

# Online supplementary appendix for "The King is Dead: Political Succession and War in Europe, 1000-1799"

This appendix contains both supplementary analyses, references in the main text, and descriptions of the data used in the article.

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## 1. Supplementary analyses

In this section we provide tables and figures for supplementary analyses referenced in the text. This includes both descriptive tables and graphs, further detailing the variables, but also analyses with different codings and estimation techniques. The final two sections lists all wars in which a war broke out the year of a succession, together with a brief description of whether the war broke out before or after the death of the monarch.

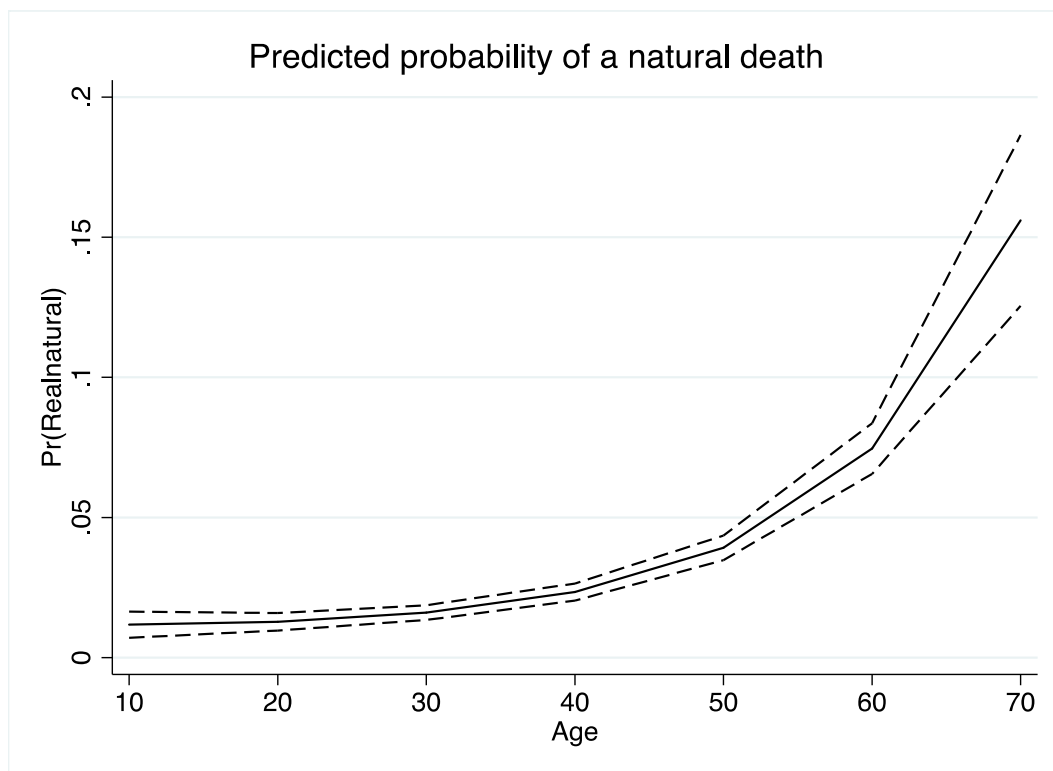
### 1a: Natural deaths

Figure A1. Histogram of the age distribution of monarchs' natural deaths



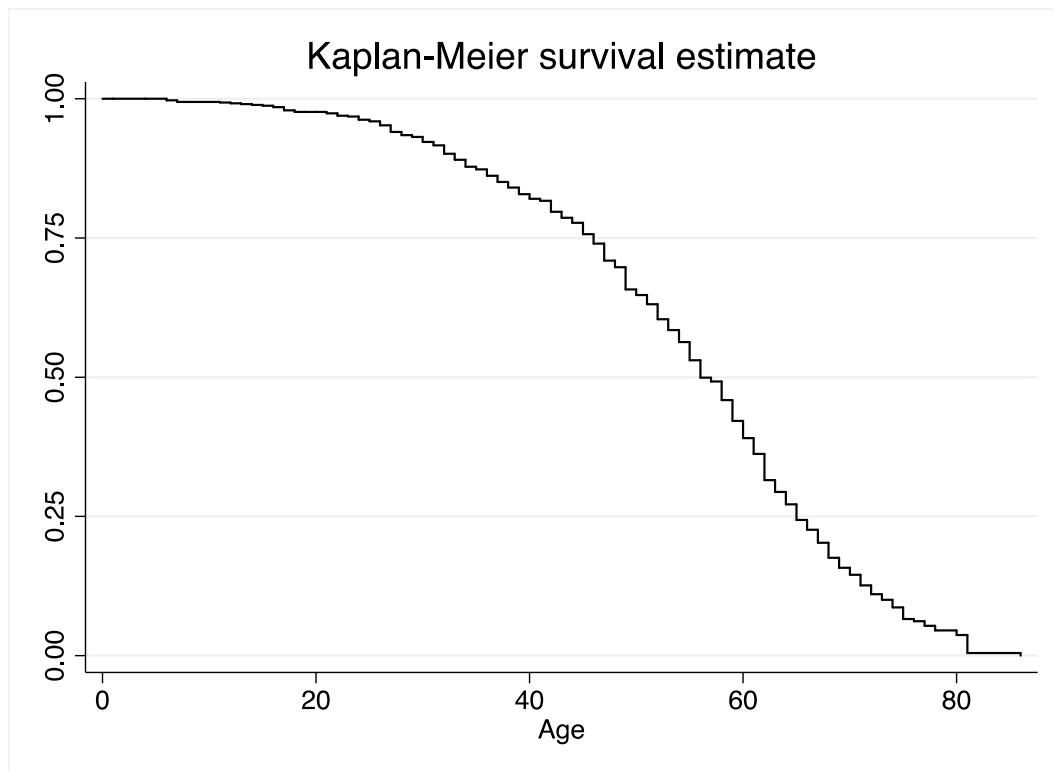


Figure A2. Age and the probability of dying of natural causes



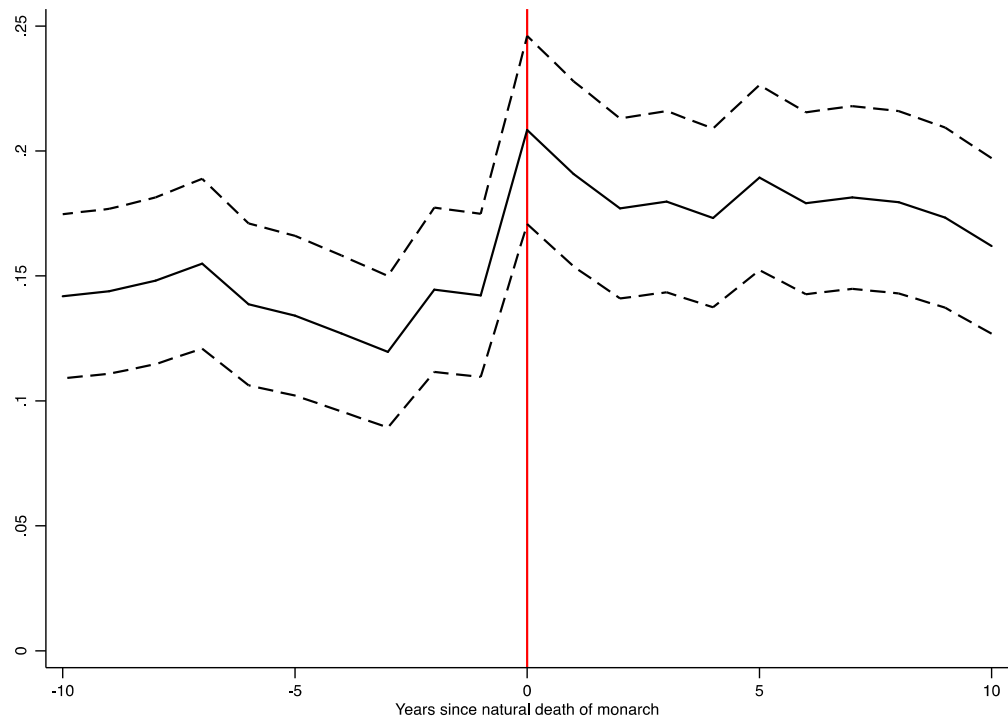
Note: Based on a model with age, age squared and century dummies, with standard errors clustered at the country level. The solid line shows the predicted probability and the dashed lines the confidence intervals.

Figure A3. Kaplan-Meier survival graph of natural deaths



Note: The graph shows how long monarchs were expected to live before dying of natural causes. 25 percent of all monarchs were expected to die naturally before they turned 45, 50 percent before they turned 55, and 75 percent before they turned 65.

