -1.43517021 0.74972824 0.05558772
## [2,]  0.16440579 0.50712471 0.74579265
## [3,]  2.06701887 1.05343267 0.04974215
## [4,] -0.05436258 0.05684999 0.33894792

## Replace results to model result
model.ols.SHRCc.cl.c <- result.p.1

model.ols.SHRCc.cl.c[2:5, 1] <- result.t3[, 1]
model.ols.SHRCc.cl.c[2:5, 2] <- result.t3[, 2]
model.ols.SHRCc.cl.c[2:5, 4] <- result.t3[, 3]

## Poisson Model with SHRC and controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add SHRC
  police.imp.1.l$l.SHRC <- police.data.t1$l.SHRC

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + l.SHRC + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
```

```
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##             [,1]      [,2]         [,3]
## [1,] -0.58811457 0.1674830 0.0004456052
## [2,]  0.16740083 0.3863977 0.6648443603
## [3,]  0.22218019 0.2714944 0.4131515347
## [4,] -0.02754617 0.0356453 0.4396493735

## Replace results to model result
model.poisson.SHRCc.cl.c <- result.p.1

model.poisson.SHRCc.cl.c[2:5, 1] <- result.t3[, 1]
model.poisson.SHRCc.cl.c[2:5, 2] <- result.t3[, 2]
model.poisson.SHRCc.cl.c[2:5, 4] <- result.t3[, 3]

stargazer(model.ols.SHRCc.cl, model.ols.SHRCc.cl.c, model.poisson.SHRCc.cl, model.poisson.SHRCc.cl.c)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:30
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.567$^{*}$ & $-$1.435$^{*}$ & $-$0.611$^{***}$ & $-$0.588$^{***}$ \\
##   & (0.860) & (0.750) & (0.174) & (0.167) \\
##   & & & & \\
##  l.SHRC & 0.229 & 0.164 & 0.143 & 0.167 \\
##   & (0.523) & (0.507) & (0.401) & (0.386) \\
##   & & & & \\
##  gdp &  & 2.067$^{**}$ &  & 0.222 \\
##   &  & (1.053) &  & (0.271) \\
##   & & & & \\
##  head\_trans &  & $-$0.054 &  & $-$0.028 \\
##   &  & (0.057) &  & (0.036) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.456$^{***}$ & $-$3.903$^{***}$ & $-$3.412$^{***}$ & $-$3.335$^{***}$ \\
##   & (0.508) & (0.714) & (0.304) & (0.290) \\
##   & & & & \\
##  state\_utASSAM & $-$4.609$^{***}$ & $-$4.227$^{***}$ & $-$3.139$^{***}$ & $-$3.115$^{***}$ \\
##   & (0.328) & (0.457) & (0.098) & (0.101) \\
##   & & & & \\
##  state\_utBIHAR  & $-$5.366$^{***}$ & $-$5.064$^{***}$ & $-$2.987$^{***}$ & $-$2.948$^{***}$ \\
##   & (0.254) & (0.196) & (0.119) & (0.127) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$3.859$^{***}$ & $-$3.474$^{***}$ & $-$1.530$^{***}$ & $-$1.499$^{***}$ \\
##   & (0.328) & (0.455) & (0.098) & (0.099) \\
```

```
##   & & & & \\
##  state\_utGOA & $-$4.466$^{***}$ & $-$3.885$^{***}$ & $-$3.055$^{***}$ & $-$2.971$^{***}$ \\
##   & (0.392) & (0.625) & (0.170) & (0.173) \\
##   & & & & \\
##  state\_utGUJARAT  & 3.177$^{***}$ & 2.811$^{***}$ & 0.625$^{***}$ & 0.590$^{***}$ \\
##   & (0.269) & (0.172) & (0.074) & (0.098) \\
##   & & & & \\
##  state\_utHARYANA  & $-$4.049$^{***}$ & $-$3.935$^{***}$ & $-$1.781$^{***}$ & $-$1.753$^{***}$ \\
##   & (0.366) & (0.400) & (0.193) & (0.191) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.678$^{***}$ & $-$5.112$^{***}$ & $-$20.096$^{***}$ & $-$20.038$^{***}$ \\
##   & (0.254) & (0.249) & (1.071) & (1.077) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$5.303$^{***}$ & $-$4.731$^{***}$ & $-$2.805$^{***}$ & $-$2.732$^{***}$ \\
##   & (0.254) & (0.246) & (0.119) & (0.148) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$4.417$^{***}$ & $-$4.063$^{***}$ & $-$2.776$^{***}$ & $-$2.731$^{***}$ \\
##   & (0.374) & (0.511) & (0.147) & (0.149) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.416$^{***}$ & $-$4.670$^{***}$ & $-$1.828$^{***}$ & $-$1.863$^{***}$ \\
##   & (0.056) & (0.107) & (0.016) & (0.037) \\
##   & & & & \\
##  state\_utKERALA  & $-$4.046$^{***}$ & $-$3.969$^{***}$ & $-$1.753$^{***}$ & $-$1.755$^{***}$ \\
##   & (0.328) & (0.322) & (0.098) & (0.090) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$2.553$^{***}$ & $-$2.414$^{***}$ & $-$0.684$^{***}$ & $-$0.669$^{***}$ \\
##   & (0.254) & (0.214) & (0.119) & (0.120) \\
##   & & & & \\
##  state\_utMAHARASHTRA & 10.893$^{***}$ & 9.608$^{***}$ & 1.053$^{***}$ & 0.899$^{***}$ \\
##   & (0.183) & (0.777) & (0.106) & (0.206) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$4.643$^{***}$ & $-$4.070$^{***}$ & $-$3.525$^{***}$ & $-$3.477$^{***}$ \\
##   & (0.315) & (0.553) & (0.068) & (0.089) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$4.954$^{***}$ & $-$4.389$^{***}$ & $-$4.273$^{***}$ & $-$4.203$^{***}$ \\
##   & (0.274) & (0.489) & (0.221) & (0.218) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$4.223$^{***}$ & $-$3.655$^{***}$ & $-$1.764$^{***}$ & $-$1.692$^{***}$ \\
##   & (0.366) & (0.557) & (0.292) & (0.276) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$4.269$^{***}$ & $-$3.745$^{***}$ & $-$2.496$^{***}$ & $-$2.434$^{***}$ \\
##   & (0.508) & (0.704) & (0.304) & (0.286) \\
##   & & & & \\
##  state\_utORISSA  & $-$3.984$^{***}$ & $-$3.743$^{***}$ & $-$1.673$^{***}$ & $-$1.666$^{***}$ \\
##   & (0.328) & (0.395) & (0.098) & (0.096) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$3.082$^{***}$ & $-$2.560$^{***}$ & $-$0.906$^{***}$ & $-$0.743$^{***}$ \\
##   & (0.282) & (0.510) & (0.094) & (0.199) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$2.734$^{***}$ & $-$2.774$^{***}$ & $-$0.741$^{***}$ & $-$0.757$^{***}$ \\
##   & (0.328) & (0.280) & (0.098) & (0.091) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$4.794$^{***}$ & $-$4.232$^{***}$ & $-$19.721$^{***}$ & $-$19.664$^{***}$ \\
##   & (0.290) & (0.541) & (1.072) & (1.075) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$0.572$^{***}$ & $-$0.991$^{***}$ & $-$0.136 & $-$0.173 \\
##   & (0.164) & (0.313) & (0.101) & (0.114) \\
##   & & & & \\
##  state\_utTELANGANA & $-$4.157$^{***}$ & $-$4.243$^{***}$ & $-$1.239$^{***}$ & $-$1.142$^{***}$ \\
##   & (0.599) & (0.517) & (0.289) & (0.297) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$4.479$^{***}$ & $-$3.943$^{***}$ & $-$2.576$^{***}$ & $-$2.510$^{***}$ \\
```

```
##   & (0.401) & (0.601) & (0.272) & (0.260) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 1.524$^{***}$ & 1.233$^{***}$ & 0.155 & 0.188 \\
##   & (0.229) & (0.429) & (0.102) & (0.157) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$4.722$^{***}$ & $-$4.297$^{***}$ & $-$19.678$^{***}$ & $-$19.618$^{***}$ \\
##   & (0.390) & (0.552) & (1.088) & (1.090) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$0.215 & $-$0.458$^{***}$ & 0.020 & $-$0.023 \\
##   & (0.203) & (0.170) & (0.089) & (0.091) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$4.875$^{***}$ & $-$4.318$^{***}$ & $-$19.723$^{***}$ & $-$19.652$^{***}$ \\
##   & (0.395) & (0.594) & (1.105) & (1.103) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.688$^{***}$ & $-$4.165$^{***}$ & $-$3.105$^{***}$ & $-$3.047$^{***}$ \\
##   & (0.395) & (0.580) & (0.296) & (0.277) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$4.813$^{***}$ & $-$4.311$^{***}$ & $-$4.203$^{***}$ & $-$4.146$^{***}$ \\
##   & (0.395) & (0.570) & (0.296) & (0.276) \\
##   & & & & \\
##  state\_utZ DAMAN & DIU & $-$4.883$^{***}$ & $-$4.563$^{***}$ & $-$19.719$^{***}$ & $-$19.672$^{***}$ \\
##   & (0.396) & (0.494) & (1.111) & (1.108) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$4.661$^{***}$ & $-$4.590$^{***}$ & $-$2.639$^{***}$ & $-$2.619$^{***}$ \\
##   & (0.366) & (0.379) & (0.292) & (0.277) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$4.875$^{***}$ & $-$4.372$^{***}$ & $-$19.723$^{***}$ & $-$19.663$^{***}$ \\
##   & (0.395) & (0.572) & (1.105) & (1.102) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$4.813$^{***}$ & $-$4.278$^{***}$ & $-$4.203$^{***}$ & $-$4.142$^{***}$ \\
##   & (0.395) & (0.585) & (0.296) & (0.277) \\
##   & & & & \\
##  as.factor(year)2002 & $-$0.082 & $-$0.079 & $-$0.085 & $-$0.134 \\
##   & (0.304) & (0.298) & (0.237) & (0.254) \\
##   & & & & \\
##  as.factor(year)2003 & 0.140 & 0.131 & 0.042 & $-$0.012 \\
##   & (0.342) & (0.328) & (0.291) & (0.283) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.209 & $-$0.228 & $-$0.177 & $-$0.230 \\
##   & (0.266) & (0.246) & (0.279) & (0.272) \\
##   & & & & \\
##  as.factor(year)2005 & 0.134 & 0.080 & 0.042 & $-$0.025 \\
##   & (0.414) & (0.419) & (0.378) & (0.379) \\
##   & & & & \\
##  as.factor(year)2006 & $-$0.159 & $-$0.176 & $-$0.139 & $-$0.181 \\
##   & (0.405) & (0.400) & (0.406) & (0.399) \\
##   & & & & \\
##  as.factor(year)2007 & 0.114 & 0.030 & 0.007 & $-$0.056 \\
##   & (0.444) & (0.447) & (0.422) & (0.428) \\
##   & & & & \\
##  as.factor(year)2008 & 0.562 & 0.393 & 0.060 & $-$0.018 \\
##   & (0.749) & (0.639) & (0.507) & (0.505) \\
##   & & & & \\
##  as.factor(year)2009 & 0.722 & 0.485 & 0.130 & 0.026 \\
##   & (0.755) & (0.594) & (0.429) & (0.468) \\
##   & & & & \\
##  as.factor(year)2010 & 0.367 & 0.056 & $-$0.138 & $-$0.279 \\
##   & (0.786) & (0.587) & (0.504) & (0.525) \\
##   & & & & \\
##  as.factor(year)2011 & 1.531 & 1.154 & 0.423 & 0.273 \\
##   & (1.288) & (1.025) & (0.459) & (0.485) \\
##   & & & & \\
```

```
##  as.factor(year)2012 & 1.544 & 1.100 & 0.379 & 0.202 \\
##   & (1.115) & (0.813) & (0.410) & (0.445) \\
##   & & & & \\
##  as.factor(year)2013 & 2.326 & 1.814 & 0.697$^{*}$ & 0.494 \\
##   & (1.485) & (1.139) & (0.357) & (0.418) \\
##   & & & & \\
##  as.factor(year)2014 & 1.318 & 0.698 & 0.300 & 0.062 \\
##   & (1.004) & (0.615) & (0.329) & (0.433) \\
##   & & & & \\
##  as.factor(year)2015 & 1.529 & 0.739 & 0.555 & 0.293 \\
##   & (0.993) & (0.543) & (0.399) & (0.516) \\
##   & & & & \\
##  as.factor(year)2016 & 1.328 & 0.507 & 0.444 & 0.140 \\
##   & (0.939) & (0.459) & (0.345) & (0.523) \\
##   & & & & \\
##  Constant & 4.765$^{***}$ & 4.444$^{***}$ & 1.494$^{***}$ & 1.542$^{***}$ \\
##   & (0.533) & (0.644) & (0.215) & (0.208) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}

###############
###Table A13###
###############
## Add party_match to data
police.data.t1$party_match <- police.data$party_match

## OLS Model with party
model.ols.party <- lm(death_not_remanded ~ 1 + l.state_pca + party_match + state_ut + as.factor(year), data = poli

model.ols.party.cl <- cl(police.data.t1, model.ols.party, police.data.t1$state_ut)

## Poisson Model with party
model.poisson.party <- glm(death_not_remanded ~ 1 + l.state_pca + party_match + state_ut + as.factor(year), data =

model.poisson.party.cl <- cl(police.data.t1, model.poisson.party, police.data.t1$state_ut)

## OLS Model with party
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add party
  police.imp.1.l$party_match <- police.data.t1$party_match
```

```r
  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + party_match + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##             [,1]       [,2]       [,3]
## [1,] -1.46039385 0.74821498 0.05095753
## [2,] -0.49364486 0.34261534 0.14963734
## [3,]  2.14234727 1.08698286 0.04873397
## [4,] -0.05469063 0.05421986 0.31312690

## Replace results to model result
model.ols.party.cl.c <- result.p.1

model.ols.party.cl.c[2:5, 1] <- result.t3[, 1]
model.ols.party.cl.c[2:5, 2] <- result.t3[, 2]
model.ols.party.cl.c[2:5, 4] <- result.t3[, 3]

## Poisson Model with party and controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)
```

```r
  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add party
  police.imp.1.l$party_match <- police.data.t1$party_match

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + party_match + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3
```

```
##             [,1]       [,2]         [,3]
## [1,] -0.61742592 0.13473362 4.593013e-06
## [2,] -0.24478967 0.11174647 2.848215e-02
## [3,]  0.24814192 0.28466423 3.833719e-01
## [4,] -0.02090078 0.02861577 4.651494e-01
```

```r
## Replace results to model result
model.poisson.party.cl.c <- result.p.1

model.poisson.party.cl.c[2:5, 1] <- result.t3[, 1]
model.poisson.party.cl.c[2:5, 2] <- result.t3[, 2]
model.poisson.party.cl.c[2:5, 4] <- result.t3[, 3]

stargazer(model.ols.party.cl, model.ols.party.cl.c, model.poisson.party.cl, model.poisson.party.cl.c)
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
```

```
## % Date and time: Thu, Apr 16, 2020 - 11:04:32
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.594$^{*}$ & $-$1.460$^{*}$ & $-$0.648$^{***}$ & $-$0.617$^{***}$ \\
##   & (0.859) & (0.748) & (0.140) & (0.135) \\
##   & & & & \\
##  party\_match & $-$0.453 & $-$0.494 & $-$0.240$^{**}$ & $-$0.245$^{**}$ \\
##   & (0.364) & (0.343) & (0.119) & (0.112) \\
##   & & & & \\
##  gdp &  & 2.142$^{**}$ &  & 0.248 \\
##   &  & (1.087) &  & (0.285) \\
##   & & & & \\
##  head\_trans &  & $-$0.055 &  & $-$0.021 \\
##   &  & (0.054) &  & (0.029) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.590$^{***}$ & $-$3.984$^{***}$ & $-$3.511$^{***}$ & $-$3.442$^{***}$ \\
##   & (0.322) & (0.582) & (0.059) & (0.088) \\
##   & & & & \\
##  state\_utASSAM & $-$4.499$^{***}$ & $-$4.115$^{***}$ & $-$3.089$^{***}$ & $-$3.053$^{***}$ \\
##   & (0.324) & (0.478) & (0.057) & (0.066) \\
##   & & & & \\
##  state\_utBIHAR  & $-$5.554$^{***}$ & $-$5.281$^{***}$ & $-$3.107$^{***}$ & $-$3.059$^{***}$ \\
##   & (0.268) & (0.220) & (0.069) & (0.082) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$3.975$^{***}$ & $-$3.610$^{***}$ & $-$1.592$^{***}$ & $-$1.559$^{***}$ \\
##   & (0.351) & (0.467) & (0.090) & (0.087) \\
##   & & & & \\
##  state\_utGOA & $-$4.442$^{***}$ & $-$3.817$^{***}$ & $-$3.057$^{***}$ & $-$2.981$^{***}$ \\
##   & (0.333) & (0.594) & (0.054) & (0.086) \\
##   & & & & \\
##  state\_utGUJARAT  & 3.072$^{***}$ & 2.683$^{***}$ & 0.556$^{***}$ & 0.505$^{***}$ \\
##   & (0.278) & (0.174) & (0.071) & (0.095) \\
##   & & & & \\
##  state\_utHARYANA  & $-$4.070$^{***}$ & $-$3.927$^{***}$ & $-$1.808$^{***}$ & $-$1.797$^{***}$ \\
##   & (0.275) & (0.319) & (0.046) & (0.043) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.696$^{***}$ & $-$5.135$^{***}$ & $-$20.126$^{***}$ & $-$20.052$^{***}$ \\
##   & (0.179) & (0.211) & (1.066) & (1.072) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$5.152$^{***}$ & $-$4.568$^{***}$ & $-$2.736$^{***}$ & $-$2.648$^{***}$ \\
##   & (0.171) & (0.217) & (0.041) & (0.096) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$4.578$^{***}$ & $-$4.207$^{***}$ & $-$2.869$^{***}$ & $-$2.834$^{***}$ \\
##   & (0.330) & (0.464) & (0.079) & (0.080) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.598$^{***}$ & $-$4.882$^{***}$ & $-$1.942$^{***}$ & $-$1.980$^{***}$ \\
##   & (0.165) & (0.191) & (0.062) & (0.070) \\
##   & & & & \\
##  state\_utKERALA  & $-$4.106$^{***}$ & $-$4.054$^{***}$ & $-$1.782$^{***}$ & $-$1.781$^{***}$ \\
##   & (0.335) & (0.321) & (0.078) & (0.072) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$2.656$^{***}$ & $-$2.545$^{***}$ & $-$0.754$^{***}$ & $-$0.732$^{***}$ \\
##   & (0.217) & (0.182) & (0.049) & (0.054) \\
```

```
##   & & & & \\
##  state\_utMAHARASHTRA & 11.048$^{***}$ & 9.708$^{***}$ & 1.127$^{***}$ & 0.962$^{***}$ \\
##   & (0.084) & (0.751) & (0.025) & (0.196) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$4.590$^{***}$ & $-$4.004$^{***}$ & $-$3.511$^{***}$ & $-$3.450$^{***}$ \\
##   & (0.322) & (0.576) & (0.059) & (0.088) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$5.079$^{***}$ & $-$4.473$^{***}$ & $-$4.365$^{***}$ & $-$4.300$^{***}$ \\
##   & (0.108) & (0.403) & (0.023) & (0.076) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$4.476$^{***}$ & $-$3.866$^{***}$ & $-$1.920$^{***}$ & $-$1.858$^{***}$ \\
##   & (0.136) & (0.409) & (0.040) & (0.076) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$4.685$^{***}$ & $-$4.136$^{***}$ & $-$2.733$^{***}$ & $-$2.682$^{***}$ \\
##   & (0.383) & (0.577) & (0.107) & (0.112) \\
##   & & & & \\
##  state\_utORISSA  & $-$4.185$^{***}$ & $-$3.976$^{***}$ & $-$1.778$^{***}$ & $-$1.764$^{***}$ \\
##   & (0.383) & (0.423) & (0.107) & (0.097) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$3.087$^{***}$ & $-$2.575$^{***}$ & $-$0.914$^{***}$ & $-$0.783$^{***}$ \\
##   & (0.273) & (0.510) & (0.062) & (0.172) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$2.681$^{***}$ & $-$2.739$^{***}$ & $-$0.730$^{***}$ & $-$0.744$^{***}$ \\
##   & (0.322) & (0.273) & (0.067) & (0.067) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$5.097$^{***}$ & $-$4.534$^{***}$ & $-$19.892$^{***}$ & $-$19.836$^{***}$ \\
##   & (0.341) & (0.542) & (1.069) & (1.072) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$0.585$^{***}$ & $-$1.044$^{***}$ & $-$0.171$^{***}$ & $-$0.215$^{**}$ \\
##   & (0.068) & (0.271) & (0.038) & (0.086) \\
##   & & & & \\
##  state\_utTELANGANA & $-$4.641$^{***}$ & $-$4.717$^{***}$ & $-$1.566$^{***}$ & $-$1.481$^{***}$ \\
##   & (0.614) & (0.555) & (0.125) & (0.191) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$4.884$^{***}$ & $-$4.326$^{***}$ & $-$2.811$^{***}$ & $-$2.757$^{***}$ \\
##   & (0.303) & (0.495) & (0.093) & (0.103) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 1.321$^{***}$ & 0.979$^{**}$ & 0.022 & 0.030 \\
##   & (0.268) & (0.440) & (0.074) & (0.145) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$4.928$^{***}$ & $-$4.474$^{***}$ & $-$19.803$^{***}$ & $-$19.753$^{***}$ \\
##   & (0.278) & (0.457) & (1.067) & (1.070) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$0.337 & $-$0.622$^{***}$ & $-$0.057 & $-$0.099 \\
##   & (0.220) & (0.169) & (0.072) & (0.080) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$4.844$^{***}$ & $-$4.218$^{***}$ & $-$19.731$^{***}$ & $-$19.666$^{***}$ \\
##   & (0.217) & (0.490) & (1.066) & (1.071) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.656$^{***}$ & $-$4.066$^{***}$ & $-$3.112$^{***}$ & $-$3.058$^{***}$ \\
##   & (0.217) & (0.474) & (0.048) & (0.088) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$4.781$^{***}$ & $-$4.213$^{***}$ & $-$4.211$^{***}$ & $-$4.158$^{***}$ \\
##   & (0.217) & (0.463) & (0.048) & (0.085) \\
##   & & & & \\
##  state\_utZ DAMAN & DIU & $-$4.863$^{***}$ & $-$4.481$^{***}$ & $-$19.736$^{***}$ & $-$19.700$^{***}$ \\
##   & (0.200) & (0.354) & (1.066) & (1.069) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$4.631$^{***}$ & $-$4.510$^{***}$ & $-$2.651$^{***}$ & $-$2.644$^{***}$ \\
##   & (0.179) & (0.213) & (0.046) & (0.047) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$4.844$^{***}$ & $-$4.274$^{***}$ & $-$19.731$^{***}$ & $-$19.676$^{***}$ \\
```

