ministersNor: An R package with data and desription for Norwegian ministers

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Abstract

To come

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1. Description

1.1. ministers

The ministers data set is an unbalanced dataset with Norwegian ministers from 1945 to 2013 as units.

Variables:

nsd_id Id used in the minister archives of Norsk Samfunnsvitenskapelig Datatjeneste.

election_year Year of election.

start Date of tenure start for the minister.

end Dete of tenure end for the minister.

cabinet_name Name of the cabinet.

last_name Minister surname

first_name Minister first name

party Party of the minister

election_date Date of the parliamentary election the minister sits under

cause Cause of resignation (only recorded where the reason is obvious)

reshuffle Was the minister reshuffled in this cabinet (1=yes, 0=no)

prime_minister Is this the Prime Minister? (1=yes, 0=no)

gender The gender of the minister

education Highest education achieved by the minister

duration Tenure length of the minister

birth Birth year of the minister

pre45_exp Days in cabinet before World War II

CabinetType Cabinet type (majority/minority)

structure Cabinet structure (single-party/coalition)

From Date the cabinet started

To Date the cabinet ended

cabinet_duration Number of days the cabinet lasted

CabinetPartiesNor Cabinet party composition

year_start Starting year of the minister

year_end Ending year of the minister

resigcalls Number of resignation calls (pooled) for the minister in the current post

resigcalls_cum Cumulative resignation calls for the minister

rc_cum_lag Lagged cumulative resignation calls for the minister

rc_opposition Number of resignation calls from the opposition against the minister in the current post

rc_paper Number of resignation calls from the newspaper against the minister in the current post

rc_organization Number of resignation calls from organizations against the minister in the current post

rc_party Number of resignation calls from own party against the minister in the current post

rc_expert Number of resignation calls from experts against the minister in the current post

rc_citizens Number of resignation calls from citizens against the minister in the current post

rc_voteofconf Votes of confidence against the minister in the current post

parl_start Date of parliament start (inaccurate)

parlTen_cum Days spent in parliament by the minister before entering the cabinet

youthCen Does the minister have experience from central youth party organization? (1=yes, 0=no)

youthLoc Does the minister have experience from local youth party organization? (1=yes, 0=no)

minister_exp_cum_y_lag Number of years the minister has previously been in cabinet

parlTen_dum Has the minister occupied a seat in parliament? (yes=1, no=0)

start_year Starting year of the minister

age Age of the minister at entering cabinet

age_cen Age centered at the mean

pm_name Name of the cabinet's Prime Minister

education_dum Dummy of the minister's education (higher/lower)

dur_start Difference in days between cabinet start and minister start

dur_end Difference in days between cabinet end and minister end

leave Did the minister exit the cabinet because of a leave of absence? (1=yes, 0=no)

event2 Was the minister fired? (1=yes, 0=no(right-censored))

jurisdiction Categorization of department the minister headed

rc_paper_dum Did the minister recieve resignation calls from a newspaper? (1=yes, 0=no)

rc_party_dum Did the minister recieve resignation calls from her own party? (1=yes, 0=no)

rc_organization_dum Did the minister recieve resignation calls from an organization? (1=yes, 0=no)

1.2. resigcalls

The resignation call data set is an unbalanced data set consisting of 832 units. Each post-war Norwegian minister has at least one row, and two or more whenever the minister has received two or more resignation calls during his tenure.

Variables:

nsd_id Minister id, matched to the id used by NSD

last_name Minister's surname

first_name Minister's first name

start Date of tenure start

end Date of tenure end

rc_source Link to newspaper source for the resignation call

rc_desc Short description of the resignation call

rc_from Actor giving the resignation call

rc_date Date the resignation call was given

dismiss_note (Unreliable variable) Note on dismissed minister

extra_note Some extra notes

post Departmental title of the minister

2. Ministerial durability

```
R> #install_github(martigso/ministersNor)
R> library(ministersNor)
R> data("ministers")
R> head(ministers[,c(6,7,3,4,8)])
##    last_name           first_name      start        end party
## 1   Andersen Magnus Kristoffersen 1963-09-25 1965-10-11   DNA
## 2   Andersen Magnus Kristoffersen 1972-01-24 1972-10-17   DNA
## 3 Andreassen              Harriet 1980-10-03 1981-02-03   DNA
## 4 Andreassen              Harriet 1981-02-04 1981-10-13   DNA
## 5   Angelsen                Peter 1997-10-17 2000-01-21    Sp
## 6       Aune          Leif JÃ¿rgen 1973-10-16 1976-01-14   DNA
```

