```
R version 3.3.3 (2017-03-06) -- "Another Canoe"
Copyright (C) 2017 The R Foundation for Statistical Computing
Platform: x86_64-apple-darwin13.4.0 (64-bit)

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[R.app GUI 1.69 (7328) x86_64-apple-darwin13.4.0]

2019-01-14 14:50:38.883 R[1942:707] Antidote - Texteurs: Module texteur installé dans /Applications/R.app (org.R-project.R)
> ########################
> #JF GODBOUT MANUSCRIPT##
> #CHAPTER 7##############
> #September 7, 2018######
> ########################
> #Figure 7.2#############
> ########################
>
> ##########################################################################
> #Table 7.2: The Relationship between Catholics and the Vote (1867-1965)#
> ##########################################################################
>
> #Regression analysis table 7.2
>
> library(mfx)
Loading required package: sandwich
Loading required package: lmtest
Loading required package: zoo

Attaching package: ‘zoo’

The following objects are masked from ‘package:base’:

    as.Date, as.Date.numeric

Loading required package: MASS
Loading required package: betareg
>
> titirve1 <- read.csv("~/Dropbox/Canada-Manuscript/Data-Final/Elections-1867-2015.csv",header=TRUE)
> titirve2 <- read.csv("~/Dropbox/Canada-Manuscript/Data-Final/census-info.csv",header=TRUE)
>
> dat <- merge(titirve1,titirve2,by=c('Riding.code','Term'))
>
> dat <- subset(dat,dat$Parliament.no.x<18)
>
> #Catholic analysis
>
> #Lib, 1867-1930
>
> dat1 <- subset(dat,dat$Party=="Lib"|dat$Party=="Opp")
>
> res <- lm(dat1$Percentage~dat1$percentage.catholic + factor(dat1$Parliament.no.x))
> res.all1 <- res
> all1 <- coeftest(res.all1, vcov = vcovHAC(res.all1))
>
> #All (1867-1930)
>
> summary(res)

Call:
lm(formula = dat1$Percentage ~ dat1$percentage.catholic + factor(dat1$Parliament.no.x))

Residuals:
     Min       1Q   Median       3Q      Max
-0.61423 -0.06265  0.01314  0.06837  0.53388

Coefficients:
                              Estimate Std. Error t value Pr(>|t|)
(Intercept)                   0.518583   0.016426  31.571  < 2e-16 ***
dat1$percentage.catholic      0.140879   0.006699  21.031  < 2e-16 ***
factor(dat1$Parliament.no.x)2 -0.042598   0.021097  -2.019 0.043559 *
factor(dat1$Parliament.no.x)3 -0.040652   0.019491  -2.086 0.037096 *
factor(dat1$Parliament.no.x)4 -0.103508   0.019608  -5.279 1.39e-07 ***
factor(dat1$Parliament.no.x)5 -0.107384   0.020249  -5.303 1.22e-07 ***
factor(dat1$Parliament.no.x)6 -0.105498   0.018555  -5.686 1.43e-08 ***
factor(dat1$Parliament.no.x)7 -0.115184   0.018611  -6.189 6.89e-10 ***
factor(dat1$Parliament.no.x)8 -0.090653   0.018648  -4.861 1.23e-06 ***
factor(dat1$Parliament.no.x)9 -0.074317   0.018197  -4.084 4.54e-05 ***
factor(dat1$Parliament.no.x)10 -0.056178   0.018798  -2.988 0.002827 **
factor(dat1$Parliament.no.x)11 -0.066125   0.018352  -3.603 0.000319 ***
factor(dat1$Parliament.no.x)12 -0.100211   0.018342  -5.463 5.06e-08 ***
factor(dat1$Parliament.no.x)13 -0.121774   0.018511  -6.579 5.59e-11 ***
factor(dat1$Parliament.no.x)14 -0.121881   0.018491  -6.591 5.14e-11 ***
```

```
factor(dat1$Parliament.no.x)15 -0.134126   0.018354  -7.308 3.48e-13 ***
factor(dat1$Parliament.no.x)16 -0.084069   0.018557  -4.530 6.12e-06 ***
factor(dat1$Parliament.no.x)17 -0.119546   0.018351  -6.514 8.55e-11 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1266 on 2970 degrees of freedom
  (455 observations deleted due to missingness)
Multiple R-squared:  0.1727,
  Adjusted R-squared:  0.168
F-statistic: 36.48 on 17 and 2970 DF,  p-value: < 2.2e-16

> nobs(res)
[1] 2988
> all1

t test of coefficients:

                               Estimate Std. Error t value  Pr(>|t|)
(Intercept)                    0.518583   0.015132 34.2707 < 2.2e-16 ***
dat1$percentage.catholic       0.140879   0.011729 12.0111 < 2.2e-16 ***
factor(dat1$Parliament.no.x)2  -0.042598   0.019684 -2.1642  0.030532 *
factor(dat1$Parliament.no.x)3  -0.040652   0.018591 -2.1867  0.028843 *
factor(dat1$Parliament.no.x)4  -0.103508   0.018345 -5.6424 1.835e-08 ***
factor(dat1$Parliament.no.x)5  -0.107384   0.020231 -5.3080 1.190e-07 ***
factor(dat1$Parliament.no.x)6  -0.105498   0.017618 -5.9879 2.380e-09 ***
factor(dat1$Parliament.no.x)7  -0.115184   0.018363 -6.2727 4.064e-10 ***
factor(dat1$Parliament.no.x)8  -0.090653   0.017342 -5.2274 1.838e-07 ***
factor(dat1$Parliament.no.x)9  -0.074317   0.016174 -4.5950 4.509e-06 ***
