

SRA 2021-based

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Run Model

```
outcomenames <- c("anymk.start.1", "anymk.start.2window")

# Note change to anymk.ongoing and anymk.ever (from mkl.ongoing and mkl.ever)
predictornames <- c("anymk.ongoing", "anymk.ever",
  "reg.afr", "reg.eap", "reg.eur", "reg.mna", "reg.sca",
  "countryage.ln", "popsize.ln.combined", "imr.sqrt",
  "gdppcgrowth.combined", "ios.iccpr1", "includesnonstate",
  "minorityrule", "elf.ethnic", "battleddeaths.ln",
  "candidaterestriction", "partyban", "judicialreform",
  "religiousfreedom", "pol_killing_approved",
  "freemove_men4", "freemove_women4", "freediscussion",
  "social_inequality", "even_civilrights", "repress_civilsoc",
  "social_power_dist", "ses_power_dist", "tradeshare.ln.combined",
  "coup.try.5yr")

source("functions_used/create_datasets.R")
source("functions_used/run_model.R")
source("functions_used/format_results.R")

dat.files <- list.files("../Make data/output/")[grepl("prepared", list.files("../Make data/output/"))]
latest.pull <- which.max(lapply(dat.files,
  function(x) {
    as.Date(gsub(paste0(paste0("prepared", base_years, "predictors-"), "I
dat <- fread(paste0("../Make data/output/", dat.files[latest.pull]))

# run the model and save the output

results <- lapply(base_years,
  function(x) format_results(dat = dat, base_year = x))
names(results) <- paste0("base", base_years)
list2env(results, .GlobalEnv)
```

```

for(i in 1:length(results)){
  write.csv(results[[i]][1], paste("results/", names(results)[i], "-run-",
    Sys.Date(), ".csv" , sep = ""),
    row.names = FALSE)
}

for(i in 1:length(results)){
  write.csv(results[[i]][2], paste("results/", names(results)[i], "-coeffs-run-",
    Sys.Date(), ".csv" , sep = ""),
    row.names = FALSE)
}

for(i in 1:length(results)){
  cv.glmnet <- results[[i]][[3]]
  save(cv.glmnet, predictornames, file=paste("results/", names(results)[i], "-cv.glmnet-",
    Sys.Date(), ".Rdata" , sep = ""))
}

```

Results

country	1-year risk	2-year risk	2021 2-year risk ranking	2020 2-year risk ranking
Pakistan	0.065	0.163	1	1
Yemen	0.042	0.129	2	3
Burma/Myanmar	0.050	0.108	3	17
Chad	0.039	0.092	4	10
Ethiopia	0.043	0.087	5	7
Nigeria	0.034	0.079	6	8
Afghanistan	0.029	0.077	7	4
India	0.031	0.074	8	2
Sudan	0.036	0.073	9	9
Somalia	0.041	0.069	10	11
Syria	0.025	0.064	11	14
Iraq	0.027	0.060	12	16
Guinea	0.027	0.059	13	6
Zimbabwe	0.018	0.054	14	57
Republic of the Congo	0.020	0.051	15	18
Central African Republic	0.031	0.050	16	20
Thailand	0.020	0.049	17	19
Democratic Republic of Congo	0.025	0.043	18	5
Uganda	0.016	0.037	19	23
Mozambique	0.017	0.035	20	22
Burundi	0.014	0.035	21	21
Indonesia	0.015	0.034	22	27
China	0.018	0.031	23	26
Mali	0.017	0.030	24	24
Tanzania	0.011	0.028	25	25
Libya	0.012	0.027	26	13
Egypt	0.013	0.025	27	34
Rwanda	0.011	0.025	28	58

country	1-year risk	2-year risk	2021 2-year risk ranking	2020 2-year risk ranking
Ivory Coast	0.012	0.024	29	35
Iran	0.011	0.024	30	30
Niger	0.015	0.024	31	44
Angola	0.013	0.023	32	28
Cambodia	0.012	0.023	33	33
Cameroon	0.013	0.022	34	31
South Africa	0.010	0.022	35	38
Kenya	0.011	0.022	36	29
Laos	0.013	0.022	37	56
Bangladesh	0.010	0.021	38	32
South Sudan	0.015	0.020	39	15
Eritrea	0.010	0.020	40	39
Turkey	0.013	0.019	41	12
Burkina Faso	0.012	0.018	42	41
Sierra Leone	0.010	0.018	43	43
Algeria	0.009	0.017	44	36
Nicaragua	0.009	0.016	45	47
Colombia	0.010	0.016	46	49
Brazil	0.008	0.016	47	50
Lebanon	0.007	0.016	48	91
Nepal	0.009	0.016	49	42
Morocco	0.008	0.016	50	46
Liberia	0.008	0.015	51	51
Malawi	0.008	0.015	52	52
Uzbekistan	0.010	0.014	53	40
Madagascar	0.008	0.014	54	53
United States of America	0.007	0.013	55	83
Philippines	0.011	0.013	56	54
Haiti	0.007	0.011	57	60
North Korea	0.008	0.011	58	61
United Arab Emirates	0.007	0.011	59	88
Mexico	0.007	0.011	60	65
Peru	0.007	0.011	61	63
Zambia	0.007	0.011	62	59
Bahrain	0.006	0.011	63	72
Russia	0.007	0.010	64	45
Sri Lanka	0.006	0.010	65	64
Guatemala	0.006	0.010	66	66
Papua New Guinea	0.006	0.010	67	67
Jordan	0.004	0.009	68	69
Comoros	0.007	0.009	69	70
Gabon	0.005	0.009	70	71
Timor-Leste	0.006	0.009	71	74
Azerbaijan	0.007	0.008	72	55
Senegal	0.006	0.008	73	73
Togo	0.006	0.008	74	76
Malaysia	0.005	0.008	75	79
Argentina	0.006	0.008	76	78
Equatorial Guinea	0.006	0.008	77	77
Saudi Arabia	0.005	0.007	78	84
Democratic Republic of Vietnam	0.006	0.007	79	80