Figure A4: Proportion of countries engaged in at least one civil war the years before and after the natural death of a monarch.



## 1b. Jackknife models

Table A1. Determinants of civil war. Logit and conditional logit analyses (jackknife at the country level).

	(1)	(2)	(3)	(4)
Natural death	1.487*** (8.084)	1.968*** (8.773)	1.546*** (8.157)	1.993*** (8.552)
Primogeniture	-0.096 (0.342)	-0.001 (0.003)	-0.431 (1.457)	-0.347 (1.157)
Natural death x primogeniture		-1.024** (3.414)		-0.975** (2.922)
Peace spell	-0.020*** (4.922)	-0.020*** (4.923)	-0.014*** (3.779)	-0.014*** (3.845)
Peace spell <sup>2</sup>	0.000*** (4.376)	0.000*** (4.342)	0.000** (3.358)	0.000** (3.369)
Age	0.005 (0.338)	0.004 (0.278)	0.007 (0.484)	0.007 (0.468)
Age <sup>2</sup>	-0.000 (0.309)	-0.000 (0.246)	-0.000 (0.426)	-0.000 (0.416)
Tenure	-0.005 (0.780)	-0.004 (0.655)	-0.005 (0.881)	-0.004 (0.751)
Previous tenure	0.007 (1.705)	0.007 (1.654)	0.004 (0.905)	0.004 (0.859)
Parliament	0.372 (1.377)	0.373 (1.370)	0.178 (0.868)	0.177 (0.856)
Ln(Area)	0.408*** (4.104)	0.405*** (4.090)	0.404* (2.220)	0.400* (2.300)
Mountains	-0.011 (1.022)	-0.011 (0.992)	-0.009 (0.657)	-0.009 (0.684)
Interregnum	0.245 (0.444)	0.273 (0.505)	0.218 (0.413)	0.249 (0.485)
<i>Century dummies</i>	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes
<i>N</i>	13575	13575	13372	13372
<i>Pseudo R<sup>2</sup></i>	0.103	0.105	0.056	0.058