factor(dat1$Parliament.no.x)10 -0.056178   0.015396 -3.6488  0.000268 ***
factor(dat1$Parliament.no.x)11 -0.066125   0.015965 -4.1419 3.541e-05 ***
factor(dat1$Parliament.no.x)12 -0.100211   0.015720 -6.3749 2.116e-10 ***
factor(dat1$Parliament.no.x)13 -0.121774   0.020852 -5.8399 5.789e-09 ***
factor(dat1$Parliament.no.x)14 -0.121881   0.019600 -6.2185 5.723e-10 ***
factor(dat1$Parliament.no.x)15 -0.134126   0.017414 -7.7024 1.807e-14 ***
factor(dat1$Parliament.no.x)16 -0.084069   0.018344 -4.5830 4.772e-06 ***
factor(dat1$Parliament.no.x)17 -0.119546   0.016203 -7.3779 2.076e-13 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

>
> dat.qc <- subset(dat1,dat1$Province.y=="Quebec")
> res.qc <- lm(dat.qc$Percentage~dat.qc$percentage.catholic + factor(dat.qc$Parliament.no.x))
> res.qc1 <- res.qc
> qc11 <- coeftest(res.qc, vcov = vcovHAC(res.qc))
>
> #Quebec (1867-1930)
>
> summary(res.qc)

Call:
lm(formula = dat.qc$Percentage ~ dat.qc$percentage.catholic +
    factor(dat.qc$Parliament.no.x))

Residuals:
     Min       1Q   Median       3Q      Max
-0.57881 -0.04990 -0.00931  0.04972  0.43676

Coefficients:
                                Estimate Std. Error t value Pr(>|t|)
(Intercept)                    0.4622033  0.0325271  14.210  < 2e-16 ***
dat.qc$percentage.catholic     0.1082256  0.0210926   5.131 3.58e-07 ***
factor(dat.qc$Parliament.no.x)2 -0.0082678  0.0336215  -0.246   0.8058
factor(dat.qc$Parliament.no.x)3 -0.0006714  0.0318067  -0.021   0.9832
factor(dat.qc$Parliament.no.x)4 -0.0478509  0.0329930  -1.450   0.1473
factor(dat.qc$Parliament.no.x)5 -0.0534058  0.0347734  -1.536   0.1250
factor(dat.qc$Parliament.no.x)6 -0.0517239  0.0307970  -1.680   0.0934 .
factor(dat.qc$Parliament.no.x)7 -0.0692809  0.0302502  -2.290   0.0223 *
factor(dat.qc$Parliament.no.x)8 -0.0141661  0.0299905  -0.472   0.6368
factor(dat.qc$Parliament.no.x)9 -0.0020841  0.0291055  -0.072   0.9429
factor(dat.qc$Parliament.no.x)10  0.0061779  0.0292148   0.211   0.8326
factor(dat.qc$Parliament.no.x)11  0.0070193  0.0295266   0.238   0.8122
factor(dat.qc$Parliament.no.x)12 -0.0565042  0.0296200  -1.908   0.0568 .
factor(dat.qc$Parliament.no.x)13  0.1949004  0.0303290   6.426 2.19e-10 ***
factor(dat.qc$Parliament.no.x)14  0.1433604  0.0295753   4.847 1.49e-06 ***
factor(dat.qc$Parliament.no.x)15  0.0289928  0.0294470   0.985   0.3251
factor(dat.qc$Parliament.no.x)16  0.0636738  0.0297216   2.142   0.0325 *
factor(dat.qc$Parliament.no.x)17 -0.0230747  0.0297732  -0.775   0.4385
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1058 on 844 degrees of freedom
  (153 observations deleted due to missingness)
Multiple R-squared:  0.3192,
  Adjusted R-squared:  0.3055
F-statistic: 23.28 on 17 and 844 DF,  p-value: < 2.2e-16

> nobs(res.qc)
[1] 862
> qc11

t test of coefficients:

                                Estimate Std. Error t value  Pr(>|t|)
(Intercept)                    0.4622033  0.0338486 13.6550 < 2.2e-16 ***
```

```
dat.qc$percentage.catholic        0.1082257  0.0326629  3.3134 0.0009609 ***
factor(dat.qc$Parliament.no.x)2  -0.0082679  0.0401982 -0.2057 0.8370927
factor(dat.qc$Parliament.no.x)3  -0.0006714  0.0293268 -0.0229 0.9817405
factor(dat.qc$Parliament.no.x)4  -0.0478509  0.0208925 -2.2903 0.0222478 *
factor(dat.qc$Parliament.no.x)5  -0.0534058  0.0234369 -2.2787 0.0229337 *
factor(dat.qc$Parliament.no.x)6  -0.0517239  0.0236389 -2.1881 0.0289371 *
factor(dat.qc$Parliament.no.x)7  -0.0692809  0.0228500 -3.0320 0.0025038 **
factor(dat.qc$Parliament.no.x)8  -0.0141661  0.0208027 -0.6810 0.4960744
factor(dat.qc$Parliament.no.x)9  -0.0020841  0.0206246 -0.1010 0.9195348
factor(dat.qc$Parliament.no.x)10  0.0061779  0.0205379  0.3008 0.7636356
factor(dat.qc$Parliament.no.x)11  0.0070193  0.0219912  0.3192 0.7496651
factor(dat.qc$Parliament.no.x)12 -0.0565042  0.0213783 -2.6431 0.0083682 **
factor(dat.qc$Parliament.no.x)13  0.1949004  0.0309832  6.2905 5.075e-10 ***
factor(dat.qc$Parliament.no.x)14  0.1433604  0.0216501  6.6217 6.314e-11 ***
factor(dat.qc$Parliament.no.x)15  0.0289928  0.0248250  1.1679 0.2431822
factor(dat.qc$Parliament.no.x)16  0.0636738  0.0249360  2.5535 0.0108397 *
factor(dat.qc$Parliament.no.x)17 -0.0230748  0.0219199 -1.0527 0.2927863
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

>
> dat.roc <-  subset(dat1,dat1$Province.y!="Quebec")
> res.roc <- lm(dat.roc$Percentage~dat.roc$percentage.catholic + factor(dat.roc$Parliament.no.x))