```
##   & (0.217) & (0.465) & (1.066) & (1.070) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$4.781$^{***}$ & $-$4.179$^{***}$ & $-$4.211$^{***}$ & $-$4.154$^{***}$ \\
##   & (0.217) & (0.480) & (0.048) & (0.089) \\
##   & & & & \\
##  as.factor(year)2002 & $-$0.030 & $-$0.050 & $-$0.028 & $-$0.054 \\
##   & (0.298) & (0.298) & (0.199) & (0.208) \\
##   & & & & \\
##  as.factor(year)2003 & 0.211 & 0.178 & 0.131 & 0.103 \\
##   & (0.370) & (0.351) & (0.202) & (0.195) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.028 & $-$0.063 & $-$0.027 & $-$0.059 \\
##   & (0.359) & (0.335) & (0.245) & (0.238) \\
##   & & & & \\
##  as.factor(year)2005 & 0.341 & 0.272 & 0.196 & 0.152 \\
##   & (0.423) & (0.399) & (0.211) & (0.207) \\
##   & & & & \\
##  as.factor(year)2006 & 0.029 & $-$0.007 & 0.011 & $-$0.020 \\
##   & (0.338) & (0.312) & (0.213) & (0.206) \\
##   & & & & \\
##  as.factor(year)2007 & 0.276 & 0.166 & 0.182 & 0.137 \\
##   & (0.527) & (0.498) & (0.282) & (0.286) \\
##   & & & & \\
##  as.factor(year)2008 & 0.744 & 0.549 & 0.250 & 0.190 \\
##   & (0.784) & (0.658) & (0.343) & (0.348) \\
##   & & & & \\
##  as.factor(year)2009 & 0.928 & 0.662 & 0.335 & 0.248 \\
##   & (0.791) & (0.627) & (0.309) & (0.351) \\
##   & & & & \\
##  as.factor(year)2010 & 0.586 & 0.245 & 0.091 & $-$0.032 \\
##   & (0.807) & (0.597) & (0.361) & (0.386) \\
##   & & & & \\
##  as.factor(year)2011 & 1.762 & 1.351 & 0.628$^{*}$ & 0.492 \\
##   & (1.312) & (1.045) & (0.339) & (0.373) \\
##   & & & & \\
##  as.factor(year)2012 & 1.798 & 1.317 & 0.583$^{*}$ & 0.419 \\
##   & (1.223) & (0.917) & (0.338) & (0.378) \\
##   & & & & \\
##  as.factor(year)2013 & 2.573 & 2.020 & 0.886$^{***}$ & 0.693$^{*}$ \\
##   & (1.571) & (1.226) & (0.313) & (0.385) \\
##   & & & & \\
##  as.factor(year)2014 & 1.555 & 0.884 & 0.529$^{**}$ & 0.293 \\
##   & (1.077) & (0.680) & (0.257) & (0.405) \\
##   & & & & \\
##  as.factor(year)2015 & 1.753$^{*}$ & 0.906$^{*}$ & 0.792$^{***}$ & 0.531 \\
##   & (1.039) & (0.550) & (0.281) & (0.451) \\
##   & & & & \\
##  as.factor(year)2016 & 1.571 & 0.691 & 0.683$^{**}$ & 0.379 \\
##   & (1.048) & (0.568) & (0.317) & (0.524) \\
##   & & & & \\
##  Constant & 5.015$^{***}$ & 4.697$^{***}$ & 1.585$^{***}$ & 1.628$^{***}$ \\
##   & (0.513) & (0.617) & (0.211) & (0.196) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}

###############
###Table A14###
###############
```

```r
## Add party_match_2006 to data
police.data.t1$party_match_2006 <- police.data$party_match_2006

## OLS Model with party 2006
model.ols.party06 <- lm(death_not_remanded ~ 1 + l.state_pca + party_match_2006 + state_ut + as.factor(year), data

model.ols.party06.cl <- cl(police.data.t1, model.ols.party06, police.data.t1$state_ut)

## Poisson Model with party 2006
model.poisson.party06 <- glm(death_not_remanded ~ 1 + l.state_pca + party_match_2006 + state_ut + as.factor(year),

model.poisson.party06.cl <- cl(police.data.t1, model.poisson.party06, police.data.t1$state_ut)

## OLS Model with party 2006
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add party 2006
  police.imp.1.l$party_match_2006 <- police.data.t1$party_match_2006

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + party_match_2006 + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
```

```
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##             [,1]      [,2]       [,3]
## [1,] -1.46325163 0.7471741 0.05018530
## [2,] -0.38584823 0.2817421 0.17084036
## [3,]  1.98266781 1.0548374 0.06016321
## [4,] -0.05581224 0.0585382 0.34037077

## Replace results to model result
model.ols.party06.cl.c <- result.p.1

model.ols.party06.cl.c[2:5, 1] <- result.t3[, 1]
model.ols.party06.cl.c[2:5, 2] <- result.t3[, 2]
model.ols.party06.cl.c[2:5, 4] <- result.t3[, 3]

## Poisson Model with party 2006 and controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add party 2006
  police.imp.1.l$party_match_2006 <- police.data.t1$party_match_2006

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + party_match_2006 + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)
```

```r
## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3
```

```
##              [,1]       [,2]         [,3]
## [1,] -0.60330099 0.15293997 7.990284e-05
## [2,] -0.27172585 0.17943368 1.299365e-01
## [3,]  0.03737703 0.30626823 9.028672e-01
## [4,] -0.03347174 0.03558093 3.468476e-01
```

```r
## Replace results to model result
model.poisson.party06.cl.c <- result.p.1

model.poisson.party06.cl.c[2:5, 1] <- result.t3[, 1]
model.poisson.party06.cl.c[2:5, 2] <- result.t3[, 2]
model.poisson.party06.cl.c[2:5, 4] <- result.t3[, 3]

stargazer(model.ols.party06.cl, model.ols.party06.cl.c, model.poisson.party06.cl, model.poisson.party06.cl.c)
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:33
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.594$^{*}$ & $-$1.463$^{*}$ & $-$0.610$^{***}$ & $-$0.603$^{***}$ \\
##   & (0.858) & (0.747) & (0.156) & (0.153) \\
##   & & & & \\
##  party\_match\_2006 & $-$0.459$^{*}$ & $-$0.386 & $-$0.270$^{*}$ & $-$0.272 \\
##   & (0.266) & (0.282) & (0.152) & (0.179) \\
##   & & & & \\
##  gdp &  & 1.983$^{*}$ &  & 0.037 \\
##   &  & (1.055) &  & (0.306) \\
##   & & & & \\
##  head\_trans &  & $-$0.056 &  & $-$0.033 \\
##   &  & (0.059) &  & (0.036) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.418$^{***}$ & $-$3.898$^{***}$ & $-$3.411$^{***}$ & $-$3.393$^{***}$ \\
##   & (0.356) & (0.542) & (0.074) & (0.076) \\
##   & & & & \\
##  state\_utASSAM & $-$4.384$^{***}$ & $-$4.066$^{***}$ & $-$3.024$^{***}$ & $-$3.019$^{***}$ \\
```

```
##   & (0.349) & (0.445) & (0.069) & (0.068) \\
##   & & & & \\
##  state\_utBIHAR  & $-$5.586$^{***}$ & $-$5.256$^{***}$ & $-$3.123$^{***}$ & $-$3.109$^{***}$ \\
##   & (0.255) & (0.246) & (0.093) & (0.150) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$3.978$^{***}$ & $-$3.589$^{***}$ & $-$1.616$^{***}$ & $-$1.605$^{***}$ \\
##   & (0.318) & (0.511) & (0.107) & (0.141) \\
##   & & & & \\
##  state\_utGOA & $-$4.614$^{***}$ & $-$4.028$^{***}$ & $-$3.173$^{***}$ & $-$3.144$^{***}$ \\
##   & (0.315) & (0.581) & (0.082) & (0.132) \\
##   & & & & \\
##  state\_utGUJARAT  & 2.899$^{***}$ & 2.609$^{***}$ & 0.441$^{***}$ & 0.447$^{***}$ \\
##   & (0.284) & (0.195) & (0.118) & (0.117) \\
##   & & & & \\
##  state\_utHARYANA  & $-$4.156$^{***}$ & $-$4.024$^{***}$ & $-$1.867$^{***}$ & $-$1.854$^{***}$ \\
##   & (0.265) & (0.306) & (0.057) & (0.056) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.640$^{***}$ & $-$5.112$^{***}$ & $-$20.078$^{***}$ & $-$20.069$^{***}$ \\
##   & (0.165) & (0.222) & (1.065) & (1.073) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$5.236$^{***}$ & $-$4.706$^{***}$ & $-$2.779$^{***}$ & $-$2.756$^{***}$ \\
##   & (0.161) & (0.209) & (0.030) & (0.117) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$4.752$^{***}$ & $-$4.350$^{***}$ & $-$2.988$^{***}$ & $-$2.982$^{***}$ \\
##   & (0.330) & (0.541) & (0.126) & (0.162) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.429$^{***}$ & $-$4.668$^{***}$ & $-$1.879$^{***}$ & $-$1.891$^{***}$ \\
##   & (0.053) & (0.095) & (0.037) & (0.039) \\
##   & & & & \\
##  state\_utKERALA  & $-$3.965$^{***}$ & $-$3.906$^{***}$ & $-$1.717$^{***}$ & $-$1.711$^{***}$ \\
##   & (0.322) & (0.322) & (0.066) & (0.064) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$2.716$^{***}$ & $-$2.553$^{***}$ & $-$0.798$^{***}$ & $-$0.794$^{***}$ \\
##   & (0.229) & (0.190) & (0.080) & (0.119) \\
##   & & & & \\
##  state\_utMAHARASHTRA & 11.049$^{***}$ & 9.801$^{***}$ & 1.132$^{***}$ & 1.117$^{***}$ \\
##   & (0.065) & (0.772) & (0.029) & (0.231) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$4.446$^{***}$ & $-$3.942$^{***}$ & $-$3.432$^{***}$ & $-$3.426$^{***}$ \\
##   & (0.349) & (0.539) & (0.067) & (0.077) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$4.965$^{***}$ & $-$4.427$^{***}$ & $-$4.311$^{***}$ & $-$4.307$^{***}$ \\
##   & (0.127) & (0.377) & (0.026) & (0.068) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$4.392$^{***}$ & $-$3.820$^{***}$ & $-$1.893$^{***}$ & $-$1.889$^{***}$ \\
##   & (0.105) & (0.413) & (0.034) & (0.088) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$4.632$^{***}$ & $-$4.065$^{***}$ & $-$2.733$^{***}$ & $-$2.735$^{***}$ \\
##   & (0.321) & (0.623) & (0.112) & (0.172) \\
##   & & & & \\
##  state\_utORISSA  & $-$4.189$^{***}$ & $-$3.922$^{***}$ & $-$1.809$^{***}$ & $-$1.815$^{***}$ \\
##   & (0.330) & (0.476) & (0.126) & (0.153) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$3.146$^{***}$ & $-$2.609$^{***}$ & $-$0.962$^{***}$ & $-$0.759$^{***}$ \\
##   & (0.263) & (0.549) & (0.083) & (0.207) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$2.739$^{***}$ & $-$2.775$^{***}$ & $-$0.782$^{***}$ & $-$0.778$^{***}$ \\
##   & (0.315) & (0.286) & (0.085) & (0.085) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$5.101$^{***}$ & $-$4.510$^{***}$ & $-$19.922$^{***}$ & $-$19.923$^{***}$ \\
##   & (0.284) & (0.610) & (1.071) & (1.082) \\
##   & & & & \\
```

```
##  state\_utTAMIL NADU  & $-$0.586$^{***}$ & $-$0.977$^{***}$ & $-$0.180$^{***}$ & $-$0.158$^{**}$ \\
##   & (0.050) & (0.235) & (0.046) & (0.072) \\
##   & & & & \\
##  state\_utTELANGANA & $-$4.557$^{***}$ & $-$4.561$^{***}$ & $-$1.440$^{***}$ & $-$1.428$^{***}$ \\
##   & (0.576) & (0.465) & (0.105) & (0.210) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$4.889$^{***}$ & $-$4.300$^{***}$ & $-$2.840$^{***}$ & $-$2.838$^{***}$ \\
##   & (0.242) & (0.564) & (0.112) & (0.177) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 1.289$^{***}$ & 1.076$^{***}$ & 0.013 & 0.119 \\
##   & (0.255) & (0.360) & (0.093) & (0.160) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$4.815$^{***}$ & $-$4.391$^{***}$ & $-$19.754$^{***}$ & $-$19.744$^{***}$ \\
##   & (0.268) & (0.454) & (1.066) & (1.070) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$0.340$^{*}$ & $-$0.546$^{***}$ & $-$0.079 & $-$0.089 \\
##   & (0.178) & (0.121) & (0.089) & (0.088) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$5.014$^{***}$ & $-$4.459$^{***}$ & $-$19.829$^{***}$ & $-$19.828$^{***}$ \\
##   & (0.161) & (0.445) & (1.065) & (1.071) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.826$^{***}$ & $-$4.305$^{***}$ & $-$3.211$^{***}$ & $-$3.217$^{***}$ \\
##   & (0.161) & (0.429) & (0.035) & (0.091) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$4.951$^{***}$ & $-$4.449$^{***}$ & $-$4.309$^{***}$ & $-$4.313$^{***}$ \\
##   & (0.161) & (0.417) & (0.035) & (0.086) \\
##   & & & & \\
##  state\_utZ DAMAN & DIU & $-$5.015$^{***}$ & $-$4.687$^{***}$ & $-$19.821$^{***}$ & $-$19.829$^{***}$ \\
##   & (0.146) & (0.304) & (1.065) & (1.069) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$4.629$^{***}$ & $-$4.568$^{***}$ & $-$2.646$^{***}$ & $-$2.650$^{***}$ \\
##   & (0.161) & (0.154) & (0.057) & (0.061) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$5.014$^{***}$ & $-$4.511$^{***}$ & $-$19.829$^{***}$ & $-$19.836$^{***}$ \\
##   & (0.161) & (0.420) & (1.065) & (1.071) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$4.951$^{***}$ & $-$4.418$^{***}$ & $-$4.309$^{***}$ & $-$4.313$^{***}$ \\
##   & (0.161) & (0.434) & (0.035) & (0.092) \\
##   & & & & \\
##  as.factor(year)2002 & 0.040 & 0.017 & 0.010 & $-$0.026 \\
##   & (0.306) & (0.307) & (0.196) & (0.217) \\
##   & & & & \\
##  as.factor(year)2003 & 0.255 & 0.222 & 0.128 & 0.096 \\
##   & (0.355) & (0.335) & (0.195) & (0.192) \\
##   & & & & \\
##  as.factor(year)2004 & 0.017 & $-$0.045 & $-$0.050 & $-$0.074 \\
##   & (0.362) & (0.329) & (0.222) & (0.220) \\
##   & & & & \\
##  as.factor(year)2005 & 0.387 & 0.284 & 0.174 & 0.141 \\
##   & (0.405) & (0.387) & (0.231) & (0.219) \\
##   & & & & \\
##  as.factor(year)2006 & 0.075 & 0.016 & $-$0.013 & $-$0.006 \\
##   & (0.329) & (0.305) & (0.220) & (0.206) \\
##   & & & & \\
##  as.factor(year)2007 & 0.321 & 0.202 & 0.157 & 0.160 \\
##   & (0.527) & (0.508) & (0.298) & (0.302) \\
##   & & & & \\
##  as.factor(year)2008 & 0.789 & 0.585 & 0.225 & 0.220 \\
##   & (0.770) & (0.625) & (0.310) & (0.322) \\
##   & & & & \\
##  as.factor(year)2009 & 0.973 & 0.699 & 0.297 & 0.279 \\
##   & (0.786) & (0.609) & (0.272) & (0.342) \\
```

```
##   & & & & \\
##  as.factor(year)2010 & 0.632 & 0.283 & 0.056 & 0.016 \\
##   & (0.807) & (0.582) & (0.324) & (0.386) \\
##   & & & & \\
##  as.factor(year)2011 & 1.807 & 1.395 & 0.588$^{**}$ & 0.559 \\
##   & (1.317) & (1.033) & (0.299) & (0.378) \\
##   & & & & \\
##  as.factor(year)2012 & 1.843 & 1.362 & 0.543$^{*}$ & 0.501 \\
##   & (1.218) & (0.905) & (0.328) & (0.397) \\
##   & & & & \\
##  as.factor(year)2013 & 2.618$^{*}$ & 2.075$^{*}$ & 0.844$^{***}$ & 0.795$^{*}$ \\
##   & (1.569) & (1.222) & (0.285) & (0.409) \\
##   & & & & \\
##  as.factor(year)2014 & 1.494 & 0.871 & 0.330 & 0.282 \\
##   & (1.050) & (0.673) & (0.247) & (0.396) \\
##   & & & & \\
##  as.factor(year)2015 & 1.705$^{*}$ & 0.921$^{*}$ & 0.608$^{**}$ & 0.550 \\
##   & (1.011) & (0.542) & (0.257) & (0.438) \\
##   & & & & \\
##  as.factor(year)2016 & 1.485 & 0.675 & 0.493$^{*}$ & 0.414 \\
##   & (1.016) & (0.563) & (0.287) & (0.515) \\
##   & & & & \\
##  Constant & 4.996$^{***}$ & 4.649$^{***}$ & 1.650$^{***}$ & 1.686$^{***}$ \\
##   & (0.505) & (0.678) & (0.247) & (0.237) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
###############
###Table A15###
###############
## Add directives to police data
police.data.t1$ssc <- police.data$ssc
police.data.t1$dgp_tenure <- police.data$dgp_tenure
police.data.t1$o_tenure <- police.data$o_tenure
police.data.t1$invest_law <- police.data$invest_law
police.data.t1$peb <- police.data$peb
police.data.t1$district_pca <- police.data$district_pca

## Lagged ssc
police.data.t1 <- ddply(police.data.t1, .(state_ut), transform, l.ssc = c(NA, ssc[-length(ssc)]))

## fill NA with 0
police.data.t1$l.ssc <- ifelse(is.na(police.data.t1$l.ssc), 0, police.data.t1$l.ssc)

## Lagged dgp_tenure
police.data.t1 <- ddply(police.data.t1, .(state_ut), transform, l.dgp_tenure = c(NA, dgp_tenure[-length(dgp_tenure

## fill NA with 0
police.data.t1$l.dgp_tenure <- ifelse(is.na(police.data.t1$l.dgp_tenure), 0, police.data.t1$l.dgp_tenure)

## Lagged o_tenure
police.data.t1 <- ddply(police.data.t1, .(state_ut), transform, l.o_tenure = c(NA, o_tenure[-length(o_tenure)]))

## fill NA with 0
police.data.t1$l.o_tenure <- ifelse(is.na(police.data.t1$l.o_tenure), 0, police.data.t1$l.o_tenure)

## Lagged invest_law
police.data.t1 <- ddply(police.data.t1, .(state_ut), transform, l.invest_law = c(NA, invest_law[-length(invest_law
```

```r
## fill NA with 0
police.data.t1$l.invest_law <- ifelse(is.na(police.data.t1$l.invest_law), 0, police.data.t1$l.invest_law)

## Lagged peb
police.data.t1 <- ddply(police.data.t1, .(state_ut), transform, l.peb = c(NA, peb[-length(peb)]))

## fill NA with 0
police.data.t1$l.peb <- ifelse(is.na(police.data.t1$l.peb), 0, police.data.t1$l.peb)

## Lagged district_pca
police.data.t1 <- ddply(police.data.t1, .(state_ut), transform, l.district_pca = c(NA, district_pca[-length(distri

## fill NA with 0
police.data.t1$l.district_pca <- ifelse(is.na(police.data.t1$l.district_pca), 0, police.data.t1$l.district_pca)

## Directives correlations
## directives data
directives <- police.data.t1[, c("l.ssc", "l.dgp_tenure","l.o_tenure", "l.invest_law", "l.peb", "l.state_pca", "l.

stargazer(cor(directives))
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:33
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}} cccccccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & l.ssc & l.dgp\_tenure & l.o\_tenure & l.invest\_law & l.peb & l.state\_pca & l.district\_pca \\
## \hline \\[-1.8ex]
## l.ssc & $1$ & $0.724$ & $0.781$ & $0.711$ & $0.793$ & $0.828$ & $0.573$ \\
## l.dgp\_tenure & $0.724$ & $1$ & $0.744$ & $0.732$ & $0.698$ & $0.618$ & $0.577$ \\
## l.o\_tenure & $0.781$ & $0.744$ & $1$ & $0.660$ & $0.938$ & $0.744$ & $0.502$ \\
## l.invest\_law & $0.711$ & $0.732$ & $0.660$ & $1$ & $0.743$ & $0.651$ & $0.506$ \\
## l.peb & $0.793$ & $0.698$ & $0.938$ & $0.743$ & $1$ & $0.761$ & $0.471$ \\
## l.state\_pca & $0.828$ & $0.618$ & $0.744$ & $0.651$ & $0.761$ & $1$ & $0.389$ \\
## l.district\_pca & $0.573$ & $0.577$ & $0.502$ & $0.506$ & $0.471$ & $0.389$ & $1$ \\
## \hline \\[-1.8ex]
## \end{tabular}
## \end{table}
```

```r
###############
###Table A16###
###############

## OLS Models
model.ols.dis <- lm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + state_ut + as.factor(year), data = pol

model.ols.dis.cl <- cl(police.data.t1, model.ols.dis, police.data.t1$state_ut)

model.ols.dir <- lm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.

model.ols.dir.cl <- cl(police.data.t1, model.ols.dir, police.data.t1$state_ut)

model.ols.dir <- lm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.

model.ols.dir.i1.cl <- cl(police.data.t1, model.ols.dir, police.data.t1$state_ut)

model.ols.dir <- lm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.

model.ols.dir.i2.cl <- cl(police.data.t1, model.ols.dir, police.data.t1$state_ut)
```

```r
## Poisson Models
model.p.dis <- glm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + state_ut + as.factor(year), data = poli

model.p.dis.cl <- cl(police.data.t1, model.p.dis, police.data.t1$state_ut)

model.p.dir <- glm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.i

model.p.dir.cl <- cl(police.data.t1, model.p.dir, police.data.t1$state_ut)

model.p.dir <- glm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.i

model.p.dir.i1.cl <- cl(police.data.t1, model.p.dir, police.data.t1$state_ut)

model.p.dir <- glm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.i

model.p.dir.i2.cl <- cl(police.data.t1, model.p.dir, police.data.t1$state_ut)

stargazer(model.ols.dis.cl, model.ols.dir.cl, model.ols.dir.i1.cl,  model.ols.dir.i2.cl,
          model.p.dis.cl,  model.p.dir.cl,  model.p.dir.i1.cl,  model.p.dir.i2.cl)


##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:34
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lccccccccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{8}{c}{\textit{Dependent variable:}} \\
## \cline{2-9}
## \\[-1.8ex] & \multicolumn{8}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4) & (5) & (6) & (7) & (8)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.508$^{*}$ & $-$0.989$^{*}$ & $-$2.004$^{**}$ & $-$0.329 & $-$0.716$^{**}$ & $-$0.423$^{*}$
##   & (0.793) & (0.600) & (0.919) & (0.592) & (0.282) & (0.218) & (0.315) & (0.349) \\
##   & & & & & & & & \\
##  l.district\_pca & $-$0.306 & $-$0.074 & $-$0.027 & $-$0.069 & 0.185 & 0.314 & 0.386 & 0.317 \\
##   & (0.500) & (0.674) & (0.647) & (0.673) & (0.355) & (0.395) & (0.396) & (0.395) \\
##   & & & & & & & & \\
##  l.ssc &  & 0.163 & 0.455 & 0.129 &  & $-$0.042 & $-$0.073 & $-$0.048 \\
##   &  & (0.612) & (0.614) & (0.619) &  & (0.379) & (0.315) & (0.383) \\
##   & & & & & & & & \\
##  l.dgp\_tenure &  & 0.888 & 0.525 & 0.891 &  & 0.197 & 0.030 & 0.202 \\
##   &  & (0.839) & (0.762) & (0.843) &  & (0.514) & (0.525) & (0.518) \\
##   & & & & & & & & \\
##  l.o\_tenure &  & $-$0.767 & $-$0.693$^{*}$ & $-$0.401 &  & $-$0.761$^{***}$ & $-$0.714$^{***}$ & $-$0.615$^{**
##   &  & (0.540) & (0.397) & (0.646) &  & (0.232) & (0.205) & (0.195) \\
##   & & & & & & & & \\
##  l.invest\_law &  & $-$0.996$^{*}$ & $-$1.799$^{**}$ & $-$0.975$^{*}$ &  & $-$0.350$^{*}$ & $-$0.616$^{**}$ & $
##   &  & (0.549) & (0.696) & (0.552) &  & (0.202) & (0.259) & (0.203) \\
##   & & & & & & & & \\
##  l.peb &  & $-$1.080 & $-$0.792 & $-$1.425 &  & 0.311 & 0.514$^{**}$ & 0.164 \\
##   &  & (1.687) & (1.557) & (1.844) &  & (0.276) & (0.233) & (0.252) \\
##   & & & & & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.679$^{***}$ & $-$5.220$^{***}$ & $-$5.342$^{***}$ & $-$5.198$^{***}$ & $-$3
##   & (0.258) & (0.478) & (0.426) & (0.480) & (0.138) & (0.216) & (0.209) & (0.215) \\
##   & & & & & & & & \\
##  state\_utASSAM & $-$4.445$^{***}$ & $-$5.176$^{***}$ & $-$5.324$^{***}$ & $-$5.155$^{***}$ & $-$3.129$^{***}$
##   & (0.430) & (0.216) & (0.186) & (0.224) & (0.081) & (0.084) & (0.079) & (0.084) \\
##   & & & & & & & & \\
##  state\_utBIHAR  & $-$5.168$^{***}$ & $-$5.608$^{***}$ & $-$5.486$^{***}$ & $-$5.604$^{***}$ & $-$3.062$^{***}$
```