Absolute *t* statistics in parentheses. Standard errors are clustered at the country level. Constants are not shown for logit models. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A2. Determinants of international war onset. Logit and condition logit models (jackknife at the country level).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All wars	All wars	All wars	All wars	Was attacked	Attacker	Was attacked	Attacker
Natural death	0.593** (3.059)	0.467 (1.359)	0.621** (3.221)	0.498 (1.541)	0.620** (3.242)	0.436 (1.639)	0.658** (3.429)	0.461 (1.727)
Primogeniture	0.018 (0.151)	0.008 (0.063)	-0.148 (1.002)	-0.158 (1.042)	0.004 (0.027)	0.026 (0.123)	-0.270 (1.099)	0.009 (0.031)
Natural death x primogeniture		0.214 (0.544)		0.211 (0.549)				
Peace spell	-0.015*** (4.333)	-0.015*** (4.335)	-0.007* (2.626)	-0.007* (2.617)	-0.020** (3.577)	-0.008 (1.550)	-0.013* (2.751)	0.000 (0.068)
Peace spell <sup>2</sup>	0.000* (2.603)	0.000* (2.599)	0.000 (1.305)	0.000 (1.297)	0.000** (2.959)	0.000 (0.033)	0.000** (3.395)	-0.000 (0.666)
Age	0.033** (3.106)	0.033** (3.094)	0.031** (2.989)	0.031** (2.988)	0.020 (1.484)	0.049** (3.472)	0.019 (1.481)	0.044** (2.979)
Age <sup>2</sup>	-0.000* (2.472)	-0.000* (2.465)	-0.000* (2.457)	-0.000* (2.455)	-0.000 (0.333)	-0.001** (3.492)	-0.000 (0.464)	-0.001** (3.184)
Tenure	-0.006 (1.230)	-0.006 (1.246)	-0.005 (1.099)	-0.005 (1.120)	-0.012 (1.977)	0.003 (0.450)	-0.010 (1.715)	0.003 (0.452)
Previous tenure	0.004 (1.626)	0.004 (1.627)	0.003 (1.310)	0.003 (1.307)	0.003 (0.871)	0.006 (1.568)	0.003 (0.938)	0.004 (1.037)
Parliament	0.125 (0.871)	0.125 (0.871)	0.053 (0.325)	0.053 (0.325)	0.282 (1.456)	-0.038 (0.151)	0.013 (0.073)	0.095 (0.390)
Ln(Area)	0.403*** (7.533)	0.403*** (7.566)	0.194 (1.914)	0.194 (1.928)	0.339*** (4.546)	0.432*** (6.775)	0.222** (2.982)	0.179 (1.052)
Mountains	0.010 (1.535)	0.010 (1.534)	0.032* (2.302)	0.032* (2.307)	0.004 (0.321)	0.015 (1.384)	0.018 (1.884)	0.038 (1.348)
Interregnum	0.348 (0.872)	0.344 (0.862)	0.417 (1.184)	0.415 (1.171)	0.438 (0.995)	0.251 (0.377)	0.728 (1.704)	0.071 (0.099)
<i>Century dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes	No	No	Yes	Yes
<i>N</i>	13575	13575	13575	13575	13575	13575	13575	13447
<i>Pseudo R<sup>2</sup></i>	0.083	0.083	0.024	0.024	0.067	0.075	0.027	0.020

Absolute *t* statistics in parentheses. Standard errors are clustered at the country level. Constants are not shown for logit models



### 1c. War with alternative coding of natural succession years

Table A3. Determinants of civil war. Logit and conditional logit analyses (years with natural deaths and depositions counted as natural death years)

	(1)	(2)	(3)	(4)
Natural death	1.505 <sup>***</sup> (9.304)	1.973 <sup>***</sup> (10.326)	1.563 <sup>***</sup> (9.072)	1.994 <sup>***</sup> (9.972)
Primogeniture	-0.097 (0.439)	-0.001 (0.004)	-0.426 (1.770)	-0.338 (1.384)
Natural death x primogeniture		-0.989 <sup>***</sup> (3.554)		-0.935 <sup>**</sup> (3.152)
Peace spell	-0.019 <sup>***</sup> (5.916)	-0.020 <sup>***</sup> (5.953)	-0.014 <sup>***</sup> (4.457)	-0.014 <sup>***</sup> (4.542)
Peace spell <sup>2</sup>	0.000 <sup>***</sup> (6.602)	0.000 <sup>***</sup> (6.666)	0.000 <sup>***</sup> (4.451)	0.000 <sup>***</sup> (4.500)
Age	0.005 (0.347)	0.004 (0.291)	0.007 (0.490)	0.007 (0.483)
Age <sup>2</sup>	-0.000 (0.328)	-0.000 (0.274)	-0.000 (0.458)	-0.000 (0.461)
Tenure	-0.004 (0.789)	-0.004 (0.657)	-0.005 (0.836)	-0.004 (0.704)
Previous tenure	0.007 (1.842)	0.007 (1.795)	0.005 (1.055)	0.004 (1.012)
Parliament	0.369 (1.721)	0.371 (1.718)	0.175 (0.981)	0.174 (0.970)
Ln(Area)	0.407 <sup>***</sup> (5.059)	0.405 <sup>***</sup> (5.070)	0.401 <sup>**</sup> (3.266)	0.398 <sup>***</sup> (3.324)
Mountains	-0.011 (1.256)	-0.011 (1.213)	-0.009 (1.053)	-0.009 (1.049)
Interregnum	0.240 (0.513)	0.270 (0.587)	0.212 (0.472)	0.243 (0.554)
<i>Century dummies</i>	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes
<i>N</i>	13575	13575	13372	13372
<i>Pseudo R<sup>2</sup></i>	0.104	0.106	0.057	0.059

Absolute *t* statistics in parentheses. Standard errors are clustered at the country level. Constants are not shown for logit models. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A4. International war onset. Logit and condition logit models (years with natural deaths and depositions counted as natural death years).