> res.roc1 <- res.roc
> roc11 <- coeftest(res.roc, vcov = vcovHAC(res.roc))
>
> #Rest of Canada (1867-1930)
>
> summary(res.roc)

Call:
lm(formula = dat.roc$Percentage ~ dat.roc$percentage.catholic +
    factor(dat.roc$Parliament.no.x))

Residuals:
     Min       1Q   Median       3Q      Max
-0.44836 -0.04727  0.01550  0.06202  0.51312

Coefficients:
                                 Estimate Std. Error t value Pr(>|t|)
(Intercept)                       0.57555    0.01753  32.835  < 2e-16 ***
dat.roc$percentage.catholic       0.01712    0.01299   1.317 0.187821
factor(dat.roc$Parliament.no.x)2 -0.05532    0.02274  -2.433 0.015074 *
factor(dat.roc$Parliament.no.x)3 -0.05520    0.02081  -2.653 0.008046 **
factor(dat.roc$Parliament.no.x)4 -0.12699    0.02075  -6.121 1.10e-09 ***
factor(dat.roc$Parliament.no.x)5 -0.12735    0.02132  -5.973 2.72e-09 ***
factor(dat.roc$Parliament.no.x)6 -0.12654    0.01970  -6.422 1.65e-10 ***
factor(dat.roc$Parliament.no.x)7 -0.13113    0.01989  -6.591 5.50e-11 ***
factor(dat.roc$Parliament.no.x)8 -0.11606    0.02002  -5.797 7.78e-09 ***
factor(dat.roc$Parliament.no.x)9 -0.09944    0.01960  -5.073 4.26e-07 ***
factor(dat.roc$Parliament.no.x)10 -0.06850    0.02069  -3.311 0.000944 ***
factor(dat.roc$Parliament.no.x)11 -0.09033    0.01970  -4.585 4.81e-06 ***
factor(dat.roc$Parliament.no.x)12 -0.11276    0.01966  -5.736 1.11e-08 ***
factor(dat.roc$Parliament.no.x)13 -0.23145    0.01973 -11.730  < 2e-16 ***
factor(dat.roc$Parliament.no.x)14 -0.23354    0.01991 -11.728  < 2e-16 ***
factor(dat.roc$Parliament.no.x)15 -0.19402    0.01974  -9.828  < 2e-16 ***
factor(dat.roc$Parliament.no.x)16 -0.13772    0.01997  -6.895 7.07e-12 ***
factor(dat.roc$Parliament.no.x)17 -0.15104    0.01963  -7.693 2.20e-14 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1161 on 2108 degrees of freedom
  (302 observations deleted due to missingness)
Multiple R-squared:  0.1804,
  Adjusted R-squared:  0.1738
F-statistic:  27.3 on 17 and 2108 DF,  p-value: < 2.2e-16

> nobs(res.roc)
[1] 2126
> roc11

t test of coefficients:

                                  Estimate Std. Error  t value  Pr(>|t|)
(Intercept)                       0.575554   0.016405  35.0841 < 2.2e-16 ***
dat.roc$percentage.catholic       0.017117   0.031559   0.5424  0.587620
factor(dat.roc$Parliament.no.x)2 -0.055316   0.019720  -2.8051  0.005076 **
factor(dat.roc$Parliament.no.x)3 -0.055196   0.020763  -2.6583  0.007912 **
factor(dat.roc$Parliament.no.x)4 -0.126986   0.021438  -5.9233 3.674e-09 ***
factor(dat.roc$Parliament.no.x)5 -0.127346   0.022649  -5.6225 2.132e-08 ***
factor(dat.roc$Parliament.no.x)6 -0.126538   0.019797  -6.3918 2.012e-10 ***
factor(dat.roc$Parliament.no.x)7 -0.131127   0.021368  -6.1367 1.004e-09 ***
factor(dat.roc$Parliament.no.x)8 -0.116061   0.019936  -5.8218 6.716e-09 ***
factor(dat.roc$Parliament.no.x)9 -0.099443   0.018609  -5.3438 1.008e-07 ***
factor(dat.roc$Parliament.no.x)10 -0.068501   0.017004  -4.0284 5.814e-05 ***
factor(dat.roc$Parliament.no.x)11 -0.090335   0.017586  -5.1367 3.054e-07 ***
factor(dat.roc$Parliament.no.x)12 -0.112761   0.017910  -6.2961 3.703e-10 ***
factor(dat.roc$Parliament.no.x)13 -0.231453   0.019571 -11.8266 < 2.2e-16 ***
factor(dat.roc$Parliament.no.x)14 -0.233542   0.020719 -11.2717 < 2.2e-16 ***
factor(dat.roc$Parliament.no.x)15 -0.194023   0.019160 -10.1263 < 2.2e-16 ***
factor(dat.roc$Parliament.no.x)16 -0.137718   0.019631  -7.0154 3.078e-12 ***
factor(dat.roc$Parliament.no.x)17 -0.151038   0.018170  -8.3126 < 2.2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
```

```
>
> ##################
> #Adding 1949-1965#
> ##################
>
> data1 <- read.csv("~/Dropbox/Canada-Manuscript/Data-Final/Election-1949.csv", header=TRUE)
> data2 <- read.csv("~/Dropbox/Canada-Manuscript/Data-Final/Election-1953-1965.csv", header=TRUE)
>
> cath1 <- data1$ROMNCATH
> cath2 <- data2$ROMNCATH
> cath1 <- cath1/100
> cath2 <- cath2/100
>
> meth1 <- data1$UNITEDCH
> meth1 <- meth1/100
> meth2 <- data2$UNITEDCH
> meth2 <- meth2/100
>
> l49 <- data1$LIBERAL
> lib1 <- l49/100
> l53 <- data2$LIBERL08 #53
> l57 <- data2$LIBERL09 #57
> l58 <- data2$LIBERL10 #58
> l62 <- data2$LIBERL11 #62
> l63 <- data2$LIBERL12 #63
> l65 <- data2$LIBERL13 #65
> lib2 <- c(l53,l57,l58,l62,l63,l65)
> lib2 <- lib2/100
>
> c49 <- data1$CONSERV
> cons1 <- c49/100
> c53 <- data2$CONSRV08
> c57 <- data2$CONSRV09