```
##   & (0.164) & (0.393) & (0.307) & (0.394) & (0.222) & (0.170) & (0.152) & (0.171) \\
##   & & & & & & & & \\
##  state\_utCHHATTISGARH  & $-$3.867$^{***}$ & $-$4.468$^{***}$ & $-$4.589$^{***}$ & $-$4.444$^{***}$ & $-$1.426$
##   & (0.258) & (0.416) & (0.375) & (0.416) & (0.138) & (0.186) & (0.182) & (0.186) \\
##   & & & & & & & & \\
##  state\_utGOA & $-$4.617$^{***}$ & $-$5.097$^{***}$ & $-$5.350$^{***}$ & $-$5.254$^{***}$ & $-$3.035$^{***}$ &
##   & (0.258) & (0.400) & (0.326) & (0.298) & (0.138) & (0.157) & (0.131) & (0.101) \\
##   & & & & & & & & \\
##  state\_utGUJARAT  & 3.254$^{***}$ & 2.458$^{***}$ & 2.311$^{***}$ & 2.478$^{***}$ & 0.593$^{***}$ & 0.338$^{**
##   & (0.358) & (0.200) & (0.199) & (0.204) & (0.069) & (0.080) & (0.076) & (0.080) \\
##   & & & & & & & & \\
##  state\_utHARYANA  & $-$4.211$^{***}$ & $-$4.892$^{***}$ & $-$5.015$^{***}$ & $-$4.869$^{***}$ & $-$1.778$^{***
##   & (0.212) & (0.401) & (0.372) & (0.399) & (0.124) & (0.169) & (0.166) & (0.168) \\
##   & & & & & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.481$^{***}$ & $-$5.920$^{***}$ & $-$5.798$^{***}$ & $-$5.916$^{***}$ & $-$20
##   & (0.164) & (0.393) & (0.307) & (0.394) & (1.088) & (1.083) & (1.082) & (1.085) \\
##   & & & & & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$5.278$^{***}$ & $-$5.426$^{***}$ & $-$5.277$^{***}$ & $-$5.231$^{***}$ & $-$2.7
##   & (0.215) & (0.286) & (0.217) & (0.296) & (0.038) & (0.138) & (0.130) & (0.080) \\
##   & & & & & & & & \\
##  state\_utJHARKHAND & $-$4.382$^{***}$ & $-$4.562$^{***}$ & $-$4.883$^{***}$ & $-$4.538$^{***}$ & $-$2.842$^{**
##   & (0.430) & (0.478) & (0.455) & (0.491) & (0.081) & (0.249) & (0.279) & (0.251) \\
##   & & & & & & & & \\
##  state\_utKARNATAKA  & $-$4.387$^{***}$ & $-$5.443$^{***}$ & $-$5.587$^{***}$ & $-$5.427$^{***}$ & $-$1.828$^{*
##   & (0.072) & (0.512) & (0.545) & (0.507) & (0.018) & (0.072) & (0.071) & (0.072) \\
##   & & & & & & & & \\
##  state\_utKERALA  & $-$3.882$^{***}$ & $-$4.614$^{***}$ & $-$4.762$^{***}$ & $-$4.592$^{***}$ & $-$1.743$^{***}
##   & (0.430) & (0.216) & (0.186) & (0.224) & (0.081) & (0.084) & (0.079) & (0.084) \\
##   & & & & & & & & \\
##  state\_utMADHYA PRADESH & $-$2.413$^{***}$ & $-$3.079$^{***}$ & $-$3.127$^{***}$ & $-$3.076$^{***}$ & $-$0.730
##   & (0.125) & (0.514) & (0.446) & (0.514) & (0.170) & (0.115) & (0.110) & (0.116) \\
##   & & & & & & & & \\
##  state\_utMAHARASHTRA & 10.949$^{***}$ & 9.700$^{***}$ & 9.602$^{***}$ & 9.716$^{***}$ & 1.094$^{***}$ & 0.714$
##   & (0.072) & (0.731) & (0.748) & (0.726) & (0.011) & (0.066) & (0.076) & (0.066) \\
##   & & & & & & & & \\
##  state\_utMANIPUR  & $-$4.507$^{***}$ & $-$5.739$^{***}$ & $-$5.498$^{***}$ & $-$5.707$^{***}$ & $-$3.535$^{***
##   & (0.430) & (0.519) & (0.422) & (0.528) & (0.081) & (0.116) & (0.138) & (0.117) \\
##   & & & & & & & & \\
##  state\_utMEGHALAYA  & $-$5.119$^{***}$ & $-$6.038$^{***}$ & $-$6.167$^{***}$ & $-$6.019$^{***}$ & $-$4.305$^{*
##   & (0.092) & (0.510) & (0.517) & (0.504) & (0.084) & (0.116) & (0.115) & (0.115) \\
##   & & & & & & & & \\
##  state\_utMIZORAM  & $-$4.336$^{***}$ & $-$5.327$^{***}$ & $-$5.472$^{***}$ & $-$5.310$^{***}$ & $-$1.871$^{***
##   & (0.143) & (0.411) & (0.443) & (0.407) & (0.028) & (0.071) & (0.069) & (0.071) \\
##   & & & & & & & & \\
##  state\_utNAGALAND  & $-$4.492$^{***}$ & $-$5.093$^{***}$ & $-$5.214$^{***}$ & $-$5.069$^{***}$ & $-$2.524$^{**
##   & (0.258) & (0.416) & (0.375) & (0.416) & (0.138) & (0.186) & (0.182) & (0.186) \\
##   & & & & & & & & \\
##  state\_utORISSA  & $-$3.992$^{***}$ & $-$4.501$^{***}$ & $-$4.458$^{***}$ & $-$4.496$^{***}$ & $-$1.569$^{***}
##   & (0.258) & (0.438) & (0.425) & (0.439) & (0.138) & (0.321) & (0.296) & (0.322) \\
##   & & & & & & & & \\
##  state\_utPUNJAB  & $-$2.933$^{***}$ & $-$3.730$^{***}$ & $-$3.877$^{***}$ & $-$3.709$^{***}$ & $-$0.892$^{***}
##   & (0.358) & (0.200) & (0.199) & (0.204) & (0.069) & (0.080) & (0.076) & (0.080) \\
##   & & & & & & & & \\
##  state\_utRAJASTHAN  & $-$2.570$^{***}$ & $-$3.301$^{***}$ & $-$3.449$^{***}$ & $-$3.280$^{***}$ & $-$0.731$^{*
##   & (0.430) & (0.216) & (0.186) & (0.224) & (0.081) & (0.084) & (0.079) & (0.084) \\
##   & & & & & & & & \\
##  state\_utSIKKIM  & $-$4.899$^{***}$ & $-$5.579$^{***}$ & $-$5.702$^{***}$ & $-$5.556$^{***}$ & $-$19.684$^{***
##   & (0.212) & (0.401) & (0.372) & (0.399) & (1.072) & (1.083) & (1.084) & (1.084) \\
##   & & & & & & & & \\
##  state\_utTAMIL NADU  & $-$0.500$^{***}$ & $-$1.621$^{***}$ & $-$1.764$^{***}$ & $-$1.606$^{***}$ & $-$0.099$^{
##   & (0.000) & (0.616) & (0.649) & (0.610) & (0.000) & (0.071) & (0.071) & (0.072) \\
##   & & & & & & & & \\
```

```
##  state\_utTELANGANA & $-$4.434$^{***}$ & $-$6.301$^{***}$ & $-$6.502$^{***}$ & $-$6.302$^{***}$ & $-$1.315$^{**
##   & (0.652) & (1.695) & (1.746) & (1.696) & (0.135) & (0.115) & (0.120) & (0.115) \\
##   & & & & & & & & \\
##  state\_utTRIPURA  & $-$4.680$^{***}$ & $-$5.440$^{***}$ & $-$5.566$^{***}$ & $-$5.419$^{***}$ & $-$2.610$^{***
##   & (0.167) & (0.414) & (0.398) & (0.409) & (0.112) & (0.146) & (0.144) & (0.146) \\
##   & & & & & & & & \\
##  state\_utUTTAR PRADESH  & 1.535$^{***}$ & 0.517 & 0.268 & 0.533 & 0.199$^{***}$ & $-$0.043 & $-$0.057 & $-$0.0
##   & (0.215) & (0.764) & (0.755) & (0.762) & (0.038) & (0.149) & (0.132) & (0.149) \\
##   & & & & & & & & \\
##  state\_utUTTARAKHAND  & $-$4.899$^{***}$ & $-$5.579$^{***}$ & $-$5.702$^{***}$ & $-$5.556$^{***}$ & $-$19.684$
##   & (0.212) & (0.401) & (0.372) & (0.399) & (1.072) & (1.083) & (1.084) & (1.084) \\
##   & & & & & & & & \\
##  state\_utWEST BENGAL  & $-$0.212$^{*}$ & $-$0.747 & $-$0.774$^{*}$ & $-$0.734 & 0.105 & $-$0.041 & $-$0.006 &
##   & (0.125) & (0.459) & (0.416) & (0.458) & (0.102) & (0.222) & (0.214) & (0.222) \\
##   & & & & & & & & \\
##  state\_utZ A & N ISLANDS & $-$5.087$^{***}$ & $-$5.610$^{***}$ & $-$5.665$^{***}$ & $-$5.587$^{***}$ & $-$19.7
##   & (0.125) & (0.297) & (0.252) & (0.304) & (1.070) & (1.078) & (1.076) & (1.079) \\
##   & & & & & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.900$^{***}$ & $-$5.423$^{***}$ & $-$5.477$^{***}$ & $-$5.400$^{***}$ & $-$3.153$
##   & (0.125) & (0.297) & (0.252) & (0.304) & (0.102) & (0.128) & (0.100) & (0.130) \\
##   & & & & & & & & \\
##  state\_utZ D & N HAVELI & $-$5.025$^{***}$ & $-$5.548$^{***}$ & $-$5.602$^{***}$ & $-$5.525$^{***}$ & $-$4.251
##   & (0.125) & (0.297) & (0.252) & (0.304) & (0.102) & (0.128) & (0.100) & (0.130) \\
##   & & & & & & & & \\
##  state\_utZ DAMAN & DIU & $-$5.106$^{***}$ & $-$5.621$^{***}$ & $-$5.674$^{***}$ & $-$5.598$^{***}$ & $-$19.769
##   & (0.117) & (0.304) & (0.260) & (0.310) & (1.070) & (1.079) & (1.077) & (1.080) \\
##   & & & & & & & & \\
##  state\_utZ DELHI  & $-$4.869$^{***}$ & $-$4.800$^{***}$ & $-$4.933$^{***}$ & $-$4.790$^{***}$ & $-$2.695$^{***
##   & (0.092) & (0.096) & (0.079) & (0.100) & (0.084) & (0.043) & (0.046) & (0.044) \\
##   & & & & & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$5.087$^{***}$ & $-$5.610$^{***}$ & $-$5.665$^{***}$ & $-$5.587$^{***}$ & $-$19.76
##   & (0.125) & (0.297) & (0.252) & (0.304) & (1.070) & (1.078) & (1.076) & (1.079) \\
##   & & & & & & & & \\
##  state\_utZ PUDUCHERRY  & $-$5.025$^{***}$ & $-$5.548$^{***}$ & $-$5.602$^{***}$ & $-$5.525$^{***}$ & $-$4.251$
##   & (0.125) & (0.297) & (0.252) & (0.304) & (0.102) & (0.128) & (0.100) & (0.130) \\
##   & & & & & & & & \\
##  as.factor(year)2002 & 0.009 & 0.005 & 0.004 & 0.005 & 0.000 & $-$0.000 & 0.000 & 0.000 \\
##   & (0.300) & (0.304) & (0.304) & (0.304) & (0.197) & (0.198) & (0.198) & (0.198) \\
##   & & & & & & & & \\
##  as.factor(year)2003 & 0.237 & 0.234 & 0.233 & 0.234 & 0.141 & 0.141 & 0.141 & 0.141 \\
##   & (0.362) & (0.360) & (0.360) & (0.360) & (0.195) & (0.195) & (0.196) & (0.196) \\
##   & & & & & & & & \\
##  as.factor(year)2004 & $-$0.106 & $-$0.109 & $-$0.110 & $-$0.109 & $-$0.078 & $-$0.078 & $-$0.078 & $-$0.078 \\
##   & (0.335) & (0.333) & (0.333) & (0.333) & (0.230) & (0.231) & (0.231) & (0.231) \\
##   & & & & & & & & \\
##  as.factor(year)2005 & 0.237 & 0.234 & 0.233 & 0.234 & 0.141 & 0.141 & 0.141 & 0.141 \\
##   & (0.400) & (0.401) & (0.401) & (0.402) & (0.235) & (0.236) & (0.236) & (0.236) \\
##   & & & & & & & & \\
##  as.factor(year)2006 & $-$0.048 & $-$0.052 & $-$0.053 & $-$0.052 & $-$0.038 & $-$0.038 & $-$0.038 & $-$0.038 \\
##   & (0.331) & (0.330) & (0.331) & (0.331) & (0.218) & (0.219) & (0.220) & (0.220) \\
##   & & & & & & & & \\
##  as.factor(year)2007 & 0.237 & 0.336 & 0.364 & 0.335 & 0.141 & 0.144 & 0.145 & 0.144 \\
##   & (0.531) & (0.529) & (0.537) & (0.529) & (0.312) & (0.314) & (0.314) & (0.314) \\
##   & & & & & & & & \\
##  as.factor(year)2008 & 0.729 & 1.743 & 1.759 & 1.740 & 0.194 & 0.322 & 0.309 & 0.321 \\
##   & (0.831) & (1.484) & (1.481) & (1.483) & (0.334) & (0.288) & (0.295) & (0.288) \\
##   & & & & & & & & \\
##  as.factor(year)2009 & 0.905 & 2.116 & 2.157 & 2.115 & 0.251 & 0.456$^{**}$ & 0.459$^{**}$ & 0.455$^{**}$ \\
##   & (0.852) & (1.569) & (1.568) & (1.568) & (0.306) & (0.198) & (0.197) & (0.198) \\
##   & & & & & & & & \\
##  as.factor(year)2010 & 0.548 & 1.795 & 1.837 & 1.795 & $-$0.016 & 0.191 & 0.194 & 0.190 \\
##   & (0.872) & (1.630) & (1.632) & (1.630) & (0.371) & (0.304) & (0.304) & (0.305) \\
```

```
##   & & & & & & & & \\
##  as.factor(year)2011 & 1.716 & 2.870 & 3.054 & 2.877 & 0.544$^{*}$ & 0.753$^{***}$ & 0.733$^{***}$ & 0.753$^{**
##   & (1.363) & (2.103) & (2.146) & (2.107) & (0.328) & (0.259) & (0.260) & (0.259) \\
##   & & & & & & & & \\
##  as.factor(year)2012 & 1.739 & 2.908 & 3.012 & 2.924 & 0.500 & 0.713$^{**}$ & 0.696$^{**}$ & 0.714$^{**}$ \\
##   & (1.249) & (1.960) & (1.979) & (1.969) & (0.346) & (0.305) & (0.307) & (0.305) \\
##   & & & & & & & & \\
##  as.factor(year)2013 & 2.534 & 3.761 & 3.888 & 3.777 & 0.819$^{***}$ & 1.056$^{***}$ & 1.053$^{***}$ & 1.056$^{
##   & (1.610) & (2.342) & (2.366) & (2.351) & (0.307) & (0.225) & (0.226) & (0.226) \\
##   & & & & & & & & \\
##  as.factor(year)2014 & 1.554 & 2.785 & 2.888 & 2.803 & 0.409 & 0.632$^{***}$ & 0.611$^{***}$ & 0.632$^{***}$ \\
##   & (1.135) & (1.870) & (1.885) & (1.880) & (0.254) & (0.194) & (0.198) & (0.194) \\
##   & & & & & & & & \\
##  as.factor(year)2015 & 1.771 & 2.978 & 3.110 & 2.997 & 0.646$^{**}$ & 0.833$^{***}$ & 0.908$^{***}$ & 0.835$^{*
##   & (1.116) & (1.877) & (1.917) & (1.888) & (0.288) & (0.213) & (0.233) & (0.213) \\
##   & & & & & & & & \\
##  as.factor(year)2016 & 1.577 & 2.811 & 2.924 & 2.830 & 0.535$^{*}$ & 0.803$^{***}$ & 0.790$^{***}$ & 0.804$^{**
##   & (1.113) & (1.871) & (1.888) & (1.881) & (0.316) & (0.260) & (0.256) & (0.260) \\
##   & & & & & & & & \\
##  l.state\_pca:l.invest\_law &  &  & 1.494$^{**}$ &  &  &  & 0.654$^{*}$ &  \\
##   &  &  & (0.728) &  &  &  & (0.352) &  \\
##   & & & & & & & & \\
##  l.state\_pca:l.o\_tenure &  &  &  & $-$0.691 &  &  &  & $-$0.424$^{**}$ \\
##   &  &  &  & (0.523) &  &  &  & (0.199) \\
##   & & & & & & & & \\
##  Constant & 4.800$^{***}$ & 5.443$^{***}$ & 5.528$^{***}$ & 5.425$^{***}$ & 1.474$^{***}$ & 1.719$^{***}$ & 1.7
##   & (0.499) & (0.367) & (0.308) & (0.378) & (0.216) & (0.173) & (0.172) & (0.174) \\
##   & & & & & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{8}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
###############
###Table A17###
###############

## OLS Model with controls
## Dis
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add directives
  police.imp.1.l$l.ssc <- police.data.t1$l.ssc
  police.imp.1.l$l.dgp_tenure <- police.data.t1$l.dgp_tenure
```

```
  police.imp.1.l$l.o_tenure <- police.data.t1$l.o_tenure
  police.imp.1.l$l.invest_law <- police.data.t1$l.invest_law
  police.imp.1.l$l.peb <- police.data.t1$l.peb
  police.imp.1.l$l.district_pca <- police.data.t1$l.district_pca

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##             [,1]       [,2]       [,3]
## [1,] -1.28631660 0.62551301 0.03974218
## [2,] -0.66967313 0.71679772 0.35017145
## [3,]  2.41055429 1.31356547 0.06648746
## [4,] -0.05108319 0.05929132 0.38892817

## Replace results to model result
model.ols.dis.cl.c <- result.p.1

model.ols.dis.cl.c[2:5, 1] <- result.t3[, 1]
model.ols.dis.cl.c[2:5, 2] <- result.t3[, 2]
model.ols.dis.cl.c[2:5, 4] <- result.t3[, 3]


## Dir
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)
```

```r
  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add directives
  police.imp.1.l$l.ssc <- police.data.t1$l.ssc
  police.imp.1.l$l.dgp_tenure <- police.data.t1$l.dgp_tenure
  police.imp.1.l$l.o_tenure <- police.data.t1$l.o_tenure
  police.imp.1.l$l.invest_law <- police.data.t1$l.invest_law
  police.imp.1.l$l.peb <- police.data.t1$l.peb
  police.imp.1.l$l.district_pca <- police.data.t1$l.district_pca

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.inve
                head_trans + state_ut +
                as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:10, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:10, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 9, ncol = 3)
for (i in 1:9){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##              [,1]       [,2]       [,3]
##  [1,] -0.84930033 0.43528206 0.05103927
##  [2,] -0.36037249 0.80627022 0.65490219
##  [3,]  0.27719406 0.52002914 0.59400892
##  [4,]  0.61046043 0.73539532 0.40647550
##  [5,] -0.73507083 0.55074620 0.18198057
```

```
##  [6,] -0.98524961 0.45661692 0.03094992
##  [7,] -0.87140089 1.58831865 0.58325869
##  [8,]  2.19465550 0.99874084 0.02799029
##  [9,] -0.06346474 0.07172073 0.37621759

## Replace results to model result
model.ols.dir.cl.c <- result.p.1

model.ols.dir.cl.c[2:10, 1] <- result.t3[, 1]
model.ols.dir.cl.c[2:10, 2] <- result.t3[, 2]
model.ols.dir.cl.c[2:10, 4] <- result.t3[, 3]


## Dir.i1
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add directives
  police.imp.1.l$l.ssc <- police.data.t1$l.ssc
  police.imp.1.l$l.dgp_tenure <- police.data.t1$l.dgp_tenure
  police.imp.1.l$l.o_tenure <- police.data.t1$l.o_tenure
  police.imp.1.l$l.invest_law <- police.data.t1$l.invest_law
  police.imp.1.l$l.peb <- police.data.t1$l.peb
  police.imp.1.l$l.district_pca <- police.data.t1$l.district_pca

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.inve
                  l.state_pca*l.invest_law +gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[c(2:10, 61), 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[c(2:10, 61), 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
```

```
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 10, ncol = 3)
for (i in 1:10){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##              [,1]       [,2]       [,3]
##  [1,] -1.58341816 0.72693990 0.02939139
##  [2,] -0.30244609 0.79609274 0.70400989
##  [3,]  0.47350116 0.54585947 0.38570015
##  [4,]  0.37403911 0.74785256 0.61696885
##  [5,] -0.67904245 0.47714175 0.15469379
##  [6,] -1.55784437 0.52280751 0.00288468
##  [7,] -0.69057844 1.49170752 0.64340384
##  [8,]  2.01487457 1.01914694 0.04803929
##  [9,] -0.06158936 0.07098126 0.38556691
## [10,]  1.06551714 0.65548833 0.10404929

## Replace results to model result
model.ols.dir.i1.cl.c <- result.p.1

model.ols.dir.i1.cl.c[c(2:10, 61), 1] <- result.t3[, 1]
model.ols.dir.i1.cl.c[c(2:10, 61), 2] <- result.t3[, 2]
model.ols.dir.i1.cl.c[c(2:10, 61), 4] <- result.t3[, 3]

## Dir.i2
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add directives
  police.imp.1.l$l.ssc <- police.data.t1$l.ssc
  police.imp.1.l$l.dgp_tenure <- police.data.t1$l.dgp_tenure
  police.imp.1.l$l.o_tenure <- police.data.t1$l.o_tenure
  police.imp.1.l$l.invest_law <- police.data.t1$l.invest_law
  police.imp.1.l$l.peb <- police.data.t1$l.peb
  police.imp.1.l$l.district_pca <- police.data.t1$l.district_pca

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.inve
```

```
                  l.state_pca*l.o_tenure +gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[c(2:10, 61), 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[c(2:10, 61), 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 10, ncol = 3)
for (i in 1:10){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##               [,1]       [,2]       [,3]
##  [1,] -0.59088624 0.42642525 0.16584657
##  [2,] -0.35813658 0.80520812 0.65648224
##  [3,]  0.26467619 0.52326688 0.61298659
##  [4,]  0.61190896 0.73828089 0.40720091
##  [5,] -0.59380468 0.62715960 0.34373260
##  [6,] -0.97742919 0.46005989 0.03362255
##  [7,] -1.00423469 1.65372832 0.54368174
##  [8,]  2.19007869 0.99590388 0.02787178
##  [9,] -0.06200683 0.07181274 0.38788917
## [10,] -0.27142678 0.36307634 0.45471656

## Replace results to model result
model.ols.dir.i2.cl.c <- result.p.1

model.ols.dir.i2.cl.c[c(2:10, 61), 1] <- result.t3[, 1]
model.ols.dir.i2.cl.c[c(2:10, 61), 2] <- result.t3[, 2]
model.ols.dir.i2.cl.c[c(2:10, 61), 4] <- result.t3[, 3]


## Poisson Model with controls
## Dis
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)
```

```r
  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add directives
  police.imp.1.l$l.ssc <- police.data.t1$l.ssc
  police.imp.1.l$l.dgp_tenure <- police.data.t1$l.dgp_tenure
  police.imp.1.l$l.o_tenure <- police.data.t1$l.o_tenure
  police.imp.1.l$l.invest_law <- police.data.t1$l.invest_law
  police.imp.1.l$l.peb <- police.data.t1$l.peb
  police.imp.1.l$l.district_pca <- police.data.t1$l.district_pca

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3


##              [,1]       [,2]       [,3]
## [1,] -0.68351513 0.26191161 0.00906172
## [2,]  0.16553711 0.33743573 0.62372797
## [3,]  0.17917391 0.27010323 0.50710422
## [4,] -0.02741046 0.03505322 0.43423405
```

```r
## Replace results to model result
model.p.dis.cl.c <- result.p.1

model.p.dis.cl.c[2:5, 1] <- result.t3[, 1]
model.p.dis.cl.c[2:5, 2] <- result.t3[, 2]
model.p.dis.cl.c[2:5, 4] <- result.t3[, 3]


## Dir
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add directives
  police.imp.1.l$l.ssc <- police.data.t1$l.ssc
  police.imp.1.l$l.dgp_tenure <- police.data.t1$l.dgp_tenure
  police.imp.1.l$l.o_tenure <- police.data.t1$l.o_tenure
  police.imp.1.l$l.invest_law <- police.data.t1$l.invest_law
  police.imp.1.l$l.peb <- police.data.t1$l.peb
  police.imp.1.l$l.district_pca <- police.data.t1$l.district_pca

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.inv
                 head_trans + state_ut +
                 as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:10, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:10, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
```