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All wars	All wars	All wars	All wars	Was attacked	Attacker	Was attacked	Attacker
Natural death	0.582** (3.208)	0.429 (1.418)	0.605*** (3.366)	0.457 (1.609)	0.622*** (3.608)	0.407 (1.586)	0.658*** (3.807)	0.426 (1.661)
Primogeniture	0.017 (0.178)	0.005 (0.049)	-0.147 (1.133)	-0.159 (1.209)	0.004 (0.034)	0.026 (0.155)	-0.268 (1.323)	0.010 (0.040)
Natural death x primogeniture		0.258 (0.731)		0.254 (0.737)				
Peace spell	-0.015*** (4.339)	-0.015*** (4.338)	-0.007* (2.352)	-0.007* (2.344)	-0.020*** (3.704)	-0.008 (1.646)	-0.013** (2.917)	0.000 (0.076)
Peace spell <sup>2</sup>	0.000** (3.175)	0.000** (3.173)	0.000 (1.815)	0.000 (1.803)	0.000** (3.157)	0.000 (0.039)	0.000*** (3.646)	-0.000 (0.963)
Age	0.033** (3.253)	0.033** (3.238)	0.031** (3.048)	0.031** (3.043)	0.020 (1.598)	0.049*** (3.602)	0.019 (1.575)	0.044** (3.047)
Age <sup>2</sup>	-0.000** (2.596)	-0.000** (2.583)	-0.000* (2.488)	-0.000* (2.480)	-0.000 (0.357)	-0.001*** (3.711)	-0.000 (0.488)	-0.001*** (3.284)
Tenure	-0.006 (1.294)	-0.006 (1.318)	-0.005 (1.107)	-0.005 (1.135)	-0.012* (2.112)	0.003 (0.495)	-0.010 (1.738)	0.003 (0.497)
Previous tenure	0.004 (1.784)	0.004 (1.783)	0.003 (1.373)	0.003 (1.371)	0.003 (0.982)	0.006 (1.686)	0.003 (1.016)	0.004 (1.045)
Parliament	0.124 (0.988)	0.124 (0.986)	0.053 (0.361)	0.053 (0.359)	0.282* (1.962)	-0.038 (0.204)	0.012 (0.077)	0.094 (0.438)
Ln(Area)	0.403*** (9.278)	0.403*** (9.316)	0.194* (2.375)	0.194* (2.389)	0.338*** (6.319)	0.432*** (8.140)	0.221*** (3.367)	0.179 (1.400)
Mountains	0.403*** (9.278)	0.403*** (9.316)	0.194* (2.375)	0.194* (2.389)	0.338*** (6.319)	0.432*** (8.140)	0.221*** (3.367)	0.179 (1.400)
Interregnum	0.345 (1.040)	0.341 (1.026)	0.413 (1.303)	0.410 (1.291)	0.436 (1.093)	0.248 (0.471)	0.725 (1.910)	0.067 (0.116)
<i>Century dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes	No	No	Yes	Yes
<i>N</i>	13575	13575	13575	13575	13575	13575	13575	13447
<i>Pseudo R<sup>2</sup></i>	0.083	0.083	0.024	0.024	0.067	0.075	0.027	0.020

Absolute *t* statistics in parentheses. Standard errors are clustered at the country level. Constants are not shown for logit models

### 1d. Models with Brecke data on civil wars.

Table A5. Determinants of civil war. Logit and conditional logit analyses.

	(1)	(2)	(3)	(4)
Natural death	1.448*** (8.692)	1.859*** (7.833)	1.497*** (8.823)	1.876*** (7.732)
Primogeniture	0.026 (0.114)	0.095 (0.411)	-0.184 (0.896)	-0.121 (0.582)
Natural death x primogeniture		-0.815** (2.672)		-0.772* (2.373)
Peace spell	-0.019*** (5.701)	-0.019*** (5.684)	-0.013*** (4.025)	-0.013*** (4.057)
Peace spell <sup>2</sup>	0.000*** (6.430)	0.000*** (6.434)	0.000*** (3.314)	0.000*** (3.331)
Age	0.017 (1.452)	0.016 (1.420)	0.017 (1.505)	0.017 (1.507)
Age <sup>2</sup>	-0.000 (1.531)	-0.000 (1.482)	-0.000 (1.377)	-0.000 (1.368)
Tenure	-0.006 (1.141)	-0.006 (1.046)	-0.006 (1.255)	-0.006 (1.149)
Previous tenure	0.003 (0.809)	0.003 (0.771)	0.000 (0.111)	0.000 (0.086)
Parliament	0.262 (1.093)	0.261 (1.083)	-0.038 (0.222)	-0.042 (0.239)
Ln(Area)	0.465*** (6.094)	0.463*** (6.083)	0.437*** (4.763)	0.434*** (4.842)
Mountains	-0.014 (1.651)	-0.014 (1.615)	-0.015* (2.017)	-0.015* (2.020)
Interregnum	0.293 (0.776)	0.312 (0.842)	0.288 (0.824)	0.310 (0.906)
<i>Century dummies</i>	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes
<i>N</i>	13575	13575	13372	13372
<i>Pseudo R<sup>2</sup></i>	0.118	0.119	0.066	0.067

Absolute *t* statistics in parentheses. Standard errors are clustered at the country level. Constants are not shown for logit models. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**1e. Models with late start dates and early end dates for wars.**

**Table A6. Determinants of civil war. Logit and conditional logit analyses.**

	(1)	(2)	(3)	(4)
Natural death	1.393*** (7.718)	1.885*** (9.776)	1.454*** (7.919)	1.912*** (10.175)
Primogeniture	-0.108 (0.496)	-0.017 (0.082)	-0.471* (2.183)	-0.393 (1.777)
Natural death x primogeniture		-1.068*** (4.035)		-1.021*** (3.646)
Peace spell	-0.019*** (5.709)	-0.019*** (5.776)	-0.013*** (3.981)	-0.013*** (4.088)
Peace spell <sup>2</sup>	0.000*** (6.374)	0.000*** (6.482)	0.000*** (4.095)	0.000*** (4.168)
Age	0.012 (0.797)	0.011 (0.751)	0.014 (1.012)	0.014 (1.009)
Age <sup>2</sup>	-0.000 (1.051)	-0.000 (0.999)	-0.000 (1.131)	-0.000 (1.125)
Tenure	-0.005 (0.885)	-0.005 (0.749)	-0.006 (0.999)	-0.005 (0.861)
Previous tenure	0.006 (1.802)	0.006 (1.765)	0.004 (0.901)	0.004 (0.857)
Parliament	0.395 (1.900)	0.397 (1.895)	0.197 (1.104)	0.196 (1.091)
Ln(Area)	0.417*** (5.323)	0.414*** (5.321)	0.426*** (3.353)	0.421*** (3.410)
Mountains	-0.012 (1.321)	-0.012 (1.281)	-0.011 (1.180)	-0.011 (1.168)
Interregnum	0.509 (1.096)	0.537 (1.178)	0.527 (1.106)	0.557 (1.196)
<i>Century dummies</i>	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes
<i>N</i>	13575	13575	13372	13372
<i>Pseudo R<sup>2</sup></i>	0.101	0.103	0.055	0.057