> c58 <- data2$CONSRV10
> c62 <- data2$CONSRV11
> c63 <- data2$CONSRV12
> c65 <- data2$CONSRV13
> cons2 <- c(c53,c57,c58,c62,c63,c65)
> cons2 <- cons2/100
>
> parl21 <- 1:length(data1$PROVNC01)/1:length(data1$PROVNC01) * 21
> parl22 <- 1:length(data2$PROVNC01)/1:length(data2$PROVNC01) * 22
> parl23 <- 1:length(data2$PROVNC01)/1:length(data2$PROVNC01) * 23
> parl24 <- 1:length(data2$PROVNC01)/1:length(data2$PROVNC01) * 24
> parl25 <- 1:length(data2$PROVNC01)/1:length(data2$PROVNC01) * 25
> parl26 <- 1:length(data2$PROVNC01)/1:length(data2$PROVNC01) * 26
> parl27 <- 1:length(data2$PROVNC01)/1:length(data2$PROVNC01) * 27
> parl2 <- c(parl22,parl23,parl24,parl25,parl26,parl27)
> parl1 <- parl21
>
> qc <- ifelse(data2$PROVNC01=="QUEBEC",1,0)
> prov2 <- c(qc,qc,qc,qc,qc,qc)
>
> qc <- ifelse(data1$PROVNC01=="QUEBEC",1,0)
> prov1 <- qc
>
> dat60 <- data.frame(lib2,cons2,cath2,meth2,parl2,prov2)
> dat50 <- data.frame(lib1,cons1,cath1,meth1,parl1,prov1)
> colnames(dat60) <- c("lib","cons","cath","meth","parl","prov")
> colnames(dat50) <- c("lib","cons","cath","meth","parl","prov")
>
> dat60 <- rbind(dat60,dat50)
>
> res.all <- lm(dat60$lib~dat60$cath + factor(dat60$parl))
> res.all <- res.all
> all <- coeftest(res.all, vcov = vcovHAC(res.all))
>
> #All (1949-1965)
>
> summary(res.all)

Call:
lm(formula = dat60$lib ~ dat60$cath + factor(dat60$parl))

Residuals:
     Min       1Q   Median       3Q      Max
-0.45101 -0.08576 -0.00004  0.08014  0.61042

Coefficients:
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)          0.413663   0.008634  47.913  < 2e-16 ***
dat60$cath           0.201443   0.009048  22.263  < 2e-16 ***
factor(dat60$parl)22 -0.011532   0.010853  -1.062    0.288
factor(dat60$parl)23 -0.088344   0.010853  -8.140 7.27e-16 ***
factor(dat60$parl)24 -0.167608   0.010853 -15.443  < 2e-16 ***
factor(dat60$parl)25 -0.138348   0.010853 -12.747  < 2e-16 ***
factor(dat60$parl)26 -0.097080   0.010853  -8.945  < 2e-16 ***
factor(dat60$parl)27 -0.107926   0.010853  -9.944  < 2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1237 on 1817 degrees of freedom
Multiple R-squared:  0.3233,
  Adjusted R-squared:  0.3207
F-statistic:   124 on 7 and 1817 DF,  p-value: < 2.2e-16
```

```
> nobs(res.all)
[1] 1825
> all

t test of coefficients:

                     Estimate Std. Error t value  Pr(>|t|)
(Intercept)          0.413663   0.016754 24.6901 < 2.2e-16 ***
dat60$cath           0.201443   0.019826 10.1606 < 2.2e-16 ***
factor(dat60$parl)22 -0.011532   0.021614 -0.5335 0.5937281
factor(dat60$parl)23 -0.088344   0.024815 -3.5601 0.0003803 ***
factor(dat60$parl)24 -0.167608   0.023460 -7.1445 1.302e-12 ***
factor(dat60$parl)25 -0.138348   0.026687 -5.1841 2.412e-07 ***
factor(dat60$parl)26 -0.097080   0.025925 -3.7446 0.0001863 ***
factor(dat60$parl)27 -0.107926   0.024049 -4.4878 7.648e-06 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

>
> dat.qc <- subset(dat60,dat60$prov==1)
> res.qc <- lm(dat.qc$lib~dat.qc$cath + factor(dat.qc$parl))
> res.qc2 <- res.qc
> qc22 <- coeftest(res.qc, vcov = vcovHAC(res.qc))
>
> #Quebec (1949-1965)
>
> summary(res.qc)

Call:
lm(formula = dat.qc$lib ~ dat.qc$cath + factor(dat.qc$parl))

Residuals:
     Min       1Q   Median       3Q      Max
-0.41047 -0.06695  0.00139  0.06426  0.39262

Coefficients:
                     Estimate Std. Error t value Pr(>|t|)
(Intercept)           0.73697    0.03063  24.064  < 2e-16 ***
dat.qc$cath          -0.15460    0.03178  -4.865 1.53e-06 ***
factor(dat.qc$parl)22  0.02393    0.01647   1.452    0.147
factor(dat.qc$parl)23 -0.02577    0.01647  -1.564    0.118
factor(dat.qc$parl)24 -0.14358    0.01647  -8.716  < 2e-16 ***
factor(dat.qc$parl)25 -0.21497    0.01647 -13.049  < 2e-16 ***
factor(dat.qc$parl)26 -0.15241    0.01647  -9.251  < 2e-16 ***
factor(dat.qc$parl)27 -0.14841    0.01647  -9.009  < 2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1002 on 515 degrees of freedom
Multiple R-squared:  0.4389,
  Adjusted R-squared:  0.4313
F-statistic: 57.55 on 7 and 515 DF,  p-value: < 2.2e-16

> nobs(res.qc)
[1] 523
> qc22

t test of coefficients:

                      Estimate Std. Error  t value  Pr(>|t|)
(Intercept)           0.736971   0.033456  22.0280 < 2.2e-16 ***
dat.qc$cath          -0.154604   0.036210  -4.2697 2.331e-05 ***
factor(dat.qc$parl)22  0.023927   0.016996   1.4078   0.15981
factor(dat.qc$parl)23 -0.025767   0.014213  -1.8129   0.07043 .