```
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 9, ncol = 3)
for (i in 1:9){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##              [,1]       [,2]       [,3]
##  [1,] -0.38300548 0.23390454 0.10153783
##  [2,]  0.34275641 0.40010103 0.39162472
##  [3,] -0.09006079 0.37725911 0.81131963
##  [4,]  0.19815602 0.49594720 0.68948751
##  [5,] -0.68502128 0.28191071 0.01510204
##  [6,] -0.37360422 0.21737066 0.08566125
##  [7,]  0.19777873 0.31938192 0.53574863
##  [8,] -0.12924950 0.29968472 0.66626122
##  [9,] -0.03956940 0.03591735 0.27060114

## Replace results to model result
model.p.dir.cl.c <- result.p.1

model.p.dir.cl.c[2:10, 1] <- result.t3[, 1]
model.p.dir.cl.c[2:10, 2] <- result.t3[, 2]
model.p.dir.cl.c[2:10, 4] <- result.t3[, 3]


## Dir.i1
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add directives
  police.imp.1.l$l.ssc <- police.data.t1$l.ssc
  police.imp.1.l$l.dgp_tenure <- police.data.t1$l.dgp_tenure
  police.imp.1.l$l.o_tenure <- police.data.t1$l.o_tenure
  police.imp.1.l$l.invest_law <- police.data.t1$l.invest_law
  police.imp.1.l$l.peb <- police.data.t1$l.peb
  police.imp.1.l$l.district_pca <- police.data.t1$l.district_pca

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.inv
                 l.state_pca*l.invest_law +gdp +
                 head_trans + state_ut +
                 as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)
```

```
  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[c(2:10, 61), 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[c(2:10, 61), 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 10, ncol = 3)
for (i in 1:10){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3
```

```
##               [,1]       [,2]       [,3]
##  [1,] -0.82406417 0.35379081 0.01984629
##  [2,]  0.39406278 0.39794250 0.32205167
##  [3,] -0.10402825 0.32720234 0.75053615
##  [4,]  0.04584170 0.51272117 0.92875717
##  [5,] -0.66680259 0.26736483 0.01263196
##  [6,] -0.59102904 0.28191634 0.03604056
##  [7,]  0.40979680 0.31094074 0.18752852
##  [8,] -0.05742625 0.29962971 0.84801059
##  [9,] -0.03597313 0.03557928 0.31198300
## [10,]  0.59060888 0.32873719 0.07239932
```

```
## Replace results to model result
model.p.dir.i1.cl.c <- result.p.1

model.p.dir.i1.cl.c[c(2:10, 61), 1] <- result.t3[, 1]
model.p.dir.i1.cl.c[c(2:10, 61), 2] <- result.t3[, 2]
model.p.dir.i1.cl.c[c(2:10, 61), 4] <- result.t3[, 3]

## Dir.i2
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
```

```r
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add directives
  police.imp.1.l$l.ssc <- police.data.t1$l.ssc
  police.imp.1.l$l.dgp_tenure <- police.data.t1$l.dgp_tenure
  police.imp.1.l$l.o_tenure <- police.data.t1$l.o_tenure
  police.imp.1.l$l.invest_law <- police.data.t1$l.invest_law
  police.imp.1.l$l.peb <- police.data.t1$l.peb
  police.imp.1.l$l.district_pca <- police.data.t1$l.district_pca

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + l.district_pca + l.ssc + l.dgp_tenure + l.o_tenure + l.inv
                 l.state_pca*l.o_tenure +gdp +
                 head_trans + state_ut +
                 as.factor(year), data = police.imp.1.l, family = "poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[c(2:10, 61), 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[c(2:10, 61), 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 10, ncol = 3)
for (i in 1:10){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3


##              [,1]       [,2]       [,3]
##  [1,] -0.04592784 0.32398764 0.88727117
##  [2,]  0.34522807 0.39940466 0.38739201
##  [3,] -0.09466665 0.37992470 0.80322763
##  [4,]  0.20274861 0.49962937 0.68489101
##  [5,] -0.56817843 0.25754754 0.02737624
##  [6,] -0.37069138 0.21852967 0.08982951
##  [7,]  0.08006997 0.30054025 0.78991568
##  [8,] -0.12891090 0.29993212 0.66734096
##  [9,] -0.03945366 0.03606248 0.27393906
## [10,] -0.34200480 0.18922355 0.07069815
```

```
## Replace results to model result
model.p.dir.i2.cl.c <- result.p.1

model.p.dir.i2.cl.c[c(2:10, 61), 1] <- result.t3[, 1]
model.p.dir.i2.cl.c[c(2:10, 61), 2] <- result.t3[, 2]
model.p.dir.i2.cl.c[c(2:10, 61), 4] <- result.t3[, 3]

stargazer(model.ols.dis.cl.c, model.ols.dir.cl.c, model.ols.dir.i1.cl.c,  model.ols.dir.i2.cl.c,
                    model.p.dis.cl.c,  model.p.dir.cl.c,  model.p.dir.i1.cl.c,  model.p.dir.i2.cl.c)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:38
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lccccccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{8}{c}{\textit{Dependent variable:}} \\
## \cline{2-9}
## \\[-1.8ex] & \multicolumn{8}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4) & (5) & (6) & (7) & (8)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.286$^{**}$ & $-$0.849$^{*}$ & $-$1.583$^{**}$ & $-$0.591 & $-$0.684$^{***}$ & $-$0.383 & $
##   & (0.626) & (0.435) & (0.727) & (0.426) & (0.262) & (0.234) & (0.354) & (0.324) \\
##   & & & & & & & & \\
##  l.district\_pca & $-$0.670 & $-$0.360 & $-$0.302 & $-$0.358 & 0.166 & 0.343 & 0.394 & 0.345 \\
##   & (0.717) & (0.806) & (0.796) & (0.805) & (0.337) & (0.400) & (0.398) & (0.399) \\
##   & & & & & & & & \\
##  l.ssc &  & 0.277 & 0.474 & 0.265 &  & $-$0.090 & $-$0.104 & $-$0.095 \\
##   &  & (0.520) & (0.546) & (0.523) &  & (0.377) & (0.327) & (0.380) \\
##   & & & & & & & & \\
##  l.dgp\_tenure &  & 0.610 & 0.374 & 0.612 &  & 0.198 & 0.046 & 0.203 \\
##   &  & (0.735) & (0.748) & (0.738) &  & (0.496) & (0.513) & (0.500) \\
##   & & & & & & & & \\
##  l.o\_tenure &  & $-$0.735 & $-$0.679 & $-$0.594 &  & $-$0.685$^{**}$ & $-$0.667$^{**}$ & $-$0.568$^{**}$ \\
##   &  & (0.551) & (0.477) & (0.627) &  & (0.282) & (0.267) & (0.258) \\
##   & & & & & & & & \\
##  l.invest\_law &  & $-$0.985$^{**}$ & $-$1.558$^{***}$ & $-$0.977$^{**}$ &  & $-$0.374$^{*}$ & $-$0.591$^{**}$
##   &  & (0.457) & (0.523) & (0.460) &  & (0.217) & (0.282) & (0.219) \\
##   & & & & & & & & \\
##  l.peb &  & $-$0.871 & $-$0.691 & $-$1.004 &  & 0.198 & 0.410 & 0.080 \\
##   &  & (1.588) & (1.492) & (1.654) &  & (0.319) & (0.311) & (0.301) \\
##   & & & & & & & & \\
##  gdp & 2.411$^{*}$ & 2.195$^{**}$ & 2.015$^{**}$ & 2.190$^{**}$ & 0.179 & $-$0.129 & $-$0.057 & $-$0.129 \\
##   & (1.314) & (0.999) & (1.019) & (0.996) & (0.270) & (0.300) & (0.300) & (0.300) \\
##   & & & & & & & & \\
##  head\_trans & $-$0.051 & $-$0.063 & $-$0.062 & $-$0.062 & $-$0.027 & $-$0.040 & $-$0.036 & $-$0.039 \\
##   & (0.059) & (0.072) & (0.071) & (0.072) & (0.035) & (0.036) & (0.036) & (0.036) \\
##   & & & & & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.097$^{***}$ & $-$4.600$^{***}$ & $-$4.740$^{***}$ & $-$4.591$^{***}$ & $-$3
##   & (0.476) & (0.492) & (0.421) & (0.497) & (0.138) & (0.213) & (0.210) & (0.212) \\
##   & & & & & & & & \\
##  state\_utASSAM & $-$3.928$^{***}$ & $-$4.638$^{***}$ & $-$4.793$^{***}$ & $-$4.629$^{***}$ & $-$3.101$^{***}$
##   & (0.685) & (0.415) & (0.382) & (0.424) & (0.084) & (0.107) & (0.109) & (0.107) \\
##   & & & & & & & & \\
##  state\_utBIHAR  & $-$4.712$^{***}$ & $-$5.142$^{***}$ & $-$5.084$^{***}$ & $-$5.142$^{***}$ & $-$3.008$^{***}$
##   & (0.350) & (0.346) & (0.319) & (0.347) & (0.210) & (0.166) & (0.133) & (0.167) \\
##   & & & & & & & & \\
##  state\_utCHHATTISGARH  & $-$3.530$^{***}$ & $-$4.064$^{***}$ & $-$4.187$^{***}$ & $-$4.054$^{***}$ & $-$1.403
##   & (0.354) & (0.403) & (0.338) & (0.406) & (0.130) & (0.180) & (0.179) & (0.180) \\
##   & & & & & & & & \\
```

```
##  state\_utGOA & $-$4.031$^{***}$ & $-$4.570$^{***}$ & $-$4.796$^{***}$ & $-$4.652$^{***}$ & $-$2.979$^{***}$ &
##   & (0.469) & (0.586) & (0.528) & (0.524) & (0.139) & (0.154) & (0.138) & (0.111) \\
##   & & & & & & & & \\
##  state\_utGUJARAT  & 2.913$^{***}$ & 2.250$^{***}$ & 2.156$^{***}$ & 2.260$^{***}$ & 0.568$^{***}$ & 0.369$^{**
##   & (0.219) & (0.232) & (0.225) & (0.232) & (0.095) & (0.094) & (0.090) & (0.094) \\
##   & & & & & & & & \\
##  state\_utHARYANA  & $-$4.143$^{***}$ & $-$4.721$^{***}$ & $-$4.827$^{***}$ & $-$4.711$^{***}$ & $-$1.771$^{***
##   & (0.201) & (0.387) & (0.337) & (0.386) & (0.113) & (0.164) & (0.163) & (0.163) \\
##   & & & & & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$4.721$^{***}$ & $-$5.190$^{***}$ & $-$5.153$^{***}$ & $-$5.190$^{***}$ & $-$20
##   & (0.517) & (0.414) & (0.399) & (0.415) & (1.089) & (1.085) & (1.081) & (1.086) \\
##   & & & & & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$4.693$^{***}$ & $-$4.907$^{***}$ & $-$4.830$^{***}$ & $-$4.815$^{***}$ & $-$2.6
##   & (0.187) & (0.363) & (0.347) & (0.409) & (0.097) & (0.116) & (0.107) & (0.067) \\
##   & & & & & & & & \\
##  state\_utJHARKHAND & $-$3.866$^{***}$ & $-$4.154$^{***}$ & $-$4.430$^{***}$ & $-$4.143$^{***}$ & $-$2.809$^{**
##   & (0.682) & (0.634) & (0.645) & (0.644) & (0.083) & (0.268) & (0.295) & (0.270) \\
##   & & & & & & & & \\
##  state\_utKARNATAKA  & $-$4.662$^{***}$ & $-$5.587$^{***}$ & $-$5.685$^{***}$ & $-$5.578$^{***}$ & $-$1.855$^{*
##   & (0.101) & (0.492) & (0.518) & (0.490) & (0.040) & (0.072) & (0.071) & (0.072) \\
##   & & & & & & & & \\
##  state\_utKERALA  & $-$3.715$^{***}$ & $-$4.381$^{***}$ & $-$4.512$^{***}$ & $-$4.372$^{***}$ & $-$1.735$^{***}
##   & (0.499) & (0.299) & (0.263) & (0.307) & (0.079) & (0.084) & (0.083) & (0.084) \\
##   & & & & & & & & \\
##  state\_utMADHYA PRADESH & $-$2.200$^{***}$ & $-$2.805$^{***}$ & $-$2.862$^{***}$ & $-$2.804$^{***}$ & $-$0.699
##   & (0.150) & (0.393) & (0.336) & (0.395) & (0.156) & (0.105) & (0.096) & (0.105) \\
##   & & & & & & & & \\
##  state\_utMAHARASHTRA & 9.445$^{***}$ & 8.486$^{***}$ & 8.507$^{***}$ & 8.496$^{***}$ & 0.976$^{***}$ & 0.783$^
##   & (0.918) & (1.114) & (1.133) & (1.109) & (0.186) & (0.186) & (0.188) & (0.186) \\
##   & & & & & & & & \\
##  state\_utMANIPUR  & $-$3.764$^{***}$ & $-$4.984$^{***}$ & $-$4.859$^{***}$ & $-$4.970$^{***}$ & $-$3.490$^{***
##   & (0.808) & (0.678) & (0.656) & (0.690) & (0.097) & (0.215) & (0.191) & (0.216) \\
##   & & & & & & & & \\
##  state\_utMEGHALAYA  & $-$4.516$^{***}$ & $-$5.396$^{***}$ & $-$5.545$^{***}$ & $-$5.387$^{***}$ & $-$4.267$^{*
##   & (0.337) & (0.362) & (0.338) & (0.365) & (0.101) & (0.131) & (0.135) & (0.131) \\
##   & & & & & & & & \\
##  state\_utMIZORAM  & $-$3.618$^{***}$ & $-$4.596$^{***}$ & $-$4.764$^{***}$ & $-$4.588$^{***}$ & $-$1.824$^{***
##   & (0.533) & (0.371) & (0.374) & (0.376) & (0.075) & (0.136) & (0.137) & (0.136) \\
##   & & & & & & & & \\
##  state\_utNAGALAND  & $-$3.939$^{***}$ & $-$4.507$^{***}$ & $-$4.646$^{***}$ & $-$4.496$^{***}$ & $-$2.498$^{**
##   & (0.467) & (0.407) & (0.338) & (0.412) & (0.139) & (0.183) & (0.184) & (0.182) \\
##   & & & & & & & & \\
##  state\_utORISSA  & $-$3.815$^{***}$ & $-$4.217$^{***}$ & $-$4.208$^{***}$ & $-$4.214$^{***}$ & $-$1.567$^{***}
##   & (0.284) & (0.407) & (0.393) & (0.407) & (0.128) & (0.324) & (0.304) & (0.325) \\
##   & & & & & & & & \\
##  state\_utPUNJAB  & $-$2.334$^{***}$ & $-$3.000$^{***}$ & $-$3.149$^{***}$ & $-$3.002$^{***}$ & $-$0.721$^{***}
##   & (0.660) & (0.584) & (0.546) & (0.582) & (0.205) & (0.192) & (0.192) & (0.193) \\
##   & & & & & & & & \\
##  state\_utRAJASTHAN  & $-$2.536$^{***}$ & $-$3.188$^{***}$ & $-$3.309$^{***}$ & $-$3.178$^{***}$ & $-$0.734$^{*
##   & (0.434) & (0.263) & (0.226) & (0.270) & (0.082) & (0.081) & (0.079) & (0.081) \\
##   & & & & & & & & \\
##  state\_utSIKKIM  & $-$4.326$^{***}$ & $-$4.974$^{***}$ & $-$5.116$^{***}$ & $-$4.964$^{***}$ & $-$19.652$^{***
##   & (0.438) & (0.359) & (0.293) & (0.364) & (1.075) & (1.085) & (1.087) & (1.086) \\
##   & & & & & & & & \\
##  state\_utTAMIL NADU  & $-$1.004$^{***}$ & $-$1.945$^{***}$ & $-$2.027$^{***}$ & $-$1.938$^{***}$ & $-$0.118 &
##   & (0.309) & (0.654) & (0.679) & (0.651) & (0.075) & (0.088) & (0.085) & (0.088) \\
##   & & & & & & & & \\
##  state\_utTELANGANA & $-$4.582$^{***}$ & $-$6.262$^{***}$ & $-$6.421$^{***}$ & $-$6.261$^{***}$ & $-$1.256$^{**
##   & (0.633) & (1.496) & (1.548) & (1.497) & (0.193) & (0.238) & (0.241) & (0.238) \\
##   & & & & & & & & \\
##  state\_utTRIPURA  & $-$4.111$^{***}$ & $-$4.833$^{***}$ & $-$4.976$^{***}$ & $-$4.823$^{***}$ & $-$2.578$^{***
##   & (0.394) & (0.334) & (0.278) & (0.339) & (0.118) & (0.147) & (0.151) & (0.147) \\
```

```
##   & & & & & & & & \\
##  state\_utUTTAR PRADESH  & 1.104$^{**}$ & 0.303 & 0.142 & 0.306 & 0.247$^{*}$ & 0.127 & 0.090 & 0.128 \\
##   & (0.545) & (0.867) & (0.838) & (0.866) & (0.143) & (0.274) & (0.257) & (0.274) \\
##   & & & & & & & & \\
##  state\_utUTTARAKHAND  & $-$4.469$^{***}$ & $-$5.093$^{***}$ & $-$5.224$^{***}$ & $-$5.083$^{***}$ & $-$19.654$
##   & (0.358) & (0.358) & (0.294) & (0.361) & (1.073) & (1.084) & (1.086) & (1.085) \\
##   & & & & & & & & \\
##  state\_utWEST BENGAL  & $-$0.578$^{***}$ & $-$0.968$^{*}$ & $-$0.971$^{**}$ & $-$0.961$^{*}$ & 0.070 & $-$0.02
##   & (0.220) & (0.523) & (0.494) & (0.521) & (0.101) & (0.230) & (0.223) & (0.231) \\
##   & & & & & & & & \\
##  state\_utZ A & N ISLANDS & $-$4.484$^{***}$ & $-$5.083$^{***}$ & $-$5.166$^{***}$ & $-$5.073$^{***}$ & $-$19.7
##   & (0.378) & (0.391) & (0.368) & (0.400) & (1.073) & (1.090) & (1.085) & (1.091) \\
##   & & & & & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.335$^{***}$ & $-$4.933$^{***}$ & $-$5.013$^{***}$ & $-$4.922$^{***}$ & $-$3.128$
##   & (0.360) & (0.376) & (0.354) & (0.386) & (0.113) & (0.191) & (0.154) & (0.192) \\
##   & & & & & & & & \\
##  state\_utZ D & N HAVELI & $-$4.484$^{***}$ & $-$5.078$^{***}$ & $-$5.157$^{***}$ & $-$5.067$^{***}$ & $-$4.227
##   & (0.345) & (0.369) & (0.346) & (0.379) & (0.110) & (0.189) & (0.152) & (0.190) \\
##   & & & & & & & & \\
##  state\_utZ DAMAN & DIU & $-$4.775$^{***}$ & $-$5.343$^{***}$ & $-$5.406$^{***}$ & $-$5.332$^{***}$ & $-$19.756
##   & (0.217) & (0.304) & (0.278) & (0.313) & (1.073) & (1.088) & (1.084) & (1.089) \\
##   & & & & & & & & \\
##  state\_utZ DELHI  & $-$4.820$^{***}$ & $-$4.781$^{***}$ & $-$4.884$^{***}$ & $-$4.777$^{***}$ & $-$2.698$^{***
##   & (0.084) & (0.079) & (0.083) & (0.081) & (0.079) & (0.042) & (0.044) & (0.042) \\
##   & & & & & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$4.544$^{***}$ & $-$5.140$^{***}$ & $-$5.219$^{***}$ & $-$5.129$^{***}$ & $-$19.74
##   & (0.350) & (0.369) & (0.346) & (0.378) & (1.073) & (1.089) & (1.084) & (1.090) \\
##   & & & & & & & & \\
##  state\_utZ PUDUCHERRY  & $-$4.447$^{***}$ & $-$5.045$^{***}$ & $-$5.126$^{***}$ & $-$5.034$^{***}$ & $-$4.224$
##   & (0.366) & (0.381) & (0.359) & (0.391) & (0.113) & (0.193) & (0.156) & (0.194) \\
##   & & & & & & & & \\
##  as.factor(year)2002 & $-$0.005 & $-$0.010 & $-$0.010 & $-$0.009 & $-$0.032 & $-$0.038 & $-$0.035 & $-$0.038 \\
##   & (0.300) & (0.304) & (0.304) & (0.304) & (0.217) & (0.220) & (0.219) & (0.220) \\
##   & & & & & & & & \\
##  as.factor(year)2003 & 0.207 & 0.205 & 0.206 & 0.206 & 0.108 & 0.111 & 0.112 & 0.111 \\
##   & (0.343) & (0.342) & (0.343) & (0.342) & (0.191) & (0.196) & (0.195) & (0.196) \\
##   & & & & & & & & \\
##  as.factor(year)2004 & $-$0.150 & $-$0.146 & $-$0.144 & $-$0.146 & $-$0.109 & $-$0.094 & $-$0.097 & $-$0.094 \\
##   & (0.306) & (0.308) & (0.310) & (0.309) & (0.222) & (0.228) & (0.228) & (0.229) \\
##   & & & & & & & & \\
##  as.factor(year)2005 & 0.155 & 0.158 & 0.163 & 0.159 & 0.097 & 0.120 & 0.116 & 0.120 \\
##   & (0.378) & (0.379) & (0.381) & (0.380) & (0.226) & (0.221) & (0.223) & (0.221) \\
##   & & & & & & & & \\
##  as.factor(year)2006 & $-$0.103 & $-$0.080 & $-$0.075 & $-$0.082 & $-$0.055 & $-$0.005 & $-$0.017 & $-$0.006 \\
##   & (0.301) & (0.303) & (0.304) & (0.303) & (0.208) & (0.205) & (0.207) & (0.205) \\
##   & & & & & & & & \\
##  as.factor(year)2007 & 0.111 & 0.227 & 0.258 & 0.226 & 0.112 & 0.180 & 0.166 & 0.180 \\
##   & (0.507) & (0.502) & (0.509) & (0.502) & (0.316) & (0.318) & (0.320) & (0.318) \\
##   & & & & & & & & \\
##  as.factor(year)2008 & 0.556 & 1.503 & 1.535 & 1.501 & 0.152 & 0.372 & 0.339 & 0.371 \\
##   & (0.710) & (1.318) & (1.321) & (1.318) & (0.342) & (0.295) & (0.302) & (0.296) \\
##   & & & & & & & & \\
##  as.factor(year)2009 & 0.663 & 1.805 & 1.862 & 1.804 & 0.187 & 0.511$^{*}$ & 0.483$^{*}$ & 0.510$^{*}$ \\
##   & (0.688) & (1.361) & (1.371) & (1.361) & (0.351) & (0.278) & (0.276) & (0.279) \\
##   & & & & & & & & \\
##  as.factor(year)2010 & 0.222 & 1.404 & 1.467 & 1.404 & $-$0.113 & 0.235 & 0.203 & 0.234 \\
##   & (0.656) & (1.386) & (1.400) & (1.387) & (0.408) & (0.368) & (0.362) & (0.369) \\
##   & & & & & & & & \\
##  as.factor(year)2011 & 1.308 & 2.415 & 2.592 & 2.419 & 0.442 & 0.831$^{**}$ & 0.769$^{**}$ & 0.831$^{**}$ \\
##   & (1.074) & (1.824) & (1.871) & (1.827) & (0.381) & (0.359) & (0.354) & (0.360) \\
##   & & & & & & & & \\
##  as.factor(year)2012 & 1.256 & 2.373 & 2.496 & 2.381 & 0.375 & 0.798$^{**}$ & 0.731$^{*}$ & 0.798$^{**}$ \\
```

```
##   & (0.914) & (1.637) & (1.667) & (1.642) & (0.401) & (0.388) & (0.392) & (0.388) \\
##   & & & & & & & & \\
##  as.factor(year)2013 & 1.981 & 3.160 & 3.306 & 3.168 & 0.672$^{*}$ & 1.149$^{***}$ & 1.087$^{***}$ & 1.149$^{**
##   & (1.233) & (1.979) & (2.015) & (1.984) & (0.400) & (0.397) & (0.395) & (0.397) \\
##   & & & & & & & & \\
##  as.factor(year)2014 & 0.887 & 2.081 & 2.217 & 2.090 & 0.237 & 0.762$^{*}$ & 0.670 & 0.763$^{*}$ \\
##   & (0.697) & (1.475) & (1.504) & (1.480) & (0.407) & (0.421) & (0.428) & (0.421) \\
##   & & & & & & & & \\
##  as.factor(year)2015 & 0.921 & 2.114 & 2.285 & 2.124 & 0.453 & 0.970$^{**}$ & 0.960$^{**}$ & 0.971$^{**}$ \\
##   & (0.578) & (1.434) & (1.480) & (1.439) & (0.458) & (0.464) & (0.473) & (0.464) \\
##   & & & & & & & & \\
##  as.factor(year)2016 & 0.688 & 1.913 & 2.071 & 1.923 & 0.307 & 0.939$^{*}$ & 0.841 & 0.939$^{*}$ \\
##   & (0.584) & (1.409) & (1.442) & (1.415) & (0.525) & (0.570) & (0.566) & (0.570) \\
##   & & & & & & & & \\
##  l.state\_pca:l.invest\_law &  &  & 1.066 &  &  & 0.591$^{*}$ &  \\
##   &  &  & (0.655) &  &  & (0.329) &  \\
##   & & & & & & & & \\
##  l.state\_pca:l.o\_tenure &  &  &  & $-$0.271 &  &  & $-$0.342$^{*}$ \\
##   &  &  &  & (0.363) &  &  & (0.189) \\
##   & & & & & & & & \\
##  Constant & 4.433$^{***}$ & 5.063$^{***}$ & 5.158$^{***}$ & 5.054$^{***}$ & 1.514$^{***}$ & 1.757$^{***}$ & 1.7
##   & (0.639) & (0.490) & (0.450) & (0.499) & (0.209) & (0.165) & (0.164) & (0.166) \\
##   & & & & & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{8}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
###############
###Table A18###
###############
## Add pca_bind
police.data.t1$pca_bind <- police.data$pca_bind