Absolute *t* statistics in parentheses. Standard errors are clustered at the country level. Constants are not shown for logit models. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A7. Determinants of international war onset. Logit and condition logit models.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All wars	All wars	All wars	All wars	Was attacked	Attacker	Was attacked	Attacker
Natural death	0.344 (1.861)	0.282 (1.051)	0.368* (1.990)	0.314 (1.247)	0.563** (2.942)	-0.076 (0.283)	0.601** (3.188)	-0.060 (0.216)
Primogeniture	-0.016 (0.165)	-0.020 (0.201)	-0.209 (1.496)	-0.213 (1.504)	-0.033 (0.265)	0.002 (0.011)	-0.317 (1.410)	-0.069 (0.270)
Natural death x primogeniture		0.107 (0.353)		0.095 (0.324)				
Peace spell	-0.014*** (4.203)	-0.014*** (4.212)	-0.006* (2.050)	-0.006* (2.052)	-0.019*** (3.555)	-0.008 (1.644)	-0.011* (2.493)	0.000 (0.002)
Peace spell <sup>2</sup>	0.000** (2.962)	0.000** (2.969)	0.000 (1.458)	0.000 (1.456)	0.000** (2.910)	0.000 (0.075)	0.000** (3.110)	-0.000 (0.890)
Age	0.026* (2.547)	0.026* (2.544)	0.024* (2.438)	0.024* (2.439)	0.014 (1.078)	0.041** (3.071)	0.013 (1.043)	0.037** (2.651)
Age <sup>2</sup>	-0.000* (2.057)	-0.000* (2.058)	-0.000 (1.958)	-0.000* (1.961)	-0.000 (0.148)	-0.001** (3.204)	-0.000 (0.305)	-0.000** (2.821)
Tenure	-0.005 (1.110)	-0.005 (1.109)	-0.004 (0.888)	-0.004 (0.890)	-0.009 (1.694)	0.002 (0.269)	-0.007 (1.272)	0.001 (0.244)
Previous tenure	0.003 (1.265)	0.003 (1.266)	0.002 (0.924)	0.002 (0.924)	0.002 (0.586)	0.004 (1.187)	0.002 (0.620)	0.003 (0.693)
Parliament	0.158 (1.306)	0.158 (1.306)	0.115 (0.820)	0.115 (0.820)	0.301* (2.121)	0.009 (0.048)	0.052 (0.338)	0.179 (0.813)
Ln(Area)	0.400*** (9.755)	0.400*** (9.797)	0.182* (2.313)	0.182* (2.320)	0.334*** (6.188)	0.434*** (8.557)	0.208** (3.242)	0.174 (1.416)
Mountains	0.010 (1.925)	0.010 (1.925)	0.029** (3.152)	0.029** (3.157)	0.005 (0.640)	0.014 (1.958)	0.016* (2.010)	0.035* (2.179)
Interregnum	0.364 (1.083)	0.363 (1.078)	0.458 (1.233)	0.457 (1.229)	0.564 (1.536)	0.079 (0.130)	0.875* (2.574)	-0.076 (0.102)
<i>Century dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes	No	No	Yes	Yes
<i>N</i>	13575	13575	13575	13575	13575	13575	13575	13447
<i>Pseudo R<sup>2</sup></i>	0.080	0.080	0.021	0.021	0.066	0.072	0.025	0.018

Absolute *t* statistics in parentheses. Standard errors are clustered at the country level. Constants are not shown for logit models

## 1f. Linear probability models (OLS)

Table A8. Determinants of civil war onset. Linear probability analyses.

	(1)	(2)	(3)	(4)
Natural death	0.071*** (5.556)	0.147*** (6.528)	0.072*** (5.471)	0.148*** (6.505)
Primogeniture	0.001 (0.071)	0.004 (0.586)	0.001 (0.158)	0.005 (0.655)
Natural death x primogeniture		-0.116*** (4.844)		-0.117*** (4.828)
Peace spell	-0.000*** (4.206)	-0.000*** (4.241)	-0.000** (2.987)	-0.000** (3.055)
Peace spell <sup>2</sup>	0.000*** (4.289)	0.000*** (4.317)	0.000** (3.085)	0.000** (3.133)
Age	0.000 (0.167)	0.000 (0.060)	0.000 (0.251)	0.000 (0.145)
Age <sup>2</sup>	-0.000 (0.228)	-0.000 (0.112)	-0.000 (0.258)	-0.000 (0.142)
Tenure	-0.000 (0.896)	-0.000 (0.792)	-0.000 (1.327)	-0.000 (1.238)
Previous tenure	0.000 (1.449)	0.000 (1.447)	0.000 (0.332)	0.000 (0.306)
Parliament	0.008 (1.171)	0.008 (1.165)	0.000 (0.091)	0.000 (0.057)
Ln(Area)	0.011*** (5.105)	0.010*** (5.028)	0.009** (2.992)	0.009** (3.054)
Mountains	-0.000 (0.886)	-0.000 (0.873)	0.000 (0.419)	0.000 (0.433)
Interregnum	0.011 (0.560)	0.012 (0.628)	0.008 (0.414)	0.010 (0.473)
Constant	-0.018 (1.297)	-0.019 (1.439)	-0.019 (1.546)	-0.021 (1.742)
<i>Century dummies</i>	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes
<i>N</i>	13575	13575	13372	13372
<i>Pseudo R<sup>2</sup></i>	0.026	0.030	0.014	0.017

Absolute *t* statistics in parentheses. Standard errors are clustered at the country level.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A9. Determinants of international war onset. Linear probability analyses