factor(dat.qc$parl)24 -0.143580   0.011600 -12.3778 < 2.2e-16 ***
factor(dat.qc$parl)25 -0.214967   0.018068 -11.8978 < 2.2e-16 ***
factor(dat.qc$parl)26 -0.152407   0.015526  -9.8165 < 2.2e-16 ***
factor(dat.qc$parl)27 -0.148407   0.015290  -9.7059 < 2.2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

>
> dat.roc <- subset(dat60,dat60$prov!=1)
> res.roc <- lm(dat.roc$lib~dat.roc$cath + factor(dat.roc$parl))
> res.roc2 <- res.roc
> roc22 <- coeftest(res.roc, vcov = vcovHAC(res.roc))
>
> #Rest of Canada (1949-1965)
>
> summary(res.roc)

Call:
lm(formula = dat.roc$lib ~ dat.roc$cath + factor(dat.roc$parl))

Residuals:
     Min       1Q   Median       3Q      Max
-0.44094 -0.08318  0.00245  0.07419  0.63463

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
(Intercept)            0.38358    0.01023  37.501  < 2e-16 ***
dat.roc$cath           0.30937    0.01945  15.906  < 2e-16 ***
factor(dat.roc$parl)22 -0.02916    0.01266  -2.303   0.0215 *
factor(dat.roc$parl)23 -0.11690    0.01266  -9.233  < 2e-16 ***
```

```
factor(dat.roc$parl)24 -0.18062    0.01266 -14.265  < 2e-16 ***
factor(dat.roc$parl)25 -0.11078    0.01266  -8.749  < 2e-16 ***
factor(dat.roc$parl)26 -0.07810    0.01266  -6.168 9.23e-10 ***
factor(dat.roc$parl)27 -0.09493    0.01266  -7.497 1.20e-13 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1219 on 1294 degrees of freedom
Multiple R-squared:  0.2772,
  Adjusted R-squared:  0.2733
F-statistic: 70.88 on 7 and 1294 DF,  p-value: < 2.2e-16

> nobs(res.roc)
[1] 1302
> roc22

t test of coefficients:

                       Estimate Std. Error t value  Pr(>|t|)
(Intercept)            0.383583   0.017773 21.5828 < 2.2e-16 ***
dat.roc$cath           0.309373   0.022552 13.7182 < 2.2e-16 ***
factor(dat.roc$parl)22 -0.029156   0.024577 -1.1863 0.2357336
factor(dat.roc$parl)23 -0.116903   0.027299 -4.2823 1.986e-05 ***
factor(dat.roc$parl)24 -0.180623   0.028855 -6.2597 5.236e-10 ***
factor(dat.roc$parl)25 -0.110779   0.029105 -3.8061 0.0001477 ***
factor(dat.roc$parl)26 -0.078096   0.030597 -2.5524 0.0108122 *
factor(dat.roc$parl)27 -0.094930   0.029149 -3.2567 0.0011563 **
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

>
> #merge 1867-1965
>
> lib1 <- dat1$Percentage
> cath1 <- dat1$percentage.catholic
> parl1 <- dat1$Parliament.no.x
> queb1 <- ifelse(dat1$Province.y=="Quebec",1,0)
>
> lib2 <- dat60$lib
> cath2 <- dat60$cath
> parl2 <- dat60$parl
> queb2 <- dat60$prov
>
> lib <- c(lib1,lib2)
> cath <- c(cath1,cath2)
> parl <- c(parl1,parl2)
> prov <- c(queb1,queb2)
>
> overlord <- data.frame(lib,cath,parl,prov)
>
> res <- lm(overlord$lib~overlord$cath + factor(overlord$parl))
> res.all <- res
> all <- coeftest(res.all, vcov = vcovHAC(res.all))
>
> #All (1867-1930 and 1949-1965)
>
> summary(res)

Call:
lm(formula = overlord$lib ~ overlord$cath + factor(overlord$parl))

Residuals:
     Min       1Q   Median       3Q      Max
-0.62656 -0.07547  0.01053  0.07578  0.60461

Coefficients:
                        Estimate Std. Error t value Pr(>|t|)
(Intercept)             0.510400   0.016258  31.395  < 2e-16 ***
overlord$cath           0.161679   0.005396  29.962  < 2e-16 ***
factor(overlord$parl)2  -0.042754   0.020974  -2.038 0.041559 *
factor(overlord$parl)3  -0.040402   0.019377  -2.085 0.037120 *
factor(overlord$parl)4  -0.102432   0.019492  -5.255 1.54e-07 ***
factor(overlord$parl)5  -0.106719   0.020130  -5.301 1.20e-07 ***
factor(overlord$parl)6  -0.104941   0.018446  -5.689 1.35e-08 ***
factor(overlord$parl)7  -0.115168   0.018502  -6.224 5.24e-10 ***
factor(overlord$parl)8  -0.091244   0.018538  -4.922 8.86e-07 ***
factor(overlord$parl)9  -0.074929   0.018090  -4.142 3.50e-05 ***