## Lag pca_ind
police.data.t1 <- ddply(police.data.t1, .(state_ut), transform, l.pca_bind = c(NA, pca_bind[-length(pca_bind)]))

## fill NA with 0
police.data.t1$l.pca_bind <- ifelse(is.na(police.data.t1$l.pca_bind), 0, police.data.t1$l.pca_bind)

## Poisson no control binding
model.poisson.bind <- glm(death_not_remanded ~ 1 + l.state_pca + l.pca_bind + as.factor(state_ut) + as.factor(year

model.poisson.bind.cl <- cl(police.data.t1, model.poisson.bind, police.data.t1$state_ut)

stargazer(model.poisson.bind.cl)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:40
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] &   \\
## \hline \\[-1.8ex]
```

```
##  l.state\_pca & $-$0.522$^{***}$ \\
##   & (0.196) \\
##   & \\
##  l.pca\_bind & $-$0.587$^{***}$ \\
##   & (0.218) \\
##   & \\
##  as.factor(state\_ut)ARUNACHAL PRADESH  & $-$3.340$^{***}$ \\
##   & (0.067) \\
##   & \\
##  as.factor(state\_ut)ASSAM & $-$2.935$^{***}$ \\
##   & (0.067) \\
##   & \\
##  as.factor(state\_ut)BIHAR  & $-$3.012$^{***}$ \\
##   & (0.022) \\
##   & \\
##  as.factor(state\_ut)CHHATTISGARH  & $-$1.599$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)GOA & $-$2.935$^{***}$ \\
##   & (0.067) \\
##   & \\
##  as.factor(state\_ut)GUJARAT  & 0.514$^{***}$ \\
##   & (0.097) \\
##   & \\
##  as.factor(state\_ut)HARYANA  & $-$1.940$^{***}$ \\
##   & (0.097) \\
##   & \\
##  as.factor(state\_ut)HIMACHAL PRADESH  & $-$20.118$^{***}$ \\
##   & (1.065) \\
##   & \\
##  as.factor(state\_ut)JAMMU & KASHMIR  & $-$2.829$^{***}$ \\
##   & (0.022) \\
##   & \\
##  as.factor(state\_ut)JHARKHAND & $-$2.921$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)KARNATAKA  & $-$1.904$^{***}$ \\
##   & (0.049) \\
##   & \\
##  as.factor(state\_ut)KERALA  & $-$1.549$^{***}$ \\
##   & (0.067) \\
##   & \\
##  as.factor(state\_ut)MADHYA PRADESH & $-$0.709$^{***}$ \\
##   & (0.022) \\
##   & \\
##  as.factor(state\_ut)MAHARASHTRA & 1.020$^{***}$ \\
##   & (0.023) \\
##   & \\
##  as.factor(state\_ut)MANIPUR  & $-$3.614$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)MEGHALAYA  & $-$4.287$^{***}$ \\
##   & (0.023) \\
##   & \\
##  as.factor(state\_ut)MIZORAM  & $-$1.802$^{***}$ \\
##   & (0.023) \\
##   & \\
##  as.factor(state\_ut)NAGALAND  & $-$2.698$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)ORISSA  & $-$1.742$^{***}$ \\
##   & (0.107) \\
```

```
##   & \\
##  as.factor(state\_ut)PUNJAB  & $-$0.970$^{***}$ \\
##   & (0.097) \\
##   & \\
##  as.factor(state\_ut)RAJASTHAN  & $-$0.810$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)SIKKIM  & $-$19.577$^{***}$ \\
##   & (1.066) \\
##   & \\
##  as.factor(state\_ut)TAMIL NADU  & $-$0.173$^{***}$ \\
##   & (0.031) \\
##   & \\
##  as.factor(state\_ut)TELANGANA & $-$1.417$^{***}$ \\
##   & (0.096) \\
##   & \\
##  as.factor(state\_ut)TRIPURA  & $-$2.554$^{***}$ \\
##   & (0.044) \\
##   & \\
##  as.factor(state\_ut)UTTAR PRADESH  & 0.124$^{***}$ \\
##   & (0.022) \\
##   & \\
##  as.factor(state\_ut)UTTARAKHAND  & $-$19.850$^{***}$ \\
##   & (1.069) \\
##   & \\
##  as.factor(state\_ut)WEST BENGAL  & $-$0.036 \\
##   & (0.075) \\
##   & \\
##  as.factor(state\_ut)Z A & N ISLANDS & $-$19.913$^{***}$ \\
##   & (1.067) \\
##   & \\
##  as.factor(state\_ut)Z CHANDIGARH  & $-$3.294$^{***}$ \\
##   & (0.075) \\
##   & \\
##  as.factor(state\_ut)Z D & N HAVELI & $-$4.392$^{***}$ \\
##   & (0.075) \\
##   & \\
##  as.factor(state\_ut)Z DAMAN & DIU & $-$19.918$^{***}$ \\
##   & (1.068) \\
##   & \\
##  as.factor(state\_ut)Z DELHI  & $-$2.822$^{***}$ \\
##   & (0.060) \\
##   & \\
##  as.factor(state\_ut)Z LAKSHADWEEP  & $-$19.913$^{***}$ \\
##   & (1.067) \\
##   & \\
##  as.factor(state\_ut)Z PUDUCHERRY  & $-$4.392$^{***}$ \\
##   & (0.075) \\
##   & \\
##  as.factor(year)2002 & 0.000 \\
##   & (0.197) \\
##   & \\
##  as.factor(year)2003 & 0.141 \\
##   & (0.195) \\
##   & \\
##  as.factor(year)2004 & $-$0.078 \\
##   & (0.230) \\
##   & \\
##  as.factor(year)2005 & 0.141 \\
##   & (0.235) \\
##   & \\
##  as.factor(year)2006 & $-$0.038 \\
```

```
##   & (0.218) \\
##   & \\
##  as.factor(year)2007 & 0.141 \\
##   & (0.312) \\
##   & \\
##  as.factor(year)2008 & 0.198 \\
##   & (0.334) \\
##   & \\
##  as.factor(year)2009 & 0.251 \\
##   & (0.300) \\
##   & \\
##  as.factor(year)2010 & $-$0.014 \\
##   & (0.367) \\
##   & \\
##  as.factor(year)2011 & 0.540 \\
##   & (0.333) \\
##   & \\
##  as.factor(year)2012 & 0.501 \\
##   & (0.347) \\
##   & \\
##  as.factor(year)2013 & 0.820$^{***}$ \\
##   & (0.313) \\
##   & \\
##  as.factor(year)2014 & 0.443$^{*}$ \\
##   & (0.230) \\
##   & \\
##  as.factor(year)2015 & 0.682$^{***}$ \\
##   & (0.244) \\
##   & \\
##  as.factor(year)2016 & 0.571$^{**}$ \\
##   & (0.278) \\
##   & \\
##  Constant & 1.540$^{***}$ \\
##   & (0.217) \\
##   & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
## categorical variable
police.data.t1$bindinglvl <- ifelse(police.data.t1$l.pca_bind == 1 & police.data.t1$l.state_pca == 1, "Binding",
                                    ifelse(police.data.t1$l.pca_bind == 0 & police.data.t1$l.state_pca == 1, "Regu
police.data.t1$bindinglvl <- as.factor(police.data.t1$bindinglvl)
police.data.t1$bindinglvl <- relevel(police.data.t1$bindinglvl, ref = "Regular")
levels(police.data.t1$bindinglvl)
```

```
## [1] "Regular" "Binding" "No PCA"
```

```
## Poisson no control binding categorical
model.poisson.bind.ca <- glm(death_not_remanded ~ 1 + bindinglvl + as.factor(state_ut) + as.factor(year), data = p

model.poisson.bind.ca.cl <- cl(police.data.t1, model.poisson.bind.ca, police.data.t1$state_ut)

stargazer(model.poisson.bind.ca.cl)
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:40
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
```

```
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] &   \\
## \hline \\[-1.8ex]
##  bindinglvlBinding & $-$0.587$^{***}$ \\
##   & (0.218) \\
##   & \\
##  bindinglvlNo PCA & 0.522$^{***}$ \\
##   & (0.196) \\
##   & \\
##  as.factor(state\_ut)ARUNACHAL PRADESH  & $-$3.340$^{***}$ \\
##   & (0.067) \\
##   & \\
##  as.factor(state\_ut)ASSAM & $-$2.935$^{***}$ \\
##   & (0.067) \\
##   & \\
##  as.factor(state\_ut)BIHAR  & $-$3.012$^{***}$ \\
##   & (0.022) \\
##   & \\
##  as.factor(state\_ut)CHHATTISGARH  & $-$1.599$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)GOA & $-$2.935$^{***}$ \\
##   & (0.067) \\
##   & \\
##  as.factor(state\_ut)GUJARAT  & 0.514$^{***}$ \\
##   & (0.097) \\
##   & \\
##  as.factor(state\_ut)HARYANA  & $-$1.940$^{***}$ \\
##   & (0.097) \\
##   & \\
##  as.factor(state\_ut)HIMACHAL PRADESH  & $-$20.118$^{***}$ \\
##   & (1.065) \\
##   & \\
##  as.factor(state\_ut)JAMMU & KASHMIR  & $-$2.829$^{***}$ \\
##   & (0.022) \\
##   & \\
##  as.factor(state\_ut)JHARKHAND & $-$2.921$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)KARNATAKA  & $-$1.904$^{***}$ \\
##   & (0.049) \\
##   & \\
##  as.factor(state\_ut)KERALA  & $-$1.549$^{***}$ \\
##   & (0.067) \\
##   & \\
##  as.factor(state\_ut)MADHYA PRADESH & $-$0.709$^{***}$ \\
##   & (0.022) \\
##   & \\
##  as.factor(state\_ut)MAHARASHTRA & 1.020$^{***}$ \\
##   & (0.023) \\
##   & \\
##  as.factor(state\_ut)MANIPUR  & $-$3.614$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)MEGHALAYA  & $-$4.287$^{***}$ \\
##   & (0.023) \\
##   & \\
##  as.factor(state\_ut)MIZORAM  & $-$1.802$^{***}$ \\
```

```
##   & (0.023) \\
##   & \\
##  as.factor(state\_ut)NAGALAND  & $-$2.698$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)ORISSA  & $-$1.742$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)PUNJAB  & $-$0.970$^{***}$ \\
##   & (0.097) \\
##   & \\
##  as.factor(state\_ut)RAJASTHAN  & $-$0.810$^{***}$ \\
##   & (0.107) \\
##   & \\
##  as.factor(state\_ut)SIKKIM  & $-$19.577$^{***}$ \\
##   & (1.066) \\
##   & \\
##  as.factor(state\_ut)TAMIL NADU  & $-$0.173$^{***}$ \\
##   & (0.031) \\
##   & \\
##  as.factor(state\_ut)TELANGANA & $-$1.417$^{***}$ \\
##   & (0.096) \\
##   & \\
##  as.factor(state\_ut)TRIPURA  & $-$2.554$^{***}$ \\
##   & (0.044) \\
##   & \\
##  as.factor(state\_ut)UTTAR PRADESH  & 0.124$^{***}$ \\
##   & (0.022) \\
##   & \\
##  as.factor(state\_ut)UTTARAKHAND  & $-$19.850$^{***}$ \\
##   & (1.069) \\
##   & \\
##  as.factor(state\_ut)WEST BENGAL  & $-$0.036 \\
##   & (0.075) \\
##   & \\
##  as.factor(state\_ut)Z A & N ISLANDS & $-$19.913$^{***}$ \\
##   & (1.067) \\
##   & \\
##  as.factor(state\_ut)Z CHANDIGARH  & $-$3.294$^{***}$ \\
##   & (0.075) \\
##   & \\
##  as.factor(state\_ut)Z D & N HAVELI & $-$4.392$^{***}$ \\
##   & (0.075) \\
##   & \\
##  as.factor(state\_ut)Z DAMAN & DIU & $-$19.918$^{***}$ \\
##   & (1.068) \\
##   & \\
##  as.factor(state\_ut)Z DELHI  & $-$2.822$^{***}$ \\
##   & (0.060) \\
##   & \\
##  as.factor(state\_ut)Z LAKSHADWEEP  & $-$19.913$^{***}$ \\
##   & (1.067) \\
##   & \\
##  as.factor(state\_ut)Z PUDUCHERRY  & $-$4.392$^{***}$ \\
##   & (0.075) \\
##   & \\
##  as.factor(year)2002 & 0.000 \\
##   & (0.197) \\
##   & \\
##  as.factor(year)2003 & 0.141 \\
##   & (0.195) \\
##   & \\
```

```
##  as.factor(year)2004 & $-$0.078 \\
##   & (0.230) \\
##   & \\
##  as.factor(year)2005 & 0.141 \\
##   & (0.235) \\
##   & \\
##  as.factor(year)2006 & $-$0.038 \\
##   & (0.218) \\
##   & \\
##  as.factor(year)2007 & 0.141 \\
##   & (0.312) \\
##   & \\
##  as.factor(year)2008 & 0.198 \\
##   & (0.334) \\
##   & \\
##  as.factor(year)2009 & 0.251 \\
##   & (0.300) \\
##   & \\
##  as.factor(year)2010 & $-$0.014 \\
##   & (0.367) \\
##   & \\
##  as.factor(year)2011 & 0.540 \\
##   & (0.333) \\
##   & \\
##  as.factor(year)2012 & 0.501 \\
##   & (0.347) \\
##   & \\
##  as.factor(year)2013 & 0.820$^{***}$ \\
##   & (0.313) \\
##   & \\
##  as.factor(year)2014 & 0.443$^{*}$ \\
##   & (0.230) \\
##   & \\
##  as.factor(year)2015 & 0.682$^{***}$ \\
##   & (0.244) \\
##   & \\
##  as.factor(year)2016 & 0.571$^{**}$ \\
##   & (0.278) \\
##   & \\
##  Constant & 1.019$^{***}$ \\
##   & (0.318) \\
##   & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}

##############
###Table A19##
##############
## Add media_women
police.data.t1$media_women <- police.data$media_women_0

police.data.media <- police.data.t1[-which(is.na(police.data.t1$media_women)), ]

police.data.media$state_ut <- as.factor(as.character(police.data.media$state_ut))

levels(police.data.media$state_ut)

##  [1] "ANDHRA PRADESH"     "ARUNACHAL PRADESH " "ASSAM"
##  [4] "BIHAR "             "CHHATTISGARH "      "GOA"
```

```
##  [7] "GUJARAT "           "HARYANA "           "HIMACHAL PRADESH "
## [10] "JAMMU & KASHMIR "   "JHARKHAND"          "KARNATAKA "
## [13] "KERALA "            "MADHYA PRADESH"     "MAHARASHTRA"
## [16] "MANIPUR "           "MEGHALAYA "         "MIZORAM "
## [19] "NAGALAND "          "ORISSA "            "PUNJAB "
## [22] "RAJASTHAN "         "SIKKIM "            "TAMIL NADU "
## [25] "TELANGANA"          "TRIPURA "           "UTTAR PRADESH "
## [28] "UTTARAKHAND "       "WEST BENGAL "       "Z DELHI "
```

```
## OLS Model with media_women
model.ols.media <- lm(death_not_remanded ~ 1 + l.state_pca + media_women + state_ut + as.factor(year), data = poli

model.ols.media.cl <- cl(police.data.media, model.ols.media, police.data.media$state_ut)

## Poisson Model with media_women
model.p.media <- glm(death_not_remanded ~ 1 + l.state_pca + media_women + state_ut + as.factor(year), data = polic

model.p.media.cl <- cl(police.data.media, model.p.media, police.data.media$state_ut)

## OLS Model with media
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add media women
  police.imp.1.l$media_women <- police.data.t1$media_women

  police.imp.1.l <- police.imp.1.l[-which(is.na(police.imp.1.l$media_women)), ]

  police.imp.1.l$state_ut <- as.factor(as.character(police.imp.1.l$state_ut))

  levels(police.imp.1.l)

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + media_women + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)
```

```r
beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3
```

```
##             [,1]       [,2]       [,3]
## [1,] -1.57007284 0.84376378 0.06277290
## [2,]  0.00714555 0.03109510 0.81824981
## [3,]  2.43135746 1.08882788 0.02554865
## [4,] -0.05498507 0.05747116 0.33869750
```

```r
## Replace results to model result
model.ols.media.cl.c <- result.p.1

model.ols.media.cl.c[2:5, 1] <- result.t3[, 1]
model.ols.media.cl.c[2:5, 2] <- result.t3[, 2]
model.ols.media.cl.c[2:5, 4] <- result.t3[, 3]

## Poisson Model with religion and controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add media women
  police.imp.1.l$media_women <- police.data.t1$media_women

  police.imp.1.l <- police.imp.1.l[-which(is.na(police.imp.1.l$media_women)), ]

  police.imp.1.l$state_ut <- as.factor(as.character(police.imp.1.l$state_ut))

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + media_women + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")
```

```r
  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3
```

```
##              [,1]       [,2]         [,3]
## [1,] -0.57594723 0.15990800 0.0003160929
## [2,]  0.01329285 0.02759197 0.6299726529
## [3,]  0.18688143 0.28001668 0.5045205330
## [4,] -0.02756219 0.03516528 0.4331633495
```

```r
## Replace results to model result
model.p.media.cl.c <- result.p.1

model.p.media.cl.c[2:5, 1] <- result.t3[, 1]
model.p.media.cl.c[2:5, 2] <- result.t3[, 2]
model.p.media.cl.c[2:5, 4] <- result.t3[, 3]

stargazer(model.ols.media.cl, model.ols.media.cl.c, model.p.media.cl, model.p.media.cl.c)
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:41
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.679$^{*}$ & $-$1.570$^{*}$ & $-$0.597$^{***}$ & $-$0.576$^{***}$ \\
##   & (0.952) & (0.844) & (0.167) & (0.160) \\
```

```
##   & & & & \\
##  media\_women & 0.024 & 0.007 & 0.012 & 0.013 \\
##   & (0.030) & (0.031) & (0.027) & (0.028) \\
##   & & & & \\
##  gdp &  & 2.431$^{**}$ &  & 0.187 \\
##   &  & (1.089) &  & (0.280) \\
##   & & & & \\
##  head\_trans &  & $-$0.055 &  & $-$0.028 \\
##   &  & (0.057) &  & (0.035) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.163$^{***}$ & $-$3.717$^{***}$ & $-$3.312$^{***}$ & $-$3.235$^{***}$ \\
##   & (0.711) & (0.825) & (0.454) & (0.463) \\
##   & & & & \\
##  state\_utASSAM & $-$3.947$^{***}$ & $-$3.869$^{***}$ & $-$2.827$^{***}$ & $-$2.768$^{***}$ \\
##   & (0.887) & (0.904) & (0.627) & (0.644) \\
##   & & & & \\
##  state\_utBIHAR  & $-$4.281$^{***}$ & $-$4.662$^{***}$ & $-$2.427$^{**}$ & $-$2.323$^{*}$ \\
##   & (1.262) & (1.370) & (1.149) & (1.191) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$3.144$^{***}$ & $-$3.102$^{***}$ & $-$1.198$^{*}$ & $-$1.125 \\
##   & (0.950) & (0.961) & (0.668) & (0.692) \\
##   & & & & \\
##  state\_utGOA & $-$4.722$^{***}$ & $-$3.841$^{***}$ & $-$3.221$^{***}$ & $-$3.170$^{***}$ \\
##   & (0.371) & (0.666) & (0.256) & (0.283) \\
##   & & & & \\
##  state\_utGUJARAT  & 3.451$^{***}$ & 2.845$^{***}$ & 0.734$^{***}$ & 0.721$^{**}$ \\
##   & (0.494) & (0.362) & (0.282) & (0.303) \\
##   & & & & \\
##  state\_utHARYANA  & $-$3.767$^{***}$ & $-$3.832$^{***}$ & $-$1.674$^{***}$ & $-$1.639$^{***}$ \\
##   & (0.597) & (0.563) & (0.382) & (0.389) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.621$^{***}$ & $-$4.964$^{***}$ & $-$20.053$^{***}$ & $-$19.997$^{***}$ \\
##   & (0.176) & (0.196) & (1.072) & (1.078) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$5.199$^{***}$ & $-$4.569$^{***}$ & $-$2.736$^{***}$ & $-$2.666$^{***}$ \\
##   & (0.167) & (0.210) & (0.066) & (0.103) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$3.472$^{**}$ & $-$3.682$^{***}$ & $-$2.333$^{**}$ & $-$2.244$^{**}$ \\
##   & (1.387) & (1.387) & (1.085) & (1.122) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.348$^{***}$ & $-$4.689$^{***}$ & $-$1.797$^{***}$ & $-$1.823$^{***}$ \\
##   & (0.098) & (0.113) & (0.061) & (0.076) \\
##   & & & & \\
##  state\_utKERALA  & $-$4.154$^{***}$ & $-$3.913$^{***}$ & $-$1.833$^{***}$ & $-$1.841$^{***}$ \\
##   & (0.368) & (0.455) & (0.251) & (0.263) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$1.881$^{**}$ & $-$2.170$^{***}$ & $-$0.330 & $-$0.271 \\
##   & (0.746) & (0.826) & (0.694) & (0.722) \\
##   & & & & \\
##  state\_utMAHARASHTRA & 11.105$^{***}$ & 9.417$^{***}$ & 1.165$^{***}$ & 1.052$^{***}$ \\
##   & (0.175) & (0.771) & (0.164) & (0.271) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$4.708$^{***}$ & $-$3.904$^{***}$ & $-$3.588$^{***}$ & $-$3.557$^{***}$ \\
##   & (0.340) & (0.630) & (0.178) & (0.206) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$4.589$^{***}$ & $-$4.184$^{***}$ & $-$4.117$^{***}$ & $-$4.042$^{***}$ \\
##   & (0.625) & (0.745) & (0.513) & (0.530) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$4.465$^{***}$ & $-$3.653$^{***}$ & $-$1.919$^{***}$ & $-$1.880$^{***}$ \\
##   & (0.150) & (0.439) & (0.124) & (0.157) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$3.940$^{***}$ & $-$3.549$^{***}$ & $-$2.379$^{***}$ & $-$2.316$^{***}$ \\
```