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All wars	All wars	All wars	All wars	Was attacked	Attacker	Was attacked	Attacker
Natural death	0.049** (3.246)	0.047 (1.765)	0.050** (3.317)	0.049 (1.892)	0.032** (3.098)	0.017 (1.693)	0.033** (3.166)	0.017 (1.715)
Primogeniture	0.005 (0.571)	0.005 (0.545)	-0.000 (0.039)	-0.000 (0.045)	0.004 (0.660)	0.002 (0.205)	-0.006 (0.914)	0.006 (0.772)
Natural death x primogeniture		0.003 (0.098)		0.002 (0.055)				
Peace spell	-0.000** (3.088)	-0.000** (3.098)	-0.000 (1.217)	-0.000 (1.217)	-0.000*** (3.805)	-0.000 (1.240)	-0.000* (2.227)	-0.000 (0.215)
Peace spell <sup>2</sup>	0.000* (2.126)	0.000* (2.134)	0.000 (0.815)	0.000 (0.815)	0.000** (2.939)	0.000 (0.615)	0.000* (2.147)	-0.000 (0.271)
Age	0.002* (2.664)	0.002* (2.654)	0.002* (2.695)	0.002* (2.691)	0.001 (1.242)	0.001** (2.781)	0.000 (1.257)	0.001* (2.676)
Age <sup>2</sup>	-0.000 (2.019)	-0.000 (2.012)	-0.000* (2.186)	-0.000* (2.180)	0.000 (0.103)	-0.000** (2.881)	-0.000 (0.019)	-0.000** (3.084)
Tenure	-0.000 (1.609)	-0.000 (1.609)	-0.000 (1.085)	-0.000 (1.086)	-0.000 (1.859)	-0.000 (0.052)	-0.000 (1.662)	0.000 (0.409)
Previous tenure	0.000 (1.132)	0.000 (1.131)	0.000 (0.952)	0.000 (0.951)	0.000 (0.350)	0.000 (1.233)	0.000 (0.423)	0.000 (0.851)
Parliament	-0.003 (0.377)	-0.003 (0.377)	0.000 (0.010)	0.000 (0.010)	0.005 (1.033)	-0.008 (0.941)	0.001 (0.178)	-0.001 (0.147)
Ln(Area)	0.028*** (7.444)	0.028*** (7.444)	0.013* (2.304)	0.013* (2.305)	0.013*** (6.685)	0.014*** (5.175)	0.008* (2.625)	0.005 (1.116)
Mountains	0.001 (1.506)	0.001 (1.506)	0.003*** (3.710)	0.003*** (3.708)	0.000 (0.552)	0.001 (1.360)	0.001** (2.928)	0.002 (1.801)
Interregnum	0.009 (0.399)	0.009 (0.397)	0.020 (0.887)	0.020 (0.883)	0.008 (0.574)	0.001 (0.067)	0.023 (1.561)	-0.004 (0.180)
Constant	-0.114*** (3.902)	-0.114*** (3.913)	-0.061* (2.148)	-0.061* (2.144)	-0.045** (2.904)	-0.070** (3.074)	-0.027 (1.406)	-0.034 (1.771)
<i>Century dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes	No	No	Yes	Yes
<i>N</i>	13575	13575	13575	13575	13575	13575	13575	13447
<i>Pseudo R<sup>2</sup></i>	0.042	0.042	0.012	0.012	0.021	0.022	0.008	0.006

Absolute *t* statistics in parentheses. Standard errors are clustered at the country level.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A10. Determinants of civil war onset. Linear probability analyses.

	(1)	(2)	(3)	(4)	(5)	(6)
Natural death	0.071*** (5.530)	0.181*** (5.392)	0.150*** (4.844)	0.072*** (5.442)	0.182*** (5.357)	0.151*** (4.856)
Primogeniture	0.001 (0.076)	0.004 (0.563)	0.004 (0.584)	0.001 (0.176)	0.005 (0.662)	0.005 (0.663)
Least one son	-0.001 (0.111)	0.002 (0.345)		-0.002 (0.332)	0.001 (0.131)	
Tenure	-0.000 (0.853)	-0.000 (0.752)	-0.000 (0.725)	-0.000 (1.267)	-0.000 (1.176)	-0.000 (1.177)
Natural death × primogeniture		- 0.110*** (4.773)	-0.115*** (5.150)		- 0.111*** (4.764)	-0.116*** (5.123)
Natural death x least one son		-0.064 (1.913)			-0.063 (1.904)	
Natural death x tenure			-0.000 (0.221)			-0.000 (0.178)
Peace spell	- 0.000*** (4.190)	- 0.000*** (4.207)	-0.000*** (4.242)	-0.000** (3.009)	-0.000** (3.033)	-0.000** (3.057)
Peace spell <sup>2</sup>	0.000*** (4.274)	0.000*** (4.281)	0.000*** (4.318)	0.000** (3.118)	0.000** (3.133)	0.000** (3.136)
Age	0.000 (0.235)	-0.000 (0.100)	0.000 (0.032)	0.000 (0.457)	0.000 (0.111)	0.000 (0.121)
Age <sup>2</sup>	-0.000 (0.272)	0.000 (0.050)	-0.000 (0.083)	-0.000 (0.398)	-0.000 (0.080)	-0.000 (0.120)
Previous tenure	0.000 (1.419)	0.000 (1.412)	0.000 (1.445)	0.000 (0.294)	0.000 (0.264)	0.000 (0.306)
Parliament	0.008 (1.157)	0.008 (1.159)	0.008 (1.165)	0.000 (0.072)	0.000 (0.036)	0.000 (0.050)
Ln(Area)	0.011*** (4.992)	0.010*** (4.902)	0.010*** (5.028)	0.009** (2.978)	0.009** (3.047)	0.009** (3.057)
Mountains	-0.000 (0.858)	-0.000 (0.860)	-0.000 (0.874)	0.000 (0.428)	0.000 (0.405)	0.000 (0.430)
Interregnum	0.011 (0.604)	0.012 (0.664)	0.012 (0.622)	0.009 (0.466)	0.010 (0.516)	0.010 (0.470)
Constant	-0.018 (1.220)	-0.020 (1.335)	-0.019 (1.433)	-0.020 (1.647)	-0.022 (1.810)	-0.021 (1.740)
<i>Century dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	No	Yes	Yes	Yes
<i>N</i>	13575	13575	13575	13372	13372	13372
<i>Pseudo R<sup>2</sup></i>	0.026	0.031	0.030	0.014	0.018	0.017

Absolute *t* statistics in parentheses. Standard errors are clustered at the country level.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## 1g. Models that cluster at country-centuries



Table A11. Determinants of civil war. Logit analyses.