factor(overlord$parl)10 -0.058231   0.018685  -3.117 0.001841 **
factor(overlord$parl)11 -0.066695   0.018244  -3.656 0.000259 ***
factor(overlord$parl)12 -0.100613   0.018235  -5.518 3.62e-08 ***
factor(overlord$parl)13 -0.121398   0.018403  -6.597 4.66e-11 ***
factor(overlord$parl)14 -0.122684   0.018382  -6.674 2.77e-11 ***
factor(overlord$parl)15 -0.135221   0.018246  -7.411 1.47e-13 ***
factor(overlord$parl)16 -0.085150   0.018448  -4.616 4.02e-06 ***
factor(overlord$parl)17 -0.120004   0.018244  -6.578 5.29e-11 ***
factor(overlord$parl)21 -0.079462   0.017918  -4.435 9.42e-06 ***
factor(overlord$parl)22 -0.089774   0.017907  -5.013 5.54e-07 ***
factor(overlord$parl)23 -0.166586   0.017907  -9.303  < 2e-16 ***
factor(overlord$parl)24 -0.245850   0.017907 -13.729  < 2e-16 ***
factor(overlord$parl)25 -0.216590   0.017907 -12.095  < 2e-16 ***
factor(overlord$parl)26 -0.175322   0.017907  -9.791  < 2e-16 ***
factor(overlord$parl)27 -0.186168   0.017907 -10.396  < 2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
```

```
Residual standard error: 0.1259 on 4788 degrees of freedom
  (455 observations deleted due to missingness)
Multiple R-squared:  0.2654,
  Adjusted R-squared:  0.2617
F-statistic: 72.09 on 24 and 4788 DF,  p-value: < 2.2e-16

> nobs(res)
[1] 4813
> all

t test of coefficients:

                       Estimate Std. Error t value  Pr(>|t|)
(Intercept)             0.510400   0.015496 32.9378 < 2.2e-16 ***
overlord$cath           0.161679   0.010518 15.3711 < 2.2e-16 ***
factor(overlord$parl)2  -0.042754   0.019990 -2.1388 0.0325037 *
factor(overlord$parl)3  -0.040402   0.018675 -2.1634 0.0305565 *
factor(overlord$parl)4  -0.102432   0.018463 -5.5478 3.049e-08 ***
factor(overlord$parl)5  -0.106719   0.020516 -5.2018 2.056e-07 ***
factor(overlord$parl)6  -0.104941   0.017617 -5.9568 2.755e-09 ***
factor(overlord$parl)7  -0.115168   0.018416 -6.2537 4.357e-10 ***
factor(overlord$parl)8  -0.091244   0.017571 -5.1928 2.157e-07 ***
factor(overlord$parl)9  -0.074929   0.016361 -4.5797 4.774e-06 ***
factor(overlord$parl)10 -0.058231   0.015592 -3.7347 0.0001901 ***
factor(overlord$parl)11 -0.066695   0.016286 -4.0952 4.288e-05 ***
factor(overlord$parl)12 -0.100613   0.016069 -6.2611 4.156e-10 ***
factor(overlord$parl)13 -0.121398   0.021494 -5.6480 1.717e-08 ***
factor(overlord$parl)14 -0.122684   0.020043 -6.1210 1.004e-09 ***
factor(overlord$parl)15 -0.135221   0.017928 -7.5424 5.488e-14 ***
factor(overlord$parl)16 -0.085150   0.018963 -4.4903 7.278e-06 ***
factor(overlord$parl)17 -0.120004   0.016543 -7.2540 4.695e-13 ***
factor(overlord$parl)21 -0.079462   0.020441 -3.8873 0.0001027 ***
factor(overlord$parl)22 -0.089774   0.023977 -3.7442 0.0001831 ***
factor(overlord$parl)23 -0.166586   0.027476 -6.0629 1.440e-09 ***
factor(overlord$parl)24 -0.245850   0.025709 -9.5626 < 2.2e-16 ***
factor(overlord$parl)25 -0.216590   0.027113 -7.9884 1.699e-15 ***
factor(overlord$parl)26 -0.175322   0.026662 -6.5758 5.357e-11 ***
factor(overlord$parl)27 -0.186168   0.024988 -7.4504 1.098e-13 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

>
> dat.qc <- subset(overlord,overlord$prov==1)
> res.qc <- lm(dat.qc$lib~dat.qc$cath + factor(dat.qc$parl))
> res.qc3 <- res.qc
> qc33 <- coeftest(res.qc, vcov = vcovHAC(res.qc))
>
> #Quebec (1867-1930 and 1949-1965)
>
> summary(res.qc)

Call:
lm(formula = dat.qc$lib ~ dat.qc$cath + factor(dat.qc$parl))

Residuals:
     Min       1Q   Median       3Q      Max
-0.57405 -0.05416 -0.00848  0.05500  0.42446

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
(Intercept)           0.529015   0.030812  17.169  < 2e-16 ***
dat.qc$cath           0.033794   0.017791   1.899 0.057715 .