```
##   & (0.751) & (0.852) & (0.489) & (0.499) \\
##   & & & & \\
##  state\_utORISSA  & $-$3.319$^{***}$ & $-$3.413$^{***}$ & $-$1.361$^{**}$ & $-$1.313$^{**}$ \\
##   & (0.891) & (0.867) & (0.626) & (0.651) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$3.046$^{***}$ & $-$2.442$^{***}$ & $-$0.908$^{***}$ & $-$0.743$^{***}$ \\
##   & (0.279) & (0.569) & (0.092) & (0.217) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$1.801 & $-$2.426$^{**}$ & $-$0.295 & $-$0.249 \\
##   & (1.213) & (1.134) & (0.923) & (0.962) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$4.691$^{***}$ & $-$4.053$^{***}$ & $-$19.701$^{***}$ & $-$19.652$^{***}$ \\
##   & (0.360) & (0.582) & (1.078) & (1.082) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$0.633$^{***}$ & $-$1.078$^{***}$ & $-$0.169 & $-$0.198 \\
##   & (0.168) & (0.321) & (0.155) & (0.175) \\
##   & & & & \\
##  state\_utTELANGANA & $-$4.464$^{***}$ & $-$4.424$^{***}$ & $-$1.379$^{***}$ & $-$1.319$^{***}$ \\
##   & (0.651) & (0.520) & (0.137) & (0.198) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$4.424$^{***}$ & $-$3.837$^{***}$ & $-$2.587$^{***}$ & $-$2.535$^{***}$ \\
##   & (0.360) & (0.554) & (0.188) & (0.194) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 2.279$^{***}$ & 1.363 & 0.553 & 0.647 \\
##   & (0.867) & (1.008) & (0.806) & (0.851) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$4.614$^{***}$ & $-$4.182$^{***}$ & $-$19.662$^{***}$ & $-$19.611$^{***}$ \\
##   & (0.429) & (0.553) & (1.091) & (1.094) \\
##   & & & & \\
##  state\_utWEST BENGAL  & 0.275 & $-$0.308 & 0.257 & 0.252 \\
##   & (0.592) & (0.533) & (0.455) & (0.479) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$5.035$^{***}$ & $-$4.736$^{***}$ & $-$2.862$^{***}$ & $-$2.876$^{***}$ \\
##   & (0.291) & (0.353) & (0.276) & (0.291) \\
##   & & & & \\
##  as.factor(year)2002 & $-$0.000 & $-$0.030 & 0.000 & $-$0.033 \\
##   & (0.362) & (0.364) & (0.198) & (0.217) \\
##   & & & & \\
##  as.factor(year)2003 & 0.276 & 0.229 & 0.141 & 0.107 \\
##   & (0.427) & (0.405) & (0.196) & (0.192) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.138 & $-$0.204 & $-$0.078 & $-$0.110 \\
##   & (0.393) & (0.360) & (0.231) & (0.222) \\
##   & & & & \\
##  as.factor(year)2005 & 0.195 & 0.137 & 0.075 & 0.022 \\
##   & (0.445) & (0.435) & (0.260) & (0.249) \\
##   & & & & \\
##  as.factor(year)2006 & $-$0.150 & $-$0.173 & $-$0.104 & $-$0.130 \\
##   & (0.361) & (0.349) & (0.247) & (0.236) \\
##   & & & & \\
##  as.factor(year)2007 & 0.126 & 0.013 & 0.041 & 0.004 \\
##   & (0.600) & (0.582) & (0.336) & (0.337) \\
##   & & & & \\
##  as.factor(year)2008 & 0.739 & 0.518 & 0.110 & 0.059 \\
##   & (0.918) & (0.796) & (0.375) & (0.381) \\
##   & & & & \\
##  as.factor(year)2009 & 0.959 & 0.654 & 0.176 & 0.101 \\
##   & (0.954) & (0.788) & (0.348) & (0.393) \\
##   & & & & \\
##  as.factor(year)2010 & 0.569 & 0.155 & $-$0.074 & $-$0.184 \\
##   & (0.979) & (0.756) & (0.370) & (0.409) \\
##   & & & & \\
```

```
##  as.factor(year)2011 & 1.627 & 1.138 & 0.469 & 0.354 \\
##   & (1.420) & (1.143) & (0.353) & (0.405) \\
##   & & & & \\
##  as.factor(year)2012 & 1.697 & 1.116 & 0.439 & 0.300 \\
##   & (1.288) & (0.966) & (0.355) & (0.405) \\
##   & & & & \\
##  as.factor(year)2013 & 2.652 & 1.968 & 0.758$^{**}$ & 0.597 \\
##   & (1.713) & (1.343) & (0.317) & (0.406) \\
##   & & & & \\
##  as.factor(year)2014 & 1.456 & 0.615 & 0.356 & 0.166 \\
##   & (1.132) & (0.707) & (0.266) & (0.413) \\
##   & & & & \\
##  as.factor(year)2015 & 1.523 & 0.691 & 0.500 & 0.276 \\
##   & (1.002) & (0.595) & (0.427) & (0.551) \\
##   & & & & \\
##  as.factor(year)2016 & 1.290 & 0.321 & 0.390 & 0.129 \\
##   & (1.017) & (0.614) & (0.459) & (0.619) \\
##   & & & & \\
##  Constant & 2.896 & 3.827 & 0.567 & 0.497 \\
##   & (2.702) & (2.661) & (2.061) & (2.155) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
##############
###Table A20##
##############
## Add literacy
police.data.t1$literacy <- police.data$literacy

police.data.liter <- police.data.t1[-which(is.na(police.data.t1$literacy)), ]

police.data.liter$state_ut <- as.factor(as.character(police.data.liter$state_ut))

levels(police.data.liter$state_ut)

##  [1] "ANDHRA PRADESH"     "ARUNACHAL PRADESH " "ASSAM"
##  [4] "BIHAR "             "CHHATTISGARH "      "GOA"
##  [7] "GUJARAT "           "HARYANA "           "HIMACHAL PRADESH "
## [10] "JAMMU & KASHMIR "   "JHARKHAND"          "KARNATAKA "
## [13] "KERALA "            "MADHYA PRADESH"     "MAHARASHTRA"
## [16] "MANIPUR "           "MEGHALAYA "         "MIZORAM "
## [19] "NAGALAND "          "ORISSA "            "PUNJAB "
## [22] "RAJASTHAN "         "SIKKIM "            "TAMIL NADU "
## [25] "TRIPURA "           "UTTAR PRADESH "     "UTTARAKHAND "
## [28] "WEST BENGAL "       "Z A & N ISLANDS"    "Z CHANDIGARH "
## [31] "Z D & N HAVELI"     "Z DAMAN & DIU"      "Z DELHI "
## [34] "Z LAKSHADWEEP "     "Z PUDUCHERRY "

## OLS Model with literacy
model.ols.liter <- lm(death_not_remanded ~ 1 + l.state_pca + literacy + state_ut + as.factor(year), data = police.

model.ols.liter.cl <- cl(police.data.liter, model.ols.liter, police.data.liter$state_ut)

## Poisson Model with literacy
model.p.liter <- glm(death_not_remanded ~ 1 + l.state_pca + literacy + state_ut + as.factor(year), data = police.d

model.p.liter.cl <- cl(police.data.liter, model.p.liter, police.data.liter$state_ut)
```

```r
## OLS Model with literacy
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add literacy
  police.imp.1.l$literacy <- police.data.t1$literacy

  police.imp.1.l <- police.imp.1.l[-which(is.na(police.imp.1.l$literacy)), ]

  police.imp.1.l$state_ut <- as.factor(as.character(police.imp.1.l$state_ut))

  levels(police.imp.1.l)

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + literacy + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}
```

```
result.t3
```

```
##               [,1]       [,2]       [,3]
## [1,] -1.434577423 0.76389728 0.06038505
## [2,] -0.005042581 0.05527676 0.92731441
## [3,]  2.075595025 1.00464533 0.03882869
## [4,] -0.055993591 0.05830473 0.33687353
```

```
## Replace results to model result
model.ols.liter.cl.c <- result.p.1

model.ols.liter.cl.c[2:5, 1] <- result.t3[, 1]
model.ols.liter.cl.c[2:5, 2] <- result.t3[, 2]
model.ols.liter.cl.c[2:5, 4] <- result.t3[, 3]

## Poisson Model with literacy and controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add literacy
  police.imp.1.l$literacy <- police.data.t1$literacy

  police.imp.1.l <- police.imp.1.l[-which(is.na(police.imp.1.l$literacy)), ]

  police.imp.1.l$state_ut <- as.factor(as.character(police.imp.1.l$state_ut))

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + literacy + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
```

```
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##             [,1]       [,2]        [,3]
## [1,] -0.56684148 0.16435167 0.000562761
## [2,]  0.01912724 0.03319825 0.564512394
## [3,]  0.22709349 0.30474256 0.456152138
## [4,] -0.02487694 0.03774165 0.509807435

## Replace results to model result
model.p.liter.cl.c <- result.p.1

model.p.liter.cl.c[2:5, 1] <- result.t3[, 1]
model.p.liter.cl.c[2:5, 2] <- result.t3[, 2]
model.p.liter.cl.c[2:5, 4] <- result.t3[, 3]

stargazer(model.ols.liter.cl, model.ols.liter.cl.c, model.p.liter.cl, model.p.liter.cl.c)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:43
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.580$^{*}$ & $-$1.435$^{*}$ & $-$0.594$^{***}$ & $-$0.567$^{***}$ \\
##   & (0.873) & (0.764) & (0.170) & (0.164) \\
##   & & & & \\
##  literacy & $-$0.040 & $-$0.005 & 0.014 & 0.019 \\
##   & (0.073) & (0.055) & (0.031) & (0.033) \\
##   & & & & \\
##  gdp &  & 2.076$^{**}$ &  & 0.227 \\
##   &  & (1.005) &  & (0.305) \\
##   & & & & \\
##  head\_trans &  & $-$0.056 &  & $-$0.025 \\
##   &  & (0.058) &  & (0.038) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.772$^{***}$ & $-$4.031$^{***}$ & $-$3.450$^{***}$ & $-$3.361$^{***}$ \\
##   & (0.252) & (0.495) & (0.111) & (0.191) \\
##   & & & & \\
##  state\_utASSAM & $-$4.386$^{***}$ & $-$4.153$^{***}$ & $-$3.160$^{***}$ & $-$3.148$^{***}$ \\
##   & (0.553) & (0.580) & (0.165) & (0.138) \\
##   & & & & \\
##  state\_utBIHAR  & $-$5.707$^{***}$ & $-$5.050$^{***}$ & $-$2.815$^{***}$ & $-$2.713$^{***}$ \\
```

```
##   & (0.883) & (0.617) & (0.304) & (0.355) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$3.630$^{***}$ & $-$3.399$^{***}$ & $-$1.552$^{***}$ & $-$1.536$^{***}$ \\
##   & (0.564) & (0.587) & (0.168) & (0.145) \\
##   & & & & \\
##  state\_utGOA & $-$3.680$^{**}$ & $-$3.844$^{**}$ & $-$3.416$^{***}$ & $-$3.461$^{***}$ \\
##   & (1.824) & (1.530) & (0.710) & (0.694) \\
##   & & & & \\
##  state\_utGUJARAT  & 3.579$^{***}$ & 2.853$^{***}$ & 0.468 & 0.373 \\
##   & (0.949) & (0.670) & (0.350) & (0.401) \\
##   & & & & \\
##  state\_utHARYANA  & $-$3.821$^{***}$ & $-$3.968$^{***}$ & $-$1.955$^{***}$ & $-$1.983$^{***}$ \\
##   & (0.791) & (0.646) & (0.283) & (0.280) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$4.979$^{***}$ & $-$4.984$^{***}$ & $-$20.283$^{***}$ & $-$20.303$^{***}$ \\
##   & (1.056) & (0.891) & (1.166) & (1.161) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$5.354$^{***}$ & $-$4.684$^{***}$ & $-$2.731$^{***}$ & $-$2.632$^{***}$ \\
##   & (0.358) & (0.257) & (0.095) & (0.175) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$4.649$^{***}$ & $-$4.126$^{***}$ & $-$2.756$^{***}$ & $-$2.694$^{***}$ \\
##   & (0.253) & (0.402) & (0.110) & (0.169) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.126$^{***}$ & $-$4.630$^{***}$ & $-$1.925$^{***}$ & $-$1.997$^{***}$ \\
##   & (0.549) & (0.385) & (0.229) & (0.262) \\
##   & & & & \\
##  state\_utKERALA  & $-$2.819 & $-$3.787$^{**}$ & $-$2.137$^{**}$ & $-$2.294$^{**}$ \\
##   & (2.373) & (1.800) & (0.943) & (0.985) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$2.371$^{***}$ & $-$2.345$^{***}$ & $-$0.684$^{***}$ & $-$0.675$^{***}$ \\
##   & (0.149) & (0.131) & (0.073) & (0.071) \\
##   & & & & \\
##  state\_utMAHARASHTRA & 11.596$^{***}$ & 9.726$^{***}$ & 0.864$^{*}$ & 0.625 \\
##   & (1.132) & (0.957) & (0.489) & (0.669) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$4.167$^{***}$ & $-$3.987$^{***}$ & $-$3.668$^{***}$ & $-$3.674$^{***}$ \\
##   & (1.049) & (0.969) & (0.380) & (0.344) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$4.891$^{***}$ & $-$4.447$^{***}$ & $-$4.408$^{***}$ & $-$4.371$^{***}$ \\
##   & (0.384) & (0.503) & (0.146) & (0.116) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$3.305 & $-$3.650$^{**}$ & $-$2.247$^{***}$ & $-$2.338$^{***}$ \\
##   & (2.039) & (1.648) & (0.845) & (0.846) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$4.070$^{***}$ & $-$3.819$^{***}$ & $-$2.721$^{***}$ & $-$2.717$^{***}$ \\
##   & (0.887) & (0.860) & (0.316) & (0.273) \\
##   & & & & \\
##  state\_utORISSA  & $-$3.756$^{***}$ & $-$3.669$^{***}$ & $-$1.696$^{***}$ & $-$1.702$^{***}$ \\
##   & (0.562) & (0.531) & (0.170) & (0.149) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$2.648$^{***}$ & $-$2.454$^{***}$ & $-$1.002$^{***}$ & $-$0.897$^{**}$ \\
##   & (0.876) & (0.918) & (0.319) & (0.399) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$2.673$^{***}$ & $-$2.719$^{***}$ & $-$0.703$^{***}$ & $-$0.710$^{***}$ \\
##   & (0.308) & (0.272) & (0.062) & (0.064) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$4.400$^{***}$ & $-$4.207$^{***}$ & $-$19.904$^{***}$ & $-$19.908$^{***}$ \\
##   & (0.986) & (0.916) & (1.127) & (1.117) \\
##   & & & & \\
##  state\_utTAMIL NADU  & 0.015 & $-$0.880 & $-$0.286 & $-$0.391 \\
##   & (0.954) & (0.713) & (0.404) & (0.482) \\
##   & & & & \\
```

```
##  state\_utTRIPURA  & $-$3.992$^{***}$ & $-$3.975$^{***}$ & $-$2.889$^{***}$ & $-$2.919$^{***}$ \\
##   & (1.298) & (1.118) & (0.516) & (0.482) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 1.485$^{***}$ & 1.271$^{***}$ & 0.213$^{***}$ & 0.252$^{*}$ \\
##   & (0.311) & (0.433) & (0.077) & (0.144) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$4.370$^{***}$ & $-$4.324$^{***}$ & $-$19.914$^{***}$ & $-$19.929$^{***}$ \\
##   & (1.042) & (0.915) & (1.134) & (1.128) \\
##   & & & & \\
##  state\_utWEST BENGAL  & 0.197 & $-$0.366 & $-$0.068 & $-$0.152 \\
##   & (0.750) & (0.526) & (0.290) & (0.325) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$4.212$^{***}$ & $-$4.340$^{***}$ & $-$20.115$^{***}$ & $-$20.170$^{***}$ \\
##   & (1.609) & (1.337) & (1.250) & (1.244) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.018$^{**}$ & $-$4.188$^{***}$ & $-$3.499$^{***}$ & $-$3.569$^{***}$ \\
##   & (1.620) & (1.334) & (0.662) & (0.649) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$4.830$^{***}$ & $-$4.408$^{***}$ & $-$4.347$^{***}$ & $-$4.316$^{***}$ \\
##   & (0.364) & (0.491) & (0.130) & (0.103) \\
##   & & & & \\
##  state\_utZ DAMAN & DIU & $-$4.227$^{***}$ & $-$4.593$^{***}$ & $-$20.118$^{***}$ & $-$20.201$^{***}$ \\
##   & (1.597) & (1.267) & (1.251) & (1.251) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$3.994$^{**}$ & $-$4.615$^{***}$ & $-$3.031$^{***}$ & $-$3.141$^{***}$ \\
##   & (1.575) & (1.198) & (0.648) & (0.674) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$5.196$^{***}$ & $-$4.502$^{***}$ & $-$19.758$^{***}$ & $-$19.686$^{***}$ \\
##   & (0.246) & (0.390) & (1.071) & (1.086) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$4.164$^{***}$ & $-$4.303$^{***}$ & $-$4.590$^{***}$ & $-$4.654$^{***}$ \\
##   & (1.582) & (1.311) & (0.646) & (0.631) \\
##   & & & & \\
##  as.factor(year)2002 & 0.008 & $-$0.009 & 0.000 & $-$0.031 \\
##   & (0.301) & (0.301) & (0.197) & (0.216) \\
##   & & & & \\
##  as.factor(year)2003 & 0.237 & 0.205 & 0.141 & 0.108 \\
##   & (0.362) & (0.344) & (0.194) & (0.190) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.106 & $-$0.148 & $-$0.078 & $-$0.111 \\
##   & (0.335) & (0.309) & (0.230) & (0.221) \\
##   & & & & \\
##  as.factor(year)2005 & 0.237 & 0.159 & 0.141 & 0.094 \\
##   & (0.399) & (0.377) & (0.235) & (0.228) \\
##   & & & & \\
##  as.factor(year)2006 & $-$0.049 & $-$0.090 & $-$0.038 & $-$0.064 \\
##   & (0.329) & (0.301) & (0.218) & (0.206) \\
##   & & & & \\
##  as.factor(year)2007 & 0.237 & 0.126 & 0.141 & 0.101 \\
##   & (0.531) & (0.503) & (0.312) & (0.317) \\
##   & & & & \\
##  as.factor(year)2008 & 0.688 & 0.488 & 0.193 & 0.137 \\
##   & (0.787) & (0.662) & (0.333) & (0.344) \\
##   & & & & \\
##  as.factor(year)2009 & 0.857 & 0.584 & 0.258 & 0.176 \\
##   & (0.798) & (0.639) & (0.296) & (0.355) \\
##   & & & & \\
##  as.factor(year)2010 & 0.502 & 0.154 & $-$0.010 & $-$0.128 \\
##   & (0.824) & (0.619) & (0.363) & (0.406) \\
##   & & & & \\
##  as.factor(year)2011 & 2.007 & 1.293 & 0.449 & 0.281 \\
##   & (1.818) & (1.376) & (0.448) & (0.545) \\
```

```
##   & & & & \\
##  as.factor(year)2012 & 2.028 & 1.244 & 0.405 & 0.209 \\
##   & (1.658) & (1.178) & (0.385) & (0.519) \\
##   & & & & \\
##  as.factor(year)2013 & 2.816 & 1.963 & 0.724$^{*}$ & 0.503 \\
##   & (2.041) & (1.535) & (0.418) & (0.572) \\
##   & & & & \\
##  as.factor(year)2014 & 1.820 & 0.853 & 0.319 & 0.060 \\
##   & (1.552) & (1.013) & (0.343) & (0.573) \\
##   & & & & \\
##  as.factor(year)2015 & 1.980 & 0.841 & 0.546 & 0.260 \\
##   & (1.509) & (0.888) & (0.386) & (0.627) \\
##   & & & & \\
##  as.factor(year)2016 & 1.894 & 0.727 & 0.497 & 0.169 \\
##   & (1.496) & (0.884) & (0.403) & (0.704) \\
##   & & & & \\
##  Constant & 7.150$^{*}$ & 4.718 & 0.614 & 0.324 \\
##   & (4.111) & (3.168) & (1.868) & (1.946) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
##############
###Table A21##
##############

## Total Death
police.data.t1$total_death <- police.data.t1$death_not_remanded + police.data.t1$death_remanded

## OLS Model with logged
police.data.t1$total_death_ln <- log(police.data.t1$total_death + 1)

model.ols.total.l <- lm(total_death_ln ~ 1 + l.state_pca  + state_ut + as.factor(year), data = police.data.t1)

model.ols.total.l.cl <- cl(police.data.t1, model.ols.total.l, police.data.t1$state_ut)

## OLS Model with SHRC
model.ols.total <- lm(total_death ~ 1 + l.state_pca  + state_ut + as.factor(year), data = police.data.t1)

model.ols.total.cl <- cl(police.data.t1, model.ols.total, police.data.t1$state_ut)



## Poisson Model with SHRC
model.p.total <- glm(total_death ~ 1 + l.state_pca  + state_ut + as.factor(year), data = police.data.t1, family="p

model.p.total.cl <- cl(police.data.t1, model.p.total, police.data.t1$state_ut)

## OLS Model with media
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
```

```r
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Total Death
  police.imp.1.l$total_death <- police.imp.1.l$death_not_remanded + police.imp.1.l$death_remanded

  ## Poisson with outdata1.csv
  imp.1.p <- lm(total_death ~ 1 + l.state_pca  + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##               [,1]      [,2]          [,3]
## [1,]  -1.03061650 0.7474772  1.679585e-01
## [2,]  -0.17129276 1.0247074  8.672421e-01
## [3,]  -0.05038368 0.0451075  2.640075e-01
## [4,] -13.84288730 0.5170207 6.431318e-158

## Replace results to model result
model.ols.total.cl.c <- result.p.1

model.ols.total.cl.c[2:5, 1] <- result.t3[, 1]
model.ols.total.cl.c[2:5, 2] <- result.t3[, 2]
model.ols.total.cl.c[2:5, 4] <- result.t3[, 3]

## Poisson Model with religion and controls
## Loop models for 5 imputation datasets
```

```r
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Total Death
  police.imp.1.l$total_death <- police.imp.1.l$death_not_remanded + police.imp.1.l$death_remanded

  ## Poisson with outdata1.csv
  imp.1.p <- glm(total_death ~ 1 + l.state_pca  + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3


##             [,1]       [,2]      [,3]
## [1,] -0.29519007 0.18921811 0.1187476
## [2,] -0.06156201 0.18944328 0.7452093
## [3,] -0.02561505 0.01749111 0.1430681
## [4,] -2.68369160 0.07143023 0.0000000
```

```r
## Replace results to model result
model.p.total.cl.c <- result.p.1

model.p.total.cl.c[2:5, 1] <- result.t3[, 1]
model.p.total.cl.c[2:5, 2] <- result.t3[, 2]
model.p.total.cl.c[2:5, 4] <- result.t3[, 3]

stargazer(model.ols.total.cl, model.ols.total.cl.c, model.p.total.cl, model.p.total.cl.c)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:44
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.013 & $-$1.031 & $-$0.289 & $-$0.295 \\
##   & (0.775) & (0.747) & (0.182) & (0.189) \\
##   & & & & \\
##  gdp &  & $-$0.171 &  & $-$0.062 \\
##   &  & (1.025) &  & (0.189) \\
##   & & & & \\
##  head\_trans &  & $-$0.050 &  & $-$0.026 \\
##   &  & (0.045) &  & (0.017) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$13.807$^{***}$ & $-$13.843$^{***}$ & $-$2.674$^{***}$ & $-$2.684$^{***}$ \\
##   & (0.291) & (0.517) & (0.069) & (0.071) \\
##   & & & & \\
##  state\_utASSAM & $-$11.557$^{***}$ & $-$11.577$^{***}$ & $-$1.450$^{***}$ & $-$1.461$^{***}$ \\
##   & (0.291) & (0.418) & (0.069) & (0.066) \\
##   & & & & \\
##  state\_utBIHAR  & $-$14.628$^{***}$ & $-$14.628$^{***}$ & $-$3.144$^{***}$ & $-$3.145$^{***}$ \\
##   & (0.145) & (0.125) & (0.034) & (0.053) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$12.745$^{***}$ & $-$12.749$^{***}$ & $-$1.916$^{***}$ & $-$1.920$^{***}$ \\
##   & (0.291) & (0.417) & (0.069) & (0.067) \\
##   & & & & \\
##  state\_utGOA & $-$14.307$^{***}$ & $-$14.267$^{***}$ & $-$3.436$^{***}$ & $-$3.429$^{***}$ \\
##   & (0.291) & (0.499) & (0.069) & (0.072) \\
##   & & & & \\
##  state\_utGUJARAT  & $-$3.558$^{***}$ & $-$3.505$^{***}$ & $-$0.207$^{***}$ & $-$0.181$^{**}$ \\
##   & (0.242) & (0.222) & (0.058) & (0.086) \\
##   & & & & \\
##  state\_utHARYANA  & $-$13.496$^{***}$ & $-$13.478$^{***}$ & $-$2.356$^{***}$ & $-$2.347$^{***}$ \\
##   & (0.242) & (0.284) & (0.058) & (0.059) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$14.503$^{***}$ & $-$14.530$^{***}$ & $-$2.977$^{***}$ & $-$2.993$^{***}$ \\
##   & (0.145) & (0.217) & (0.034) & (0.077) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$14.628$^{***}$ & $-$14.645$^{***}$ & $-$3.144$^{***}$ & $-$3.156$^{***}$ \\
##   & (0.145) & (0.213) & (0.034) & (0.077) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$14.182$^{***}$ & $-$14.195$^{***}$ & $-$3.185$^{***}$ & $-$3.191$^{***}$ \\
##   & (0.291) & (0.417) & (0.069) & (0.066) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$13.874$^{***}$ & $-$13.868$^{***}$ & $-$2.523$^{***}$ & $-$2.520$^{***}$ \\
```