	(1)	(2)	(3)	(4)
Natural death	1.484 <sup>***</sup> (7.446)	1.961 <sup>***</sup> (7.029)	1.548 <sup>***</sup> (7.395)	1.990 <sup>***</sup> (7.069)
Primogeniture	-0.096 (0.605)	-0.002 (0.011)	-0.430 (1.912)	-0.347 (1.525)
Natural death x primogeniture		-1.017 <sup>**</sup> (2.800)		-0.967 <sup>*</sup> (2.563)
Peace spell	-0.019 <sup>***</sup> (6.582)	-0.020 <sup>***</sup> (6.648)	-0.014 <sup>***</sup> (4.165)	-0.014 <sup>***</sup> (4.233)
Peace spell <sup>2</sup>	0.000 <sup>***</sup> (6.444)	0.000 <sup>***</sup> (6.541)	0.000 <sup>***</sup> (4.384)	0.000 <sup>***</sup> (4.454)
Age	0.005 (0.308)	0.004 (0.248)	0.007 (0.402)	0.007 (0.383)
Age <sup>2</sup>	-0.000 (0.254)	-0.000 (0.200)	-0.000 (0.374)	-0.000 (0.368)
Tenure	-0.005 (0.827)	-0.004 (0.691)	-0.005 (0.836)	-0.004 (0.703)
Previous tenure	0.007 (1.705)	0.007 (1.654)	0.004 (0.905)	0.004 (0.859)
Parliament	0.372 <sup>*</sup> (2.144)	0.373 <sup>*</sup> (2.138)	0.180 (0.935)	0.179 (0.935)
Ln(Area)	0.408 <sup>***</sup> (7.087)	0.405 <sup>***</sup> (7.093)	0.406 <sup>***</sup> (3.489)	0.402 <sup>***</sup> (3.495)
Mountains	-0.011 <sup>*</sup> (2.155)	-0.011 <sup>*</sup> (2.107)	-0.009 (1.094)	-0.009 (1.047)
Interregnum	0.244 (0.490)	0.272 (0.552)	0.217 (0.489)	0.247 (0.559)
<i>Century dummies</i>	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes
<i>N</i>	13575	13575	13372	13372
<i>Pseudo R<sup>2</sup></i>	0.103	0.105	0.131	0.133

Absolute *t* statistics in parentheses. Standard errors are clustered at country-centuries (i.e. there is a separate cluster for every century a country appears in the data). Constants are not shown for logit models. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A12. Determinants of international war onset. Logit models.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	All wars	All wars	All wars	All wars	Was attacked	Attacker	Was attacked	Attacker
Natural death	0.591** (3.238)	0.462 (1.512)	0.619*** (3.350)	0.490 (1.626)	0.618** (3.092)	0.435 (1.643)	0.657** (3.144)	0.459 (1.731)
Primogeniture	0.018 (0.142)	0.008 (0.059)	-0.148 (0.886)	-0.158 (0.929)	0.005 (0.033)	0.026 (0.150)	-0.269 (1.615)	0.009 (0.035)
Natural death x primogeniture		0.218 (0.593)		0.221 (0.602)				
Peace spell	-0.015*** (4.336)	-0.015*** (4.333)	-0.007* (2.193)	-0.007* (2.187)	-0.020*** (4.477)	-0.008 (1.642)	-0.013** (3.097)	0.000 (0.074)
Peace spell <sup>2</sup>	0.000* (2.521)	0.000* (2.516)	0.000 (1.109)	0.000 (1.102)	0.000*** (3.365)	0.000 (0.044)	0.000** (2.929)	-0.000 (0.997)
Age	0.033** (3.102)	0.033** (3.103)	0.031** (2.903)	0.031** (2.907)	0.020 (1.494)	0.049*** (3.389)	0.020 (1.435)	0.045** (2.948)
Age <sup>2</sup>	-0.000* (2.544)	-0.000* (2.545)	-0.000* (2.445)	-0.000* (2.449)	-0.000 (0.362)	-0.001*** (3.656)	-0.000 (0.491)	-0.001*** (3.238)
Tenure	-0.006 (1.475)	-0.006 (1.492)	-0.005 (1.239)	-0.005 (1.258)	-0.012* (2.310)	0.003 (0.564)	-0.010 (1.804)	0.003 (0.567)
Previous tenure	0.004 (1.808)	0.004 (1.814)	0.003 (1.413)	0.003 (1.417)	0.003 (0.904)	0.006 (1.631)	0.003 (0.906)	0.004 (1.050)
Parliament	0.125 (1.031)	0.125 (1.031)	0.054 (0.373)	0.054 (0.373)	0.283 (1.704)	-0.038 (0.232)	0.013 (0.083)	0.095 (0.473)
Ln(Area)	0.403*** (10.530)	0.403*** (10.544)	0.195** (3.053)	0.195** (3.059)	0.339*** (7.557)	0.432*** (8.181)	0.223*** (3.403)	0.179 (1.663)
Mountains	0.010** (2.843)	0.010** (2.837)	0.032*** (3.751)	0.032*** (3.752)	0.004 (0.750)	0.015** (3.102)	0.018 (1.921)	0.038** (3.270)
Interregnum	0.348 (0.941)	0.345 (0.930)	0.418 (1.099)	0.416 (1.091)	0.441 (0.983)	0.251 (0.452)	0.732 (1.614)	0.070 (0.110)
<i>Century dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes	No	No	Yes	Yes
<i>N</i>	13575	13575	13575	13575	13575	13575	13575	13447
<i>Pseudo R<sup>2</sup></i>	0.083	0.083	0.098	0.098	0.067	0.075	0.089	0.091

Absolute  $t$  statistics in parentheses. Standard errors are clustered at country-centuries (i.e. there is a separate cluster for every century a country appears in the data). Constants are not shown for logit models. \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

### 1h. Triple interactions between children, tenures, and primogeniture

Table A13. Interactions between natural deaths, children, and tenures. Logit and conditional logit analyses.