factor(dat.qc$parl)2  -0.006084   0.033495  -0.182 0.855894
factor(dat.qc$parl)3  -0.004569   0.031683  -0.144 0.885351
factor(dat.qc$parl)4  -0.054012   0.032857  -1.644 0.100442
factor(dat.qc$parl)5  -0.056747   0.034640  -1.638 0.101616
factor(dat.qc$parl)6  -0.053261   0.030681  -1.736 0.082801 .
factor(dat.qc$parl)7  -0.071188   0.030136  -2.362 0.018306 *
factor(dat.qc$parl)8  -0.014706   0.029879  -0.492 0.622653
factor(dat.qc$parl)9  -0.004083   0.028995  -0.141 0.888033
factor(dat.qc$parl)10  0.003354   0.029103   0.115 0.908265
factor(dat.qc$parl)11  0.005970   0.029416   0.203 0.839214
factor(dat.qc$parl)12 -0.057846   0.029509  -1.960 0.050167 .
factor(dat.qc$parl)13  0.191654   0.030212   6.344 3.05e-10 ***
factor(dat.qc$parl)14  0.141510   0.029464   4.803 1.74e-06 ***
factor(dat.qc$parl)15  0.026418   0.029335   0.901 0.367982
factor(dat.qc$parl)16  0.061590   0.029609   2.080 0.037704 *
factor(dat.qc$parl)17 -0.025202   0.029661  -0.850 0.395646
factor(dat.qc$parl)21  0.040244   0.029095   1.383 0.166841
factor(dat.qc$parl)22  0.063306   0.029025   2.181 0.029349 *
factor(dat.qc$parl)23  0.013613   0.029025   0.469 0.639145
factor(dat.qc$parl)24 -0.104201   0.029025  -3.590 0.000342 ***
factor(dat.qc$parl)25 -0.175587   0.029025  -6.049 1.88e-09 ***
factor(dat.qc$parl)26 -0.113027   0.029025  -3.894 0.000103 ***
factor(dat.qc$parl)27 -0.109027   0.029025  -3.756 0.000180 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1054 on 1360 degrees of freedom
  (153 observations deleted due to missingness)
Multiple R-squared:  0.383,
  Adjusted R-squared:  0.3721
F-statistic: 35.17 on 24 and 1360 DF,  p-value: < 2.2e-16

> nobs(res.qc)
```

```
[1] 1385
> qc33

t test of coefficients:

                       Estimate Std. Error t value  Pr(>|t|)
(Intercept)           0.5290154  0.0299856 17.6423 < 2.2e-16 ***
dat.qc$cath           0.0337940  0.0267317  1.2642  0.206376
factor(dat.qc$parl)2  -0.0060839  0.0398287 -0.1528  0.878617
factor(dat.qc$parl)3  -0.0045692  0.0286102 -0.1597  0.873138
factor(dat.qc$parl)4  -0.0540115  0.0204837 -2.6368  0.008464 **
factor(dat.qc$parl)5  -0.0567468  0.0227142 -2.4983  0.012596 *
factor(dat.qc$parl)6  -0.0532610  0.0236401 -2.2530  0.024419 *
factor(dat.qc$parl)7  -0.0711880  0.0227285 -3.1321  0.001773 **
factor(dat.qc$parl)8  -0.0147064  0.0209859 -0.7008  0.483561
factor(dat.qc$parl)9  -0.0040832  0.0207772 -0.1965  0.844231
factor(dat.qc$parl)10  0.0033540  0.0208622  0.1608  0.872297
factor(dat.qc$parl)11  0.0059696  0.0225493  0.2647  0.791252
factor(dat.qc$parl)12 -0.0578457  0.0217668 -2.6575  0.007964 **
factor(dat.qc$parl)13  0.1916536  0.0322992  5.9337 3.753e-09 ***
factor(dat.qc$parl)14  0.1415103  0.0218713  6.4701 1.363e-10 ***
factor(dat.qc$parl)15  0.0264177  0.0250054  1.0565  0.290938
factor(dat.qc$parl)16  0.0615897  0.0250884  2.4549  0.014217 *
factor(dat.qc$parl)17 -0.0252023  0.0221656 -1.1370  0.255738
factor(dat.qc$parl)21  0.0402436  0.0216902  1.8554  0.063758 .