country	1-year risk	2-year risk	2021 2-year risk ranking	2020 2-year risk ranking
Mauritania	0.005	0.007	80	82
Tajikistan	0.006	0.007	81	37
Kyrgyzstan	0.005	0.007	82	81
El Salvador	0.005	0.007	83	85
Ghana	0.005	0.007	84	62
Cuba	0.004	0.006	85	96
Ukraine	0.006	0.006	86	68
Benin	0.005	0.006	87	87
Venezuela	0.005	0.006	88	48
Ecuador	0.005	0.006	89	109
Canada	0.005	0.006	90	92
Qatar	0.004	0.006	91	134
Turkmenistan	0.005	0.005	92	90
Namibia	0.004	0.005	93	94
Kuwait	0.003	0.005	94	104
Israel	0.003	0.005	95	113
Dominican Republic	0.004	0.005	96	75
Bosnia and Herzegovina	0.004	0.005	97	95
Djibouti	0.004	0.004	98	101
Honduras	0.004	0.004	99	103
Guinea-Bissau	0.003	0.004	100	93
Kazakhstan	0.003	0.004	101	102
Bolivia	0.003	0.004	102	86
Paraguay	0.003	0.004	103	106
Tunisia	0.003	0.004	104	89
South Korea	0.003	0.004	105	105
Fiji	0.003	0.004	106	115
Romania	0.003	0.004	107	110
Japan	0.003	0.003	108	121
The Gambia	0.003	0.003	109	114
United Kingdom	0.003	0.003	110	119
Poland	0.003	0.003	111	107
Panama	0.003	0.003	112	112
Bhutan	0.003	0.003	113	138
Germany	0.003	0.003	114	111
Chile	0.003	0.003	115	116
Trinidad and Tobago	0.003	0.003	116	118
Lesotho	0.003	0.003	117	120
Botswana	0.002	0.003	118	98
Moldova	0.003	0.003	119	117
Mauritius	0.003	0.003	120	124
Spain	0.003	0.003	121	126
France	0.003	0.003	122	130
Jamaica	0.003	0.003	123	125
Georgia	0.002	0.003	124	123
Guyana	0.003	0.003	125	146
Montenegro	0.003	0.003	126	122
Italy	0.002	0.003	127	128
Hungary	0.002	0.003	128	131
Bulgaria	0.002	0.002	129	129
Serbia	0.002	0.002	130	133

country	1-year risk	2-year risk	2021 2-year risk ranking	2020 2-year risk ranking
Switzerland	0.002	0.002	131	137
Belarus	0.002	0.002	132	97
Belgium	0.002	0.002	133	136
Australia	0.002	0.002	134	108
Mongolia	0.002	0.002	135	140
Albania	0.002	0.002	136	135
Singapore	0.002	0.002	137	139
Oman	0.002	0.002	138	142
Czech Republic	0.002	0.002	139	141
Netherlands	0.002	0.002	140	143
New Zealand	0.002	0.002	141	144
Croatia	0.002	0.002	142	100
Swaziland	0.002	0.002	143	99
Greece	0.002	0.002	144	148
Macedonia	0.002	0.002	145	145
Slovakia	0.002	0.001	146	147
Costa Rica	0.002	0.001	147	149
Austria	0.002	0.001	148	151
Portugal	0.002	0.001	149	153
Sweden	0.002	0.001	150	154
Latvia	0.001	0.001	151	150
Cyprus	0.002	0.001	152	152
Armenia	0.002	0.001	153	132
Uruguay	0.001	0.001	154	155
Solomon Islands	0.001	0.001	155	158
Ireland	0.001	0.001	156	157
Finland	0.001	0.001	157	159
Lithuania	0.001	0.001	158	156
Denmark	0.001	0.001	159	161
Norway	0.001	0.001	160	160
Estonia	0.001	0.001	161	162
Slovenia	0.001	0.001	162	127

Plot rankings between years

