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

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**Abstract**

To come

*Keywords*: Cox Proportional Hazard models, negative binomial models, Norwegian ministers, R.

## 1. 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)

## 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> library(survival)
R>
R> model_2<-coxph(Surv(duration, 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          0.879    0.823 0.816  1.140 1.000 0.286
## timeint                   -0.158    0.082 0.081  3.733 1.000 0.053
## rc_paper_dum              -0.502    0.785 0.778  0.410 1.000 0.522
## rc_party_dum               0.823    1.623 1.594  0.257 1.000 0.612
## age_cen                    0.060    0.016 0.016 13.632 1.000 0.000
## factor(gender)Female       0.301    0.284 0.271  1.125 1.000 0.289
## factor(youthCen)1         -0.763    0.551 0.547  1.914 1.000 0.166
## factor(youthLoc)1          1.056    0.393 0.388  7.221 1.000 0.007
## minister_exp_cum_y_lag     0.126    0.042 0.041  8.984 1.000 0.003
## factor(parlTen_dum)1      -0.717    0.275 0.272  6.791 1.000 0.009
## factor(education_dum)Lowe -0.016    0.282 0.276  0.003 1.000 0.954
## factor(reshuffle)1        -0.001    0.487 0.481  0.000 1.000 0.999
## factor(CabinetType)Majori -0.225    0.264 0.263  0.722 1.000 0.395
## factor(structure)Coalitio  0.035    0.302 0.300  0.014 1.000 0.907
## frailty(jurisdiction)         NA       NA    NA 19.737 8.105 0.012
## rc_opposition_dum:timeint -0.329    0.235 0.233  1.953 1.000 0.162
## timeint:rc_paper_dum       0.435    0.230 0.228  3.567 1.000 0.059
## timeint:rc_party_dum      -0.102    0.454 0.447  0.050 1.000 0.823
```

**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
```

### 2.1. Robustness models

## 3. Resignation calls

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