Pooled resignation call model:

```
R> library(survival)
R>
R> model_1<-coxph(Surv(dur_start, dur_end, event2) ~ resigcalls + age_cen +
+                   factor(gender) + factor(youthCen) + factor(youthLoc) +
+                   minister_exp_cum_y_lag + factor(parlTen_dum) +
+                   factor(education_dum) + factor(reshuffle) +
+                   factor(CabinetType) + factor(structure) +
+                   frailty(jurisdiction),
+                 data=ministers, subset=prime_minister==0 & nsd_id!=299)
R>
R> round(summary(model_1)$coefficients, digits=3)
##                               coef se(coef)   se2  Chisq    DF     p
## resigcalls                   0.247    0.074 0.074 11.097 1.000 0.001
## age_cen                      0.059    0.016 0.015 14.274 1.000 0.000
## factor(gender)Female         0.338    0.258 0.250  1.716 1.000 0.190
## factor(youthCen)1           -0.641    0.540 0.537  1.408 1.000 0.235
## factor(youthLoc)1            0.845    0.378 0.375  4.994 1.000 0.025
## minister_exp_cum_y_lag       0.114    0.041 0.040  7.742 1.000 0.005
## factor(parlTen_dum)1        -0.658    0.271 0.268  5.892 1.000 0.015
## factor(education_dum)Lowe    0.003    0.280 0.273  0.000 1.000 0.993
## factor(reshuffle)1          -0.371    0.490 0.486  0.575 1.000 0.448
## factor(CabinetType)Majori    0.150    0.221 0.219  0.459 1.000 0.498
## factor(structure)Coalitio -0.261    0.259 0.258  1.016 1.000 0.313
## frailty(jurisdiction)           NA       NA    NA 14.957 6.962 0.036
```

Actor based resignation call model:

```
R> model_2<-coxph(Surv(dur_start, dur_end, event2) ~ rc_opposition_dum*timeint +
+                   rc_paper_dum*timeint + rc_party_dum*timeint +
+                   age_cen + factor(gender) + factor(youthCen) +
+                   factor(youthLoc) + minister_exp_cum_y_lag +
+                   factor(parlTen_dum) + factor(education_dum) +
+                   factor(reshuffle) + factor(CabinetType) +
+                   factor(structure) + frailty(jurisdiction),
+                 data=ministers, subset=prime_minister==0 & nsd_id!=299)
R>
R> round(summary(model_2)$coefficients, digits=3)
##                               coef se(coef)   se2  Chisq    DF     p
## rc_opposition_dum            0.909    0.790 0.784  1.322 1.000 0.250
## timeint                     -0.170    0.082 0.081  4.352 1.000 0.037
## rc_paper_dum                -0.458    0.751 0.744  0.373 1.000 0.542
## rc_party_dum                 0.982    1.605 1.577  0.375 1.000 0.540
## age_cen                      0.059    0.016 0.016 13.343 1.000 0.000
## factor(gender)Female         0.300    0.280 0.269  1.142 1.000 0.285
```

```
## factor(youthCen)1         -0.662    0.553 0.549  1.429 1.000 0.232
## factor(youthLoc)1          0.915    0.387 0.382  5.598 1.000 0.018
## minister_exp_cum_y_lag     0.124    0.042 0.041  8.862 1.000 0.003
## factor(parlTen_dum)1      -0.672    0.271 0.268  6.145 1.000 0.013
## factor(education_dum)Lowe -0.002    0.281 0.276  0.000 1.000 0.994
## factor(reshuffle)1        -0.381    0.491 0.486  0.601 1.000 0.438
## factor(CabinetType)Majori -0.202    0.266 0.264  0.577 1.000 0.447
## factor(structure)Coalitio  0.025    0.304 0.303  0.007 1.000 0.934
## frailty(jurisdiction)         NA       NA    NA 16.740 7.335 0.023
## rc_opposition_dum:timeint -0.321    0.226 0.223  2.021 1.000 0.155
## timeint:rc_paper_dum       0.421    0.219 0.217  3.683 1.000 0.055
## timeint:rc_party_dum      -0.131    0.448 0.440  0.086 1.000 0.770
```