```
##   & (0.048) & (0.100) & (0.015) & (0.032) \\
##   & & & & \\
##  state\_utKERALA  & $-$13.557$^{***}$ & $-$13.546$^{***}$ & $-$2.437$^{***}$ & $-$2.432$^{***}$ \\
##   & (0.291) & (0.311) & (0.069) & (0.071) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$10.503$^{***}$ & $-$10.509$^{***}$ & $-$1.198$^{***}$ & $-$1.201$^{***}$ \\
##   & (0.145) & (0.123) & (0.034) & (0.042) \\
##   & & & & \\
##  state\_utMAHARASHTRA & 7.437$^{***}$ & 7.522$^{***}$ & 0.386$^{***}$ & 0.434$^{***}$ \\
##   & (0.048) & (0.662) & (0.010) & (0.124) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$14.557$^{***}$ & $-$14.593$^{***}$ & $-$4.283$^{***}$ & $-$4.302$^{***}$ \\
##   & (0.291) & (0.500) & (0.069) & (0.071) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$14.311$^{***}$ & $-$14.348$^{***}$ & $-$3.050$^{***}$ & $-$3.070$^{***}$ \\
##   & (0.097) & (0.349) & (0.027) & (0.050) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$13.811$^{***}$ & $-$13.851$^{***}$ & $-$2.503$^{***}$ & $-$2.524$^{***}$ \\
##   & (0.097) & (0.355) & (0.027) & (0.052) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$14.307$^{***}$ & $-$14.349$^{***}$ & $-$3.436$^{***}$ & $-$3.458$^{***}$ \\
##   & (0.291) & (0.498) & (0.069) & (0.070) \\
##   & & & & \\
##  state\_utORISSA  & $-$13.682$^{***}$ & $-$13.702$^{***}$ & $-$2.549$^{***}$ & $-$2.559$^{***}$ \\
##   & (0.291) & (0.366) & (0.069) & (0.065) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$12.558$^{***}$ & $-$12.232$^{***}$ & $-$1.817$^{***}$ & $-$1.662$^{***}$ \\
##   & (0.242) & (0.459) & (0.058) & (0.120) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$11.807$^{***}$ & $-$11.794$^{***}$ & $-$1.532$^{***}$ & $-$1.525$^{***}$ \\
##   & (0.291) & (0.280) & (0.069) & (0.076) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$14.746$^{***}$ & $-$14.790$^{***}$ & $-$5.400$^{***}$ & $-$5.423$^{***}$ \\
##   & (0.242) & (0.462) & (0.058) & (0.063) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$9.875$^{***}$ & $-$9.804$^{***}$ & $-$1.058$^{***}$ & $-$1.020$^{***}$ \\
##   & (0.000) & (0.235) & (0.000) & (0.052) \\
##   & & & & \\
##  state\_utTELANGANA & $-$12.978$^{***}$ & $-$12.992$^{***}$ & $-$1.874$^{***}$ & $-$1.895$^{***}$ \\
##   & (0.555) & (0.573) & (0.141) & (0.181) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$14.497$^{***}$ & $-$14.532$^{***}$ & $-$3.624$^{***}$ & $-$3.643$^{***}$ \\
##   & (0.194) & (0.415) & (0.048) & (0.057) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & $-$7.315$^{***}$ & $-$7.099$^{***}$ & $-$0.690$^{***}$ & $-$0.584$^{***}$ \\
##   & (0.145) & (0.354) & (0.034) & (0.075) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$14.683$^{***}$ & $-$14.697$^{***}$ & $-$4.707$^{***}$ & $-$4.715$^{***}$ \\
##   & (0.242) & (0.404) & (0.058) & (0.058) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$8.247$^{***}$ & $-$8.234$^{***}$ & $-$0.756$^{***}$ & $-$0.748$^{***}$ \\
##   & (0.145) & (0.127) & (0.039) & (0.056) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$14.935$^{***}$ & $-$14.983$^{***}$ & $-$19.941$^{***}$ & $-$19.963$^{***}$ \\
##   & (0.145) & (0.391) & (1.064) & (1.067) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$14.747$^{***}$ & $-$14.802$^{***}$ & $-$4.330$^{***}$ & $-$4.358$^{***}$ \\
##   & (0.145) & (0.378) & (0.039) & (0.054) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$14.810$^{***}$ & $-$14.859$^{***}$ & $-$4.736$^{***}$ & $-$4.761$^{***}$ \\
##   & (0.145) & (0.367) & (0.039) & (0.052) \\
##   & & & & \\
```

```
##  state\_utZ DAMAN & DIU & $-$14.948$^{***}$ & $-$14.994$^{***}$ & $-$19.942$^{***}$ & $-$19.964$^{***}$ \\
##   & (0.136) & (0.270) & (1.065) & (1.067) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$14.623$^{***}$ & $-$14.635$^{***}$ & $-$3.656$^{***}$ & $-$3.662$^{***}$ \\
##   & (0.097) & (0.132) & (0.027) & (0.025) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$14.935$^{***}$ & $-$14.991$^{***}$ & $-$19.941$^{***}$ & $-$19.967$^{***}$ \\
##   & (0.145) & (0.370) & (1.064) & (1.067) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$14.872$^{***}$ & $-$14.924$^{***}$ & $-$5.429$^{***}$ & $-$5.456$^{***}$ \\
##   & (0.145) & (0.382) & (0.039) & (0.054) \\
##   & & & & \\
##  as.factor(year)2002 & $-$0.166 & $-$0.178 & $-$0.069 & $-$0.094 \\
##   & (0.510) & (0.513) & (0.204) & (0.216) \\
##   & & & & \\
##  as.factor(year)2003 & 0.120 & 0.113 & 0.043 & 0.024 \\
##   & (0.584) & (0.576) & (0.214) & (0.213) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.108 & $-$0.105 & $-$0.045 & $-$0.060 \\
##   & (0.473) & (0.461) & (0.188) & (0.181) \\
##   & & & & \\
##  as.factor(year)2005 & 1.092 & 1.081 & 0.352 & 0.337 \\
##   & (1.372) & (1.377) & (0.359) & (0.350) \\
##   & & & & \\
##  as.factor(year)2006 & $-$0.023 & 0.036 & $-$0.011 & 0.008 \\
##   & (0.652) & (0.645) & (0.252) & (0.245) \\
##   & & & & \\
##  as.factor(year)2007 & 0.806 & 0.829 & 0.271 & 0.285 \\
##   & (0.739) & (0.723) & (0.211) & (0.211) \\
##   & & & & \\
##  as.factor(year)2008 & 0.610 & 0.623 & 0.152 & 0.167 \\
##   & (1.025) & (0.976) & (0.307) & (0.305) \\
##   & & & & \\
##  as.factor(year)2009 & 0.269 & 0.284 & 0.012 & 0.022 \\
##   & (0.735) & (0.649) & (0.218) & (0.260) \\
##   & & & & \\
##  as.factor(year)2010 & $-$0.102 & $-$0.096 & $-$0.169 & $-$0.164 \\
##   & (0.845) & (0.730) & (0.287) & (0.306) \\
##   & & & & \\
##  as.factor(year)2011 & 1.072 & 1.092 & 0.248 & 0.265 \\
##   & (1.184) & (1.061) & (0.269) & (0.293) \\
##   & & & & \\
##  as.factor(year)2012 & 1.302 & 1.329 & 0.301 & 0.321 \\
##   & (1.177) & (1.030) & (0.270) & (0.319) \\
##   & & & & \\
##  as.factor(year)2013 & 1.588 & 1.618 & 0.384 & 0.406 \\
##   & (1.447) & (1.272) & (0.302) & (0.359) \\
##   & & & & \\
##  as.factor(year)2014 & 0.856 & 0.898 & 0.178 & 0.218 \\
##   & (0.931) & (0.742) & (0.197) & (0.244) \\
##   & & & & \\
##  as.factor(year)2015 & 0.996 & 1.039 & 0.288 & 0.328 \\
##   & (1.027) & (0.774) & (0.246) & (0.365) \\
##   & & & & \\
##  as.factor(year)2016 & 0.857 & 0.901 & 0.235 & 0.274 \\
##   & (1.058) & (0.792) & (0.276) & (0.405) \\
##   & & & & \\
##  Constant & 14.742$^{***}$ & 14.787$^{***}$ & 2.620$^{***}$ & 2.643$^{***}$ \\
##   & (0.584) & (0.708) & (0.181) & (0.185) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
```

```
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
##############
###Table A22##
##############
## OLS Model
model.ols.remanded <- lm(death_remanded ~ 1 + l.state_pca  + state_ut + as.factor(year), data = police.data.t1)

model.ols.remanded.cl <- cl(police.data.t1, model.ols.remanded, police.data.t1$state_ut)


## Poisson Model
model.p.remanded <- glm(death_remanded ~ 1 + l.state_pca  + state_ut + as.factor(year), data = police.data.t1, fam

model.p.remanded.cl <- cl(police.data.t1, model.p.remanded, police.data.t1$state_ut)

## OLS Model
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_remanded ~ 1 + l.state_pca  + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
```

```
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##               [,1]       [,2]          [,3]
## [1,]  0.401404964 0.45231610  3.748402e-01
## [2,] -2.251681137 0.69695721  1.234742e-03
## [3,]  0.004555005 0.03500829  8.964777e-01
## [4,] -9.846606040 0.32628065 4.559080e-200

## Replace results to model result
model.ols.remanded.cl.c <- result.p.1

model.ols.remanded.cl.c[2:5, 1] <- result.t3[, 1]
model.ols.remanded.cl.c[2:5, 2] <- result.t3[, 2]
model.ols.remanded.cl.c[2:5, 4] <- result.t3[, 3]

## Poisson Model with controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000


  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_remanded ~ 1 + l.state_pca  + gdp +
                   head_trans + state_ut +
                   as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)
```

```r
beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3
```

```
##              [,1]       [,2]         [,3]
## [1,]  0.270600792 0.35107194 4.408347e-01
## [2,] -0.935402999 0.43108170 3.001463e-02
## [3,] -0.009320338 0.05063955 8.539722e-01
## [4,] -2.867542322 0.16165264 2.099528e-70
```

```r
## Replace results to model result
model.p.remanded.cl.c <- result.p.1

model.p.remanded.cl.c[2:5, 1] <- result.t3[, 1]
model.p.remanded.cl.c[2:5, 2] <- result.t3[, 2]
model.p.remanded.cl.c[2:5, 4] <- result.t3[, 3]

stargazer(model.ols.remanded.cl, model.ols.remanded.cl.c, model.p.remanded.cl, model.p.remanded.cl.c)
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:46
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
## \hline \\[-1.8ex]
##  l.state\_pca & 0.551 & 0.401 & 0.346 & 0.271 \\
##   & (0.498) & (0.452) & (0.375) & (0.351) \\
##   & & & & \\
##  gdp &  & $-$2.252$^{***}$ &  & $-$0.935$^{**}$ \\
##   &  & (0.697) &  & (0.431) \\
##   & & & & \\
##  head\_trans &  & 0.005 &  & $-$0.009 \\
##   &  & (0.035) &  & (0.051) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$9.207$^{***}$ & $-$9.847$^{***}$ & $-$2.602$^{***}$ & $-$2.868$^{***}$ \\
##   & (0.187) & (0.326) & (0.126) & (0.162) \\
##   & & & & \\
##  state\_utASSAM & $-$7.019$^{***}$ & $-$7.407$^{***}$ & $-$1.296$^{***}$ & $-$1.464$^{***}$ \\
##   & (0.187) & (0.261) & (0.126) & (0.134) \\
```

```
##   & & & & \\
##  state\_utBIHAR  & $-$9.334$^{***}$ & $-$9.622$^{***}$ & $-$3.212$^{***}$ & $-$3.322$^{***}$ \\
##   & (0.093) & (0.096) & (0.052) & (0.088) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$8.957$^{***}$ & $-$9.332$^{***}$ & $-$2.334$^{***}$ & $-$2.493$^{***}$ \\
##   & (0.187) & (0.262) & (0.126) & (0.131) \\
##   & & & & \\
##  state\_utGOA & $-$9.769$^{***}$ & $-$10.329$^{***}$ & $-$3.781$^{***}$ & $-$4.014$^{***}$ \\
##   & (0.187) & (0.329) & (0.126) & (0.157) \\
##   & & & & \\
##  state\_utGUJARAT  & $-$6.735$^{***}$ & $-$6.314$^{***}$ & $-$1.191$^{***}$ & $-$1.010$^{***}$ \\
##   & (0.156) & (0.151) & (0.099) & (0.131) \\
##   & & & & \\
##  state\_utHARYANA  & $-$9.360$^{***}$ & $-$9.475$^{***}$ & $-$2.840$^{***}$ & $-$2.883$^{***}$ \\
##   & (0.156) & (0.174) & (0.099) & (0.095) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$8.897$^{***}$ & $-$9.477$^{***}$ & $-$2.439$^{***}$ & $-$2.676$^{***}$ \\
##   & (0.093) & (0.171) & (0.052) & (0.144) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$9.397$^{***}$ & $-$9.973$^{***}$ & $-$3.394$^{***}$ & $-$3.627$^{***}$ \\
##   & (0.093) & (0.171) & (0.052) & (0.142) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$9.707$^{***}$ & $-$10.088$^{***}$ & $-$3.558$^{***}$ & $-$3.720$^{***}$ \\
##   & (0.187) & (0.261) & (0.126) & (0.132) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$9.472$^{***}$ & $-$9.208$^{***}$ & $-$3.278$^{***}$ & $-$3.177$^{***}$ \\
##   & (0.031) & (0.080) & (0.018) & (0.045) \\
##   & & & & \\
##  state\_utKERALA  & $-$9.582$^{***}$ & $-$9.633$^{***}$ & $-$3.221$^{***}$ & $-$3.237$^{***}$ \\
##   & (0.187) & (0.188) & (0.126) & (0.118) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$8.022$^{***}$ & $-$8.152$^{***}$ & $-$1.708$^{***}$ & $-$1.760$^{***}$ \\
##   & (0.093) & (0.078) & (0.052) & (0.064) \\
##   & & & & \\
##  state\_utMAHARASHTRA & $-$3.528$^{***}$ & $-$2.135$^{***}$ & $-$0.433$^{***}$ & 0.084 \\
##   & (0.031) & (0.471) & (0.021) & (0.212) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$9.957$^{***}$ & $-$10.559$^{***}$ & $-$5.167$^{***}$ & $-$5.435$^{***}$ \\
##   & (0.187) & (0.319) & (0.126) & (0.163) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$9.256$^{***}$ & $-$9.883$^{***}$ & $-$2.791$^{***}$ & $-$3.071$^{***}$ \\
##   & (0.062) & (0.239) & (0.046) & (0.137) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$9.444$^{***}$ & $-$10.086$^{***}$ & $-$3.147$^{***}$ & $-$3.434$^{***}$ \\
##   & (0.062) & (0.243) & (0.046) & (0.141) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$9.894$^{***}$ & $-$10.493$^{***}$ & $-$4.474$^{***}$ & $-$4.742$^{***}$ \\
##   & (0.187) & (0.317) & (0.126) & (0.163) \\
##   & & & & \\
##  state\_utORISSA  & $-$9.769$^{***}$ & $-$10.015$^{***}$ & $-$3.781$^{***}$ & $-$3.887$^{***}$ \\
##   & (0.187) & (0.224) & (0.126) & (0.121) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$9.547$^{***}$ & $-$9.733$^{***}$ & $-$3.196$^{***}$ & $-$3.180$^{***}$ \\
##   & (0.156) & (0.327) & (0.099) & (0.336) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$9.144$^{***}$ & $-$9.075$^{***}$ & $-$2.528$^{***}$ & $-$2.498$^{***}$ \\
##   & (0.187) & (0.169) & (0.126) & (0.118) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$9.922$^{***}$ & $-$10.538$^{***}$ & $-$5.142$^{***}$ & $-$5.421$^{***}$ \\
##   & (0.156) & (0.297) & (0.099) & (0.156) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$9.375$^{***}$ & $-$8.868$^{***}$ & $-$3.110$^{***}$ & $-$2.901$^{***}$ \\
```

```
##   & (0.000) & (0.159) & (0.000) & (0.100) \\
##   & & & & \\
##  state\_utTELANGANA & $-$8.637$^{***}$ & $-$8.603$^{***}$ & $-$2.276$^{***}$ & $-$2.442$^{***}$ \\
##   & (0.413) & (0.389) & (0.334) & (0.325) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$9.888$^{***}$ & $-$10.489$^{***}$ & $-$5.127$^{***}$ & $-$5.397$^{***}$ \\
##   & (0.125) & (0.272) & (0.083) & (0.143) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & $-$8.897$^{***}$ & $-$8.377$^{***}$ & $-$2.439$^{***}$ & $-$2.185$^{***}$ \\
##   & (0.093) & (0.202) & (0.052) & (0.213) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$9.860$^{***}$ & $-$10.323$^{***}$ & $-$4.449$^{***}$ & $-$4.651$^{***}$ \\
##   & (0.156) & (0.259) & (0.099) & (0.126) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$8.103$^{***}$ & $-$7.831$^{***}$ & $-$1.744$^{***}$ & $-$1.629$^{***}$ \\
##   & (0.093) & (0.093) & (0.066) & (0.082) \\
##   & & & & \\
##  state\_utZ A & N ISLANDS & $-$9.916$^{***}$ & $-$10.555$^{***}$ & $-$20.581$^{***}$ & $-$20.880$^{***}$ \\
##   & (0.093) & (0.260) & (1.066) & (1.076) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$9.916$^{***}$ & $-$10.526$^{***}$ & $-$20.581$^{***}$ & $-$20.868$^{***}$ \\
##   & (0.093) & (0.249) & (1.066) & (1.075) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$9.853$^{***}$ & $-$10.438$^{***}$ & $-$5.111$^{***}$ & $-$5.380$^{***}$ \\
##   & (0.093) & (0.241) & (0.066) & (0.139) \\
##   & & & & \\
##  state\_utZ DAMAN & DIU & $-$9.913$^{***}$ & $-$10.314$^{***}$ & $-$20.577$^{***}$ & $-$20.786$^{***}$ \\
##   & (0.107) & (0.194) & (1.067) & (1.074) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$9.819$^{***}$ & $-$9.932$^{***}$ & $-$5.093$^{***}$ & $-$5.143$^{***}$ \\
##   & (0.062) & (0.081) & (0.046) & (0.046) \\
##   & & & & \\
##  state\_utZ LAKSHADWEEP  & $-$9.916$^{***}$ & $-$10.509$^{***}$ & $-$20.581$^{***}$ & $-$20.860$^{***}$ \\
##   & (0.093) & (0.242) & (1.066) & (1.075) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$9.916$^{***}$ & $-$10.535$^{***}$ & $-$20.581$^{***}$ & $-$20.871$^{***}$ \\
##   & (0.093) & (0.252) & (1.066) & (1.075) \\
##   & & & & \\
##  as.factor(year)2002 & $-$0.173 & $-$0.169 & $-$0.177 & $-$0.178 \\
##   & (0.436) & (0.435) & (0.453) & (0.454) \\
##   & & & & \\
##  as.factor(year)2003 & $-$0.115 & $-$0.093 & $-$0.114 & $-$0.093 \\
##   & (0.349) & (0.350) & (0.349) & (0.339) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.001 & 0.043 & $-$0.000 & 0.033 \\
##   & (0.335) & (0.343) & (0.310) & (0.317) \\
##   & & & & \\
##  as.factor(year)2005 & 0.856 & 0.922 & 0.594 & 0.653 \\
##   & (1.180) & (1.195) & (0.597) & (0.598) \\
##   & & & & \\
##  as.factor(year)2006 & 0.027 & 0.127 & 0.027 & 0.139 \\
##   & (0.479) & (0.488) & (0.435) & (0.431) \\
##   & & & & \\
##  as.factor(year)2007 & 0.570 & 0.704 & 0.432 & 0.574 \\
##   & (0.620) & (0.656) & (0.376) & (0.382) \\
##   & & & & \\
##  as.factor(year)2008 & $-$0.073 & 0.136 & 0.004 & 0.196 \\
##   & (0.383) & (0.423) & (0.366) & (0.385) \\
##   & & & & \\
##  as.factor(year)2009 & $-$0.580 & $-$0.300 & $-$0.511 & $-$0.272 \\
##   & (0.395) & (0.329) & (0.327) & (0.360) \\
##   & & & & \\
```

```
##  as.factor(year)2010 & $-$0.596$^{*}$ & $-$0.249 & $-$0.511$^{*}$ & $-$0.211 \\
##   & (0.322) & (0.291) & (0.270) & (0.314) \\
##   & & & & \\
##  as.factor(year)2011 & $-$0.592 & $-$0.164 & $-$0.382 & $-$0.026 \\
##   & (0.403) & (0.338) & (0.403) & (0.413) \\
##   & & & & \\
##  as.factor(year)2012 & $-$0.382 & 0.123 & $-$0.122 & 0.287 \\
##   & (0.494) & (0.426) & (0.318) & (0.365) \\
##   & & & & \\
##  as.factor(year)2013 & $-$0.883$^{*}$ & $-$0.307 & $-$0.719$^{*}$ & $-$0.252 \\
##   & (0.526) & (0.407) & (0.398) & (0.443) \\
##   & & & & \\
##  as.factor(year)2014 & $-$0.620 & 0.080 & $-$0.420 & 0.148 \\
##   & (0.403) & (0.397) & (0.418) & (0.476) \\
##   & & & & \\
##  as.factor(year)2015 & $-$0.691 & 0.179 & $-$0.541 & 0.122 \\
##   & (0.510) & (0.455) & (0.361) & (0.456) \\
##   & & & & \\
##  as.factor(year)2016 & $-$0.635 & 0.269 & $-$0.476 & 0.264 \\
##   & (0.504) & (0.445) & (0.408) & (0.492) \\
##   & & & & \\
##  Constant & 9.952$^{***}$ & 10.325$^{***}$ & 2.348$^{***}$ & 2.404$^{***}$ \\
##   & (0.257) & (0.275) & (0.269) & (0.303) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
```

```
###############
###Table A23###
###############
## Add pca_ind
police.data.t1$pca_ind <- police.data$pca_ind

## Lag pca_ind
police.data.t1 <- ddply(police.data.t1, .(state_ut), transform, l.pca_ind = c(NA, pca_ind[-length(pca_ind)]))

## fill NA with 0
police.data.t1$l.pca_ind <- ifelse(is.na(police.data.t1$l.pca_ind), 0, police.data.t1$l.pca_ind)

## categorical variable
police.data.t1$indlvl <- ifelse(police.data.t1$l.pca_ind == 1 & police.data.t1$l.state_pca == 1, "Ind",
                                ifelse(police.data.t1$l.pca_ind == 0 & police.data.t1$l.state_pca == 1, "Regular",
police.data.t1$indlvl <- as.factor(police.data.t1$indlvl)
police.data.t1$indlvl <- relevel(police.data.t1$indlvl, ref = "Regular")
levels(police.data.t1$indlvl)
```

```
## [1] "Regular" "Ind"     "No PCA"
```

```
## Poisson no control binding categorical
model.poisson.ind.ca <- glm(death_not_remanded ~ 1 + indlvl + as.factor(state_ut) + as.factor(year), data = police

model.poisson.ind.ca.cl <- cl(police.data.t1, model.poisson.ind.ca, police.data.t1$state_ut)

stargazer(model.poisson.ind.ca.cl)
```

```
##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:47
## \begin{table}[!htbp] \centering
##   \caption{}
```

```
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{1}{c}{\textit{Dependent variable:}} \\
## \cline{2-2}
## \\[-1.8ex] &   \\
## \hline \\[-1.8ex]
##  indlvlInd & $-$0.320 \\
##   & (0.343) \\
##   & \\
##  indlvlNo PCA & 0.560$^{***}$ \\
##   & (0.193) \\
##   & \\
##  as.factor(state\_ut)ARUNACHAL PRADESH  & $-$3.412$^{***}$ \\
##   & (0.091) \\
##   & \\
##  as.factor(state\_ut)ASSAM & $-$3.163$^{***}$ \\
##   & (0.113) \\
##   & \\
##  as.factor(state\_ut)BIHAR  & $-$2.987$^{***}$ \\
##   & (0.033) \\
##   & \\
##  as.factor(state\_ut)CHHATTISGARH  & $-$1.554$^{***}$ \\
##   & (0.113) \\
##   & \\
##  as.factor(state\_ut)GOA & $-$3.007$^{***}$ \\
##   & (0.091) \\
##   & \\
##  as.factor(state\_ut)GUJARAT  & 0.557$^{***}$ \\
##   & (0.104) \\
##   & \\
##  as.factor(state\_ut)HARYANA  & $-$1.897$^{***}$ \\
##   & (0.104) \\
##   & \\
##  as.factor(state\_ut)HIMACHAL PRADESH  & $-$20.094$^{***}$ \\
##   & (1.065) \\
##   & \\
##  as.factor(state\_ut)JAMMU & KASHMIR  & $-$2.805$^{***}$ \\
##   & (0.033) \\
##   & \\
##  as.factor(state\_ut)JHARKHAND & $-$2.875$^{***}$ \\
##   & (0.113) \\
##   & \\
##  as.factor(state\_ut)KARNATAKA  & $-$1.804$^{***}$ \\
##   & (0.017) \\
##   & \\
##  as.factor(state\_ut)KERALA  & $-$1.620$^{***}$ \\
##   & (0.091) \\
##   & \\
##  as.factor(state\_ut)MADHYA PRADESH & $-$0.684$^{***}$ \\
##   & (0.033) \\
##   & \\
##  as.factor(state\_ut)MAHARASHTRA & 1.049$^{***}$ \\
##   & (0.038) \\
##   & \\
##  as.factor(state\_ut)MANIPUR  & $-$3.569$^{***}$ \\
##   & (0.113) \\
##   & \\
##  as.factor(state\_ut)MEGHALAYA  & $-$4.396$^{***}$ \\
##   & (0.069) \\
##   & \\
```