	(1)	(2)	(3)	(4)
Natural death	2.387*** (7.025)	1.875*** (5.251)	2.376*** (6.821)	1.906*** (5.074)
Primogeniture	0.115 (0.365)		-0.297 (0.851)	
Least one son	0.233 (0.921)	0.163 (0.596)	0.114 (0.540)	0.087 (0.348)
Tenure	-0.006 (1.019)	-0.006 (0.802)	-0.007 (1.155)	-0.010 (1.465)
Natural death × primogeniture	-0.858 (1.712)		-0.733 (1.280)	
Natural death x least one son	-0.838 (1.535)	-0.871 (1.530)	-0.785 (1.446)	-0.887 (1.510)
Primogeniture x least one son	-0.186 (0.639)		-0.002 (0.007)	
Natural death x least one son x primogeniture	-0.247 (0.298)		-0.376 (0.426)	
Natural death x tenure		0.007 (0.506)		0.010 (0.671)
Least one son x tenure		-0.002 (0.263)		0.002 (0.224)
Natural death x least one son x tenure		-0.005 (0.200)		-0.008 (0.285)
<i>Century dummies</i>	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	Yes	Yes
<i>N</i>	13575	13575	13372	13372
<i>Pseudo R<sup>2</sup></i>	0.101	0.099	0.055	0.053

Control variables not shown. Absolute *t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Table A14. Children, tenures and international wars where countries were attacked

	(1)	(2)	(3)	(4)	(5)	(6)
Natural death	0.614*** (3.291)	0.585 (1.693)	0.264 (0.746)	0.663*** (3.489)	0.596 (1.671)	0.337 (0.944)
Primogeniture	-0.001 (0.008)	-0.001 (0.008)	0.000 (0.003)	-0.306 (1.448)	-0.306 (1.445)	-0.291 (1.401)
Least one son	0.073 (0.656)	0.070 (0.577)		0.137 (1.381)	0.131 (1.203)	
Tenure	-0.012* (2.173)	-0.012* (2.176)	-0.013* (2.512)	-0.011 (1.852)	-0.011 (1.858)	-0.012* (2.107)
Natural death x least one son		0.047 (0.109)			0.108 (0.245)	
Natural death x tenure			0.017 (1.287)			0.015 (1.163)
<i>Century dummies</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>Country dummies</i>	No	No	No	Yes	Yes	Yes
<i>N</i>	13575	13575	13575	13575	13575	13575
<i>Pseudo R<sup>2</sup></i>	0.066	0.066	0.066	0.026	0.026	0.026

Control variables not shown. Absolute *t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## 1i. Instrumental variable models

A15. Instrumental variables regression using regional adaption of primogeniture as an instrument for primogeniture

	(1)	(2)	(3)
	2SLS	2SLS	PROBIT
Natural death	0.148*** (5.627)	0.151*** (5.581)	1.077*** (13.353)
Primogeniture	0.011 (1.057)	-0.004 (0.325)	0.126 (0.877)
Natural death × primogeniture	-0.117*** (4.221)	-0.120*** (4.245)	-0.631*** (4.686)
First stage instruments: Primogeniture			
Regional primogeniture	2.525*** (7.690)	2.525*** (7.693)	2.525*** (7.690)
<i>Century dummies</i>	Yes	Yes	Yes
<i>Country dummies</i>	No	Yes	No
<i>N</i>	12792	12792	12792
Endogeneity tests			
<i>Correlation</i>	-0.02	0.03	-0.06
<i>Wald test (of correlation)</i>	(0.83)	(1.08)	(0.84)

Control variables and intercepts are not shown. Standard errors are clustered at the country level.

Absolute *t* statistics in parentheses

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## 1j. Civil wars that erupted the same year as monarchs died of natural reasons

As the unit of analysis is country-year, a possible concern is that we are unable to sufficiently distinguish between wars that broke out before the death of the monarch. To rule out this possibility, we have specifically investigated more detailed dates of the wars in question. Even though it is seldom possible to determine the exact start date of a war from textual histories, it is usually noted whether the war started before or after the death of the monarch.

We find that 38 of 43 civil wars began after the death of the monarch. Most, but not all, were related to the succession. Unrelated wars will however of course break out even in the years in which there was a monarch death. The analysis shows that our results not are the result of wars that precede the death of the monarch.

Table A16.

<i>Country</i>	<i>Year</i>	<i>Name of dead king</i>	<i>Name of conflict in source</i>	<i>After</i>	<i>Comment</i>
Austria	1439	Albert II	Hapsburg Dynastic Wars	Yes	The death of Albert II sparked war of succession.
Byzantine Empire	1041	Michael IV	Revolt of Michael V	Yes	The new emperor was overthrown when he exiled leading nobles.
Byzantine Empire	1180	Manuel I	Serb independence	Yes	The Serbs exploited disarray in government after king Manuel I died and revolted.
Byzantine Empire	1341	Adronikos III	Byzantine civil war	Yes	Conflict about the regency after Andronikus died.
Bohemia	1419	Wenceslaus	Hussite wars	Yes	Hussites rebelled against Sigismund who had inherited after Wenceslaus.
Bohemia	1437	Sigismund	Polish-Bohemian war	Yes	Succession war after the death of Sigismund.
Bohemia	1439	Albert II	Civil war	Yes	The death of Albert II sparked war of succession.
Castile	1214	Alfonso VIII	Castilian civil war	Yes	War between heirs of Alfonso VIII and a noble faction.
Castile	1474	Henry IV	Castilian civil war	Yes	War sparked by succession. Henry IV had no sons.
Denmark	1241	Valdemar II	Danish civil war	Yes	Succession struggle among Valdemar's sons following his death
Denmark	1533	Frederick I	Count's war	Yes	The Rigsraad refused to name a successor on the death of Frederick I, and it incited civil war.
England	1135	Henry I	English Dynastic War	Yes	Succession war between Stephen and