factor(dat.qc$parl)22  0.0633061  0.0234986  2.6940  0.007146 **
factor(dat.qc$parl)23  0.0136128  0.0222004  0.6132  0.539861
factor(dat.qc$parl)24 -0.1042005  0.0196278 -5.3088 1.287e-07 ***
factor(dat.qc$parl)25 -0.1755872  0.0274700 -6.3920 2.245e-10 ***
factor(dat.qc$parl)26 -0.1130272  0.0249159 -4.5364 6.228e-06 ***
factor(dat.qc$parl)27 -0.1090272  0.0235152 -4.6365 3.885e-06 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

>
> dat.roc <- subset(overlord,overlord$prov!=1)
> res.roc <- lm(dat.roc$lib~dat.roc$cath + factor(dat.roc$parl))
> res.roc3 <- res.roc
> roc33 <- coeftest(res.roc, vcov = vcovHAC(res.roc))
>
> #Rest of Canada (1867-1930 and 1949-1965)
>
> summary(res.roc)

Call:
lm(formula = dat.roc$lib ~ dat.roc$cath + factor(dat.roc$parl))

Residuals:
     Min       1Q   Median       3Q      Max
-0.48247 -0.06421  0.01311  0.07006  0.63994

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
(Intercept)            0.55491    0.01821  30.480  < 2e-16 ***
dat.roc$cath           0.11350    0.01109  10.231  < 2e-16 ***
factor(dat.roc$parl)2  -0.05205    0.02372  -2.195  0.02824 *
factor(dat.roc$parl)3  -0.05538    0.02170  -2.552  0.01075 *
factor(dat.roc$parl)4  -0.12644    0.02164  -5.843 5.59e-09 ***
factor(dat.roc$parl)5  -0.12957    0.02224  -5.827 6.16e-09 ***
factor(dat.roc$parl)6  -0.12668    0.02055  -6.165 7.90e-10 ***
factor(dat.roc$parl)7  -0.13117    0.02075  -6.322 2.92e-10 ***
factor(dat.roc$parl)8  -0.11706    0.02088  -5.606 2.24e-08 ***
factor(dat.roc$parl)9  -0.09892    0.02045  -4.838 1.37e-06 ***
factor(dat.roc$parl)10 -0.07067    0.02158  -3.275  0.00107 **
factor(dat.roc$parl)11 -0.09118    0.02055  -4.437 9.40e-06 ***
factor(dat.roc$parl)12 -0.11361    0.02050  -5.541 3.24e-08 ***
factor(dat.roc$parl)13 -0.23130    0.02058 -11.239  < 2e-16 ***
factor(dat.roc$parl)14 -0.23498    0.02077 -11.315  < 2e-16 ***
factor(dat.roc$parl)15 -0.19843    0.02059  -9.639  < 2e-16 ***
factor(dat.roc$parl)16 -0.14166    0.02083  -6.801 1.22e-11 ***
factor(dat.roc$parl)17 -0.15373    0.02048  -7.507 7.66e-14 ***
factor(dat.roc$parl)21 -0.12127    0.02012  -6.027 1.85e-09 ***
factor(dat.roc$parl)22 -0.14332    0.02013  -7.118 1.33e-12 ***
factor(dat.roc$parl)23 -0.23106    0.02013 -11.476  < 2e-16 ***
factor(dat.roc$parl)24 -0.29478    0.02013 -14.641  < 2e-16 ***
factor(dat.roc$parl)25 -0.22494    0.02013 -11.172  < 2e-16 ***
factor(dat.roc$parl)26 -0.19226    0.02013  -9.549  < 2e-16 ***
factor(dat.roc$parl)27 -0.20909    0.02013 -10.385  < 2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.1211 on 3403 degrees of freedom
  (302 observations deleted due to missingness)
Multiple R-squared:  0.2263,
  Adjusted R-squared:  0.2208
F-statistic: 41.47 on 24 and 3403 DF,  p-value: < 2.2e-16

> nobs(res.roc)
[1] 3428
> roc33

t test of coefficients:

                      Estimate Std. Error  t value  Pr(>|t|)
(Intercept)           0.554914   0.016630  33.3682 < 2.2e-16 ***
```

```
dat.roc$cath            0.113500   0.024734   4.5888 4.619e-06 ***
factor(dat.roc$parl)2  -0.052053   0.019501  -2.6692  0.007639 **
factor(dat.roc$parl)3  -0.055383   0.020634  -2.6840  0.007310 **
factor(dat.roc$parl)4  -0.126437   0.022355  -5.6560 1.678e-08 ***
factor(dat.roc$parl)5  -0.129571   0.023572  -5.4967 4.155e-08 ***
factor(dat.roc$parl)6  -0.126677   0.020664  -6.1303 9.774e-10 ***
factor(dat.roc$parl)7  -0.131171   0.022189  -5.9116 3.724e-09 ***
factor(dat.roc$parl)8  -0.117061   0.020186  -5.7992 7.271e-09 ***
factor(dat.roc$parl)9  -0.098920   0.019565  -5.0560 4.508e-07 ***
factor(dat.roc$parl)10 -0.070668   0.017084  -4.1365 3.612e-05 ***
factor(dat.roc$parl)11 -0.091183   0.017872  -5.1021 3.543e-07 ***
factor(dat.roc$parl)12 -0.113612   0.018232  -6.2314 5.188e-10 ***
factor(dat.roc$parl)13 -0.231303   0.019931 -11.6050 < 2.2e-16 ***
factor(dat.roc$parl)14 -0.234983   0.020593 -11.4107 < 2.2e-16 ***
factor(dat.roc$parl)15 -0.198430   0.019698 -10.0738 < 2.2e-16 ***
factor(dat.roc$parl)16 -0.141660   0.020330  -6.9680 3.844e-12 ***
factor(dat.roc$parl)17 -0.153727   0.018771  -8.1896 3.667e-16 ***
factor(dat.roc$parl)21 -0.121268   0.025343  -4.7851 1.782e-06 ***
factor(dat.roc$parl)22 -0.143316   0.029933  -4.7879 1.757e-06 ***
factor(dat.roc$parl)23 -0.231064   0.033258  -6.9475 4.435e-12 ***
factor(dat.roc$parl)24 -0.294784   0.035749  -8.2459 2.314e-16 ***
factor(dat.roc$parl)25 -0.224940   0.035326  -6.3675 2.179e-10 ***
factor(dat.roc$parl)26 -0.192257   0.036881  -5.2129 1.970e-07 ***
factor(dat.roc$parl)27 -0.209091   0.035071  -5.9619 2.748e-09 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

>
>
>
```