2.1. Robustness models

Resignation calls per year model:

```
R> ministers3<-ministers %>%
+    group_by(nsd_id) %>%
+    arrange(start) %>%
+    mutate(age_first=age[1])
R>
R> ministers3$rc_per<-ministers3$resigcalls/((as.numeric(ministers3$end-ministers3$start))
R>
R> rcper_reg<-coxph(Surv(dur_start, dur_end, event2) ~ rc_per + age_cen +
+                     factor(gender) + factor(youthCen) + factor(youthLoc) +
+                     minister_exp_cum_y_lag + factor(parlTen_dum) +
+                     factor(education_dum) + factor(reshuffle) +
+                     factor(CabinetType) + factor(structure) + frailty(jurisdiction),
+                   data=ministers3, subset=prime_minister==0 & rc_per<5)
R>
R> round(summary(rcper_reg)$coefficients, digits=3)
##                             coef se(coef)   se2  Chisq    DF     p
## rc_per                     0.725    0.117 0.116 38.372 1.000 0.000
## age_cen                    0.063    0.015 0.015 16.715 1.000 0.000
## factor(gender)Female       0.348    0.252 0.245  1.907 1.000 0.167
## factor(youthCen)1         -0.505    0.549 0.546  0.847 1.000 0.358
## factor(youthLoc)1          0.719    0.383 0.380  3.526 1.000 0.060
## minister_exp_cum_y_lag     0.114    0.040 0.039  8.202 1.000 0.004
## factor(parlTen_dum)1      -0.628    0.267 0.264  5.553 1.000 0.018
## factor(education_dum)Lowe  0.067    0.281 0.276  0.057 1.000 0.812
## factor(reshuffle)1        -0.791    0.535 0.531  2.186 1.000 0.139
## factor(CabinetType)Majori  0.181    0.221 0.219  0.673 1.000 0.412
```

```
## factor(structure)Coalitio -0.321    0.260 0.258  1.526 1.000 0.217
## frailty(jurisdiction)         NA       NA    NA  8.411 4.926 0.130
```

Age as polynomial model:

```
R> polyage_reg<-agefirst_reg<-coxph(Surv(dur_start, dur_end, event2) ~ resigcalls +
+                                   poly(age_cen, 2, raw=TRUE) + factor(gender) +
+                                   factor(youthCen) + factor(youthLoc) +
+                                   minister_exp_cum_y_lag + factor(parlTen_dum) +
+                                   factor(education_dum) + factor(reshuffle) +
+                                   factor(CabinetType) + factor(structure) +
+                                   frailty(jurisdiction),
+                                 data=ministers3, subset=prime_minister==0)
R>
R> round(summary(polyage_reg)$coefficients, digits=3)
##                              coef se(coef)   se2  Chisq    DF     p
## resigcalls                  0.197    0.067 0.066  8.683 1.000 0.003
## poly(age_cen, 2, raw = TR  0.056    0.016 0.016 12.875 1.000 0.000
## poly(age_cen, 2, raw = TR  0.000    0.001 0.001  0.081 1.000 0.775
## factor(gender)Female       0.348    0.253 0.245  1.884 1.000 0.170
## factor(youthCen)1         -0.648    0.542 0.539  1.426 1.000 0.232
## factor(youthLoc)1          0.836    0.375 0.372  4.957 1.000 0.026
## minister_exp_cum_y_lag     0.127    0.040 0.039 10.156 1.000 0.001
## factor(parlTen_dum)1      -0.653    0.268 0.265  5.926 1.000 0.015
## factor(education_dum)Lowe -0.015    0.278 0.272  0.003 1.000 0.958
## factor(reshuffle)1        -0.423    0.488 0.484  0.751 1.000 0.386
## factor(CabinetType)Majori  0.192    0.219 0.218  0.768 1.000 0.381
## factor(structure)Coalitio -0.250    0.258 0.256  0.941 1.000 0.332
## frailty(jurisdiction)         NA       NA    NA 14.662 6.873 0.038
```

```
R> ministers3$age_first_cen<-ministers3$age_first-mean(ministers3$age_first)
R>
R> agefirst_reg<-coxph(Surv(dur_start, dur_end, event2) ~ resigcalls + age_cen + age_first
+                    factor(youthCen) + factor(youthLoc) + minister_exp_cum_y_lag + factor
+                    factor(education_dum) + factor(reshuffle) + factor(CabinetType) + fac
+                  data=ministers3, subset=prime_minister==0)
R>
R> round(summary(agefirst_reg)$coefficients, digits=3)
##                              coef se(coef)   se2  Chisq    DF     p
## resigcalls                  0.194    0.066 0.065  8.758 1.000 0.003
## age_cen                     0.038    0.045 0.045  0.705 1.000 0.401
## age_first_cen               0.018    0.044 0.044  0.175 1.000 0.675
## factor(gender)Female        0.342    0.253 0.245  1.824 1.000 0.177
## factor(youthCen)1          -0.665    0.539 0.536  1.521 1.000 0.217
```

```
## factor(youthLoc)1          0.854    0.374 0.371  5.207 1.000 0.022
## minister_exp_cum_y_lag     0.150    0.067 0.066  4.946 1.000 0.026
## factor(parlTen_dum)1      -0.648    0.270 0.267  5.760 1.000 0.016
## factor(education_dum)Lowe -0.028    0.278 0.273  0.010 1.000 0.919
## factor(reshuffle)1        -0.423    0.488 0.485  0.748 1.000 0.387
## factor(CabinetType)Majori  0.178    0.217 0.216  0.668 1.000 0.414
## factor(structure)Coalitio -0.224    0.261 0.259  0.736 1.000 0.391
## frailty(jurisdiction)         NA       NA    NA 14.937 6.949 0.036
R> cox.zph(agefirst_reg)
##                                 rho    chisq      p
## resigcalls                  0.09033  0.57728 0.4474
## age_cen                     0.24031  5.75861 0.0164
## age_first_cen              -0.21440  4.55724 0.0328
## factor(gender)Female        0.03260  0.12963 0.7188
## factor(youthCen)1           0.11442  1.31587 0.2513
## factor(youthLoc)1          -0.09945  1.07822 0.2991
## minister_exp_cum_y_lag     -0.24375  5.68434 0.0171
## factor(parlTen_dum)1       -0.00559  0.00365 0.9518
## factor(education_dum)Lower  0.01462  0.02543 0.8733
## factor(reshuffle)1          0.08764  0.76963 0.3803
## factor(CabinetType)Majority 0.01456  0.02108 0.8846
## factor(structure)Coalition -0.01882  0.04268 0.8363
## GLOBAL                         NA 10.22945 0.5958
```