```
##  as.factor(state\_ut)MIZORAM  & $-$1.911$^{***}$ \\
##   & (0.069) \\
##   & \\
##  as.factor(state\_ut)NAGALAND  & $-$2.652$^{***}$ \\
##   & (0.113) \\
##   & \\
##  as.factor(state\_ut)ORISSA  & $-$1.697$^{***}$ \\
##   & (0.113) \\
##   & \\
##  as.factor(state\_ut)PUNJAB  & $-$0.927$^{***}$ \\
##   & (0.104) \\
##   & \\
##  as.factor(state\_ut)RAJASTHAN  & $-$0.765$^{***}$ \\
##   & (0.113) \\
##   & \\
##  as.factor(state\_ut)SIKKIM  & $-$19.663$^{***}$ \\
##   & (1.067) \\
##   & \\
##  as.factor(state\_ut)TAMIL NADU  & $-$0.142$^{***}$ \\
##   & (0.044) \\
##   & \\
##  as.factor(state\_ut)TELANGANA & $-$1.391$^{***}$ \\
##   & (0.096) \\
##   & \\
##  as.factor(state\_ut)TRIPURA  & $-$2.719$^{***}$ \\
##   & (0.092) \\
##   & \\
##  as.factor(state\_ut)UTTAR PRADESH  & 0.149$^{***}$ \\
##   & (0.033) \\
##   & \\
##  as.factor(state\_ut)UTTARAKHAND  & $-$19.805$^{***}$ \\
##   & (1.070) \\
##   & \\
##  as.factor(state\_ut)WEST BENGAL  & 0.003 \\
##   & (0.084) \\
##   & \\
##  as.factor(state\_ut)Z A & N ISLANDS & $-$19.873$^{***}$ \\
##   & (1.068) \\
##   & \\
##  as.factor(state\_ut)Z CHANDIGARH  & $-$3.255$^{***}$ \\
##   & (0.084) \\
##   & \\
##  as.factor(state\_ut)Z D & N HAVELI & $-$4.354$^{***}$ \\
##   & (0.084) \\
##   & \\
##  as.factor(state\_ut)Z DAMAN & DIU & $-$19.877$^{***}$ \\
##   & (1.068) \\
##   & \\
##  as.factor(state\_ut)Z DELHI  & $-$2.786$^{***}$ \\
##   & (0.069) \\
##   & \\
##  as.factor(state\_ut)Z LAKSHADWEEP  & $-$19.873$^{***}$ \\
##   & (1.068) \\
##   & \\
##  as.factor(state\_ut)Z PUDUCHERRY  & $-$4.354$^{***}$ \\
##   & (0.084) \\
##   & \\
##  as.factor(year)2002 & 0.000 \\
##   & (0.197) \\
##   & \\
##  as.factor(year)2003 & 0.141 \\
##   & (0.195) \\
```

```
##   & \\
##  as.factor(year)2004 & $-$0.078 \\
##   & (0.230) \\
##   & \\
##  as.factor(year)2005 & 0.141 \\
##   & (0.235) \\
##   & \\
##  as.factor(year)2006 & $-$0.038 \\
##   & (0.218) \\
##   & \\
##  as.factor(year)2007 & 0.141 \\
##   & (0.312) \\
##   & \\
##  as.factor(year)2008 & 0.195 \\
##   & (0.334) \\
##   & \\
##  as.factor(year)2009 & 0.255 \\
##   & (0.299) \\
##   & \\
##  as.factor(year)2010 & $-$0.013 \\
##   & (0.365) \\
##   & \\
##  as.factor(year)2011 & 0.545$^{*}$ \\
##   & (0.329) \\
##   & \\
##  as.factor(year)2012 & 0.500 \\
##   & (0.347) \\
##   & \\
##  as.factor(year)2013 & 0.822$^{***}$ \\
##   & (0.310) \\
##   & \\
##  as.factor(year)2014 & 0.437$^{*}$ \\
##   & (0.231) \\
##   & \\
##  as.factor(year)2015 & 0.683$^{***}$ \\
##   & (0.247) \\
##   & \\
##  as.factor(year)2016 & 0.573$^{**}$ \\
##   & (0.281) \\
##   & \\
##  Constant & 0.955$^{***}$ \\
##   & (0.321) \\
##   & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{1}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}

##############
###Table A24##
##############
## Add ngo
police.data.t1$ngo <- police.data$ngo*100

police.data.ngo <- police.data.t1[-which(is.na(police.data.t1$ngo)), ]

police.data.ngo$state_ut <- as.factor(as.character(police.data.ngo$state_ut))

levels(police.data.ngo$state_ut)

##  [1] "ANDHRA PRADESH"     "ARUNACHAL PRADESH " "ASSAM"
```

```
##  [4] "BIHAR "              "CHHATTISGARH "      "GOA"
##  [7] "GUJARAT "            "HARYANA "           "HIMACHAL PRADESH "
## [10] "JAMMU & KASHMIR "    "JHARKHAND"          "KARNATAKA "
## [13] "KERALA "             "MADHYA PRADESH"     "MAHARASHTRA"
## [16] "MANIPUR "            "MEGHALAYA "         "MIZORAM "
## [19] "NAGALAND "           "ORISSA "            "PUNJAB "
## [22] "RAJASTHAN "          "SIKKIM "            "TAMIL NADU "
## [25] "TRIPURA "            "UTTAR PRADESH "     "UTTARAKHAND "
## [28] "WEST BENGAL "        "Z CHANDIGARH "      "Z D & N HAVELI"
## [31] "Z DAMAN & DIU"       "Z DELHI "           "Z PUDUCHERRY "

## OLS Model with ngo
model.ols.ngo <- lm(death_not_remanded ~ 1 + l.state_pca + ngo + state_ut + as.factor(year), data = police.data.ng

model.ols.ngo.cl <- cl(police.data.ngo, model.ols.ngo, police.data.ngo$state_ut)

## Poisson Model with ngo
model.p.ngo <- glm(death_not_remanded ~ 1 + l.state_pca + ngo + state_ut + as.factor(year), data = police.data.ngo

model.p.ngo.cl <- cl(police.data.ngo, model.p.ngo, police.data.ngo$state_ut)

## OLS Model with ngo
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)])

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add ngo
  police.imp.1.l$ngo <- police.data$ngo*100

  police.imp.1.l <- police.imp.1.l[-which(is.na(police.imp.1.l$ngo)), ]

  police.imp.1.l$state_ut <- as.factor(as.character(police.imp.1.l$state_ut))

  levels(police.imp.1.l)

  ## Poisson with outdata1.csv
  imp.1.p <- lm(death_not_remanded ~ 1 + l.state_pca + ngo + gdp +
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l)

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}
```

```r
beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3
```

```
##               [,1]        [,2]       [,3]
## [1,] -1.486154480 0.780568584 0.05691821
## [2,] -0.008115802 0.007908604 0.30479780
## [3,]  2.263748457 1.101714112 0.03990304
## [4,] -0.055273379 0.057428854 0.33581505
```

```r
## Replace results to model result
model.ols.ngo.cl.c <- result.p.1

model.ols.ngo.cl.c[2:5, 1] <- result.t3[, 1]
model.ols.ngo.cl.c[2:5, 2] <- result.t3[, 2]
model.ols.ngo.cl.c[2:5, 4] <- result.t3[, 3]

## Poisson Model with ngo and controls
## Loop models for 5 imputation datasets
for (i in c(1:5)){
  filename <- paste("outdata", i, sep = "")
  filename.csv <- paste(filename, "csv", sep = ".")
  police.imp.1 <- read.csv(filename.csv)

  ## Lagged state_pca
  police.imp.1.l <- ddply(police.imp.1, .(state_ut), transform, l.state_pca = c(NA, state_pca[-length(state_pca)]))

  ## fill NA with 0
  police.imp.1.l$l.state_pca <- ifelse(is.na(police.imp.1.l$l.state_pca), 0, police.imp.1.l$l.state_pca)

  ## delete DAMAN & DIU 2001
  police.imp.1.l <- police.imp.1.l[-500,]

  ## Rescale GDP
  police.imp.1.l$gdp <- police.imp.1.l$gdp/1000000

  ## Add ngo
  police.imp.1.l$ngo <- police.data$ngo*100

  police.imp.1.l <- police.imp.1.l[-which(is.na(police.imp.1.l$ngo)), ]

  police.imp.1.l$state_ut <- as.factor(as.character(police.imp.1.l$state_ut))

  ## Poisson with outdata1.csv
  imp.1.p <- glm(death_not_remanded ~ 1 + l.state_pca + ngo + gdp +
```

```
                  head_trans + state_ut +
                  as.factor(year), data = police.imp.1.l, family="poisson")

  result.p.1 <- cl(police.imp.1.l, imp.1.p, police.imp.1.l$state_ut)

  nam.e <- paste("e", i, sep = "")
  assign(nam.e, result.p.1[2:5, 1])

  nam.se <- paste("se", i, sep = "")
  assign(nam.se, result.p.1[2:5, 2])
}


beta.t <- cbind(e1, e2, e3, e4, e5)

beta.se <- cbind(se1, se2, se3, se4, se5)

## Calculate imputed beta and SEs
se_calc <- function(q, se){
  part1 <- sum((se)^2)/length(se)
  part2 <- sum((q - mean(q))^2)/(length(q)-1)*(1+1/length(q))
  se.imp <- sqrt(part1 + part2)
  q.imp <- mean(q)
  p.value <- 2*pnorm(abs(q.imp/se.imp),lower.tail = FALSE)
  return(c(q.imp, se.imp, p.value))
}

## Print poisson results
result.t3 <- matrix(NA, nrow = 4, ncol = 3)
for (i in 1:4){
  result.t3[i, ]<- se_calc(q=beta.t[i, ], se = beta.se[i, ])
}

result.t3

##                [,1]        [,2]         [,3]
## [1,] -5.757229e-01 0.160601884 0.0003373589
## [2,] -3.464654e-06 0.005680894 0.9995133876
## [3,]  1.929705e-01 0.282886641 0.4951455585
## [4,] -2.760208e-02 0.036345994 0.4475979314

## Replace results to model result
model.p.ngo.cl.c <- result.p.1

model.p.ngo.cl.c[2:5, 1] <- result.t3[, 1]
model.p.ngo.cl.c[2:5, 2] <- result.t3[, 2]
model.p.ngo.cl.c[2:5, 4] <- result.t3[, 3]

stargazer(model.ols.ngo.cl, model.ols.ngo.cl.c, model.p.ngo.cl, model.p.ngo.cl.c)

##
## % Table created by stargazer v.5.2.2 by Marek Hlavac, Harvard University. E-mail: hlavac at fas.harvard.edu
## % Date and time: Thu, Apr 16, 2020 - 11:04:47
## \begin{table}[!htbp] \centering
##   \caption{}
##   \label{}
## \begin{tabular}{@{\extracolsep{5pt}}lcccc}
## \\[-1.8ex]\hline
## \hline \\[-1.8ex]
##  & \multicolumn{4}{c}{\textit{Dependent variable:}} \\
## \cline{2-5}
## \\[-1.8ex] & \multicolumn{4}{c}{ } \\
## \\[-1.8ex] & (1) & (2) & (3) & (4)\\
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## \hline \\[-1.8ex]
##  l.state\_pca & $-$1.587$^{*}$ & $-$1.486$^{*}$ & $-$0.596$^{***}$ & $-$0.576$^{***}$ \\
##   & (0.880) & (0.781) & (0.168) & (0.161) \\
##   & & & & \\
##  ngo & 0.004 & $-$0.008 & 0.002 & $-$0.00000 \\
##   & (0.006) & (0.008) & (0.004) & (0.006) \\
##   & & & & \\
##  gdp &  & 2.264$^{**}$ &  & 0.193 \\
##   &  & (1.102) &  & (0.283) \\
##   & & & & \\
##  head\_trans &  & $-$0.055 &  & $-$0.028 \\
##   &  & (0.057) &  & (0.036) \\
##   & & & & \\
##  state\_utARUNACHAL PRADESH  & $-$4.623$^{***}$ & $-$3.891$^{***}$ & $-$3.523$^{***}$ & $-$3.455$^{***}$ \\
##   & (0.330) & (0.643) & (0.085) & (0.123) \\
##   & & & & \\
##  state\_utASSAM & $-$4.533$^{***}$ & $-$4.113$^{***}$ & $-$3.107$^{***}$ & $-$3.077$^{***}$ \\
##   & (0.330) & (0.495) & (0.068) & (0.077) \\
##   & & & & \\
##  state\_utBIHAR  & $-$5.298$^{***}$ & $-$4.996$^{***}$ & $-$2.948$^{***}$ & $-$2.906$^{***}$ \\
##   & (0.165) & (0.095) & (0.032) & (0.059) \\
##   & & & & \\
##  state\_utCHHATTISGARH  & $-$3.779$^{***}$ & $-$3.369$^{***}$ & $-$1.496$^{***}$ & $-$1.461$^{***}$ \\
##   & (0.330) & (0.486) & (0.065) & (0.071) \\
##   & & & & \\
##  state\_utGOA & $-$4.528$^{***}$ & $-$3.880$^{***}$ & $-$3.105$^{***}$ & $-$3.037$^{***}$ \\
##   & (0.330) & (0.590) & (0.065) & (0.086) \\
##   & & & & \\
##  state\_utGUJARAT  & 3.182$^{***}$ & 2.804$^{***}$ & 0.612$^{***}$ & 0.585$^{***}$ \\
##   & (0.275) & (0.172) & (0.058) & (0.083) \\
##   & & & & \\
##  state\_utHARYANA  & $-$4.128$^{***}$ & $-$3.978$^{***}$ & $-$1.840$^{***}$ & $-$1.825$^{***}$ \\
##   & (0.275) & (0.316) & (0.056) & (0.052) \\
##   & & & & \\
##  state\_utHIMACHAL PRADESH  & $-$5.607$^{***}$ & $-$5.031$^{***}$ & $-$20.054$^{***}$ & $-$19.998$^{***}$ \\
##   & (0.165) & (0.199) & (1.067) & (1.073) \\
##   & & & & \\
##  state\_utJAMMU & KASHMIR  & $-$5.235$^{***}$ & $-$4.645$^{***}$ & $-$2.766$^{***}$ & $-$2.695$^{***}$ \\
##   & (0.165) & (0.199) & (0.032) & (0.096) \\
##   & & & & \\
##  state\_utJHARKHAND & $-$4.468$^{***}$ & $-$4.056$^{***}$ & $-$2.818$^{***}$ & $-$2.786$^{***}$ \\
##   & (0.330) & (0.489) & (0.066) & (0.072) \\
##   & & & & \\
##  state\_utKARNATAKA  & $-$4.408$^{***}$ & $-$4.661$^{***}$ & $-$1.826$^{***}$ & $-$1.852$^{***}$ \\
##   & (0.055) & (0.095) & (0.021) & (0.036) \\
##   & & & & \\
##  state\_utKERALA  & $-$3.975$^{***}$ & $-$3.871$^{***}$ & $-$1.722$^{***}$ & $-$1.713$^{***}$ \\
##   & (0.330) & (0.351) & (0.070) & (0.067) \\
##   & & & & \\
##  state\_utMADHYA PRADESH & $-$2.482$^{***}$ & $-$2.366$^{***}$ & $-$0.645$^{***}$ & $-$0.625$^{***}$ \\
##   & (0.165) & (0.114) & (0.034) & (0.040) \\
##   & & & & \\
##  state\_utMAHARASHTRA & 10.959$^{***}$ & 9.568$^{***}$ & 1.089$^{***}$ & 0.964$^{***}$ \\
##   & (0.056) & (0.759) & (0.007) & (0.191) \\
##   & & & & \\
##  state\_utMANIPUR  & $-$4.676$^{***}$ & $-$3.810$^{***}$ & $-$3.545$^{***}$ & $-$3.466$^{***}$ \\
##   & (0.346) & (0.724) & (0.129) & (0.195) \\
##   & & & & \\
##  state\_utMEGHALAYA  & $-$5.050$^{***}$ & $-$4.417$^{***}$ & $-$4.346$^{***}$ & $-$4.299$^{***}$ \\
##   & (0.110) & (0.411) & (0.024) & (0.075) \\
##   & & & & \\
##  state\_utMIZORAM  & $-$4.694$^{***}$ & $-$3.088$^{***}$ & $-$2.002$^{***}$ & $-$1.816$^{***}$ \\
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##   & (0.504) & (0.987) & (0.348) & (0.521) \\
##   & & & & \\
##  state\_utNAGALAND  & $-$4.420$^{***}$ & $-$3.762$^{***}$ & $-$2.601$^{***}$ & $-$2.554$^{***}$ \\
##   & (0.329) & (0.613) & (0.076) & (0.108) \\
##   & & & & \\
##  state\_utORISSA  & $-$3.904$^{***}$ & $-$3.649$^{***}$ & $-$1.638$^{***}$ & $-$1.626$^{***}$ \\
##   & (0.330) & (0.419) & (0.065) & (0.066) \\
##   & & & & \\
##  state\_utPUNJAB  & $-$3.000$^{***}$ & $-$2.473$^{***}$ & $-$0.870$^{***}$ & $-$0.701$^{***}$ \\
##   & (0.275) & (0.543) & (0.055) & (0.204) \\
##   & & & & \\
##  state\_utRAJASTHAN  & $-$2.655$^{***}$ & $-$2.700$^{***}$ & $-$0.707$^{***}$ & $-$0.713$^{***}$ \\
##   & (0.330) & (0.288) & (0.066) & (0.066) \\
##   & & & & \\
##  state\_utSIKKIM  & $-$4.930$^{***}$ & $-$3.975$^{***}$ & $-$19.796$^{***}$ & $-$19.706$^{***}$ \\
##   & (0.315) & (0.730) & (1.077) & (1.094) \\
##   & & & & \\
##  state\_utTAMIL NADU  & $-$0.501$^{***}$ & $-$0.969$^{***}$ & $-$0.099$^{***}$ & $-$0.121 \\
##   & (0.001) & (0.261) & (0.001) & (0.078) \\
##   & & & & \\
##  state\_utTRIPURA  & $-$4.605$^{***}$ & $-$3.982$^{***}$ & $-$2.666$^{***}$ & $-$2.621$^{***}$ \\
##   & (0.220) & (0.497) & (0.048) & (0.081) \\
##   & & & & \\
##  state\_utUTTAR PRADESH  & 1.582$^{***}$ & 1.223$^{***}$ & 0.189$^{***}$ & 0.233 \\
##   & (0.165) & (0.423) & (0.035) & (0.155) \\
##   & & & & \\
##  state\_utUTTARAKHAND  & $-$4.813$^{***}$ & $-$4.329$^{***}$ & $-$19.748$^{***}$ & $-$19.708$^{***}$ \\
##   & (0.275) & (0.473) & (1.068) & (1.071) \\
##   & & & & \\
##  state\_utWEST BENGAL  & $-$0.137 & $-$0.416$^{***}$ & 0.056 & 0.024 \\
##   & (0.165) & (0.095) & (0.037) & (0.057) \\
##   & & & & \\
##  state\_utZ CHANDIGARH  & $-$4.822$^{***}$ & $-$4.233$^{***}$ & $-$3.201$^{***}$ & $-$3.167$^{***}$ \\
##   & (0.166) & (0.441) & (0.036) & (0.073) \\
##   & & & & \\
##  state\_utZ D & N HAVELI & $-$4.947$^{***}$ & $-$4.380$^{***}$ & $-$4.299$^{***}$ & $-$4.266$^{***}$ \\
##   & (0.166) & (0.428) & (0.036) & (0.069) \\
##   & & & & \\
##  state\_utZ DAMAN & DIU & $-$5.029$^{***}$ & $-$4.646$^{***}$ & $-$19.824$^{***}$ & $-$19.802$^{***}$ \\
##   & (0.147) & (0.320) & (1.067) & (1.070) \\
##   & & & & \\
##  state\_utZ DELHI  & $-$4.799$^{***}$ & $-$4.692$^{***}$ & $-$2.736$^{***}$ & $-$2.735$^{***}$ \\
##   & (0.110) & (0.150) & (0.023) & (0.024) \\
##   & & & & \\
##  state\_utZ PUDUCHERRY  & $-$4.953$^{***}$ & $-$4.334$^{***}$ & $-$4.302$^{***}$ & $-$4.263$^{***}$ \\
##   & (0.165) & (0.454) & (0.038) & (0.080) \\
##   & & & & \\
##  as.factor(year)2002 & 0.008 & $-$0.014 & $-$0.000 & $-$0.033 \\
##   & (0.319) & (0.320) & (0.197) & (0.217) \\
##   & & & & \\
##  as.factor(year)2003 & 0.251 & 0.214 & 0.141 & 0.107 \\
##   & (0.383) & (0.363) & (0.195) & (0.192) \\
##   & & & & \\
##  as.factor(year)2004 & $-$0.113 & $-$0.161 & $-$0.078 & $-$0.111 \\
##   & (0.355) & (0.327) & (0.230) & (0.222) \\
##   & & & & \\
##  as.factor(year)2005 & 0.251 & 0.164 & 0.141 & 0.095 \\
##   & (0.425) & (0.404) & (0.235) & (0.228) \\
##   & & & & \\
##  as.factor(year)2006 & $-$0.052 & $-$0.104 & $-$0.038 & $-$0.058 \\
##   & (0.351) & (0.326) & (0.219) & (0.210) \\
##   & & & & \\
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##  as.factor(year)2007 & 0.251 & 0.122 & 0.141 & 0.109 \\
##   & (0.565) & (0.541) & (0.313) & (0.319) \\
##   & & & & \\
##  as.factor(year)2008 & 0.731 & 0.520 & 0.193 & 0.147 \\
##   & (0.836) & (0.702) & (0.334) & (0.347) \\
##   & & & & \\
##  as.factor(year)2009 & 0.911 & 0.627 & 0.259 & 0.189 \\
##   & (0.849) & (0.677) & (0.296) & (0.352) \\
##   & & & & \\
##  as.factor(year)2010 & 0.535 & 0.172 & $-$0.009 & $-$0.113 \\
##   & (0.877) & (0.657) & (0.363) & (0.407) \\
##   & & & & \\
##  as.factor(year)2011 & 1.684 & 1.254 & 0.552$^{*}$ & 0.441 \\
##   & (1.358) & (1.078) & (0.323) & (0.383) \\
##   & & & & \\
##  as.factor(year)2012 & 1.725 & 1.168 & 0.509 & 0.373 \\
##   & (1.255) & (0.916) & (0.345) & (0.408) \\
##   & & & & \\
##  as.factor(year)2013 & 2.562 & 1.928 & 0.829$^{***}$ & 0.670$^{*}$ \\
##   & (1.624) & (1.238) & (0.303) & (0.406) \\
##   & & & & \\
##  as.factor(year)2014 & 1.506 & 0.747 & 0.424$^{*}$ & 0.236 \\
##   & (1.108) & (0.681) & (0.240) & (0.408) \\
##   & & & & \\
##  as.factor(year)2015 & 1.675 & 0.725 & 0.654$^{**}$ & 0.444 \\
##   & (1.066) & (0.546) & (0.256) & (0.450) \\
##   & & & & \\
##  as.factor(year)2016 & 1.585 & 0.609 & 0.605$^{**}$ & 0.357 \\
##   & (1.074) & (0.582) & (0.283) & (0.521) \\
##   & & & & \\
##  Constant & 4.760$^{***}$ & 4.449$^{***}$ & 1.473$^{***}$ & 1.518$^{***}$ \\
##   & (0.543) & (0.636) & (0.221) & (0.215) \\
##   & & & & \\
## \hline \\[-1.8ex]
## \hline
## \hline \\[-1.8ex]
## \textit{Note:}  & \multicolumn{4}{r}{$^{*}$p$<$0.1; $^{**}$p$<$0.05; $^{***}$p$<$0.01} \\
## \end{tabular}
## \end{table}
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