3. Resignation calls

```
R> library(dplyr)
R>
R> #Restructure the data
R> ministers2<-ministers %>%
+    group_by(cabinet_name, nsd_id) %>%
+    summarize(resigcalls=sum(resigcalls),
+              rc_cum_lag=rc_cum_lag[1],
+              duration=sum(duration),
+              gender=gender[1],
+              age=age[1],
+              minister_exp_cum_y_lag=minister_exp_cum_y_lag[1],
+              parlTen_dum=parlTen_dum[1],
+              education_dum=education_dum[1],
+              jurisdiction=jurisdiction[1],
+              youthLoc=youthLoc[1],
+              youthCen=youthCen[1],
+              CabinetType=CabinetType[1],
```

```
+              structure=structure[1]) %>%
+    mutate(dur_cen=duration-mean(duration),
+           dur_cen_y=dur_cen/365.25,
+           age_cen=age-mean(age),
+           gender=factor(gender, levels=c("Male", "Female")),
+           CabinetType=factor(CabinetType, levels=c("Minority", "Majority")),
+           structure=factor(structure, levels=c("Single-party", "Coalition")))
R>
R>
R> #Negative binomial count model
R>
R> rc_reg<-glm.nb(resigcalls~rc_cum_lag + dur_cen_y + factor(gender) + age_cen +
+                  minister_exp_cum_y_lag + factor(parlTen_dum) +
+                  factor(education_dum) + factor(youthCen) + factor(youthLoc) +
+                  factor(CabinetType) + factor(structure), data=ministers2)
R>
R> round(summary(rc_reg)$coefficients, digits=3)
##                              Estimate Std. Error z value Pr(>|z|)
## (Intercept)                    -1.046      0.161  -6.490    0.000
## rc_cum_lag                      0.156      0.051   3.051    0.002
## dur_cen_y                       0.406      0.114   3.562    0.000
## factor(gender)Female            0.481      0.174   2.764    0.006
## age_cen                         0.004      0.011   0.327    0.744
## minister_exp_cum_y_lag          0.019      0.032   0.589    0.556
## factor(parlTen_dum)1            0.212      0.195   1.085    0.278
## factor(education_dum)Lower     -0.533      0.219  -2.432    0.015
## factor(youthCen)1               0.040      0.282   0.142    0.887
## factor(youthLoc)1               0.392      0.237   1.650    0.099
## factor(CabinetType)Majority     0.176      0.165   1.062    0.288
## factor(structure)Coalition      0.105      0.175   0.600    0.549
R> #Percentage increase function
R> percincrease(coef(rc_reg), 1)
##                  (Intercept)                      rc_cum_lag
##                  -64.8677725                      16.8592297
##                    dur_cen_y          factor(gender)Female
##                   50.0117444                      61.7536096
##                       age_cen       minister_exp_cum_y_lag
##                    0.3594102                       1.9264236
##         factor(parlTen_dum)1   factor(education_dum)Lower
##                   23.6014479                     -41.2944616
##            factor(youthCen)1             factor(youthLoc)1
##                    4.0789409                      47.9532630
## factor(CabinetType)Majority   factor(structure)Coalition
##                   19.2138922                      11.0864457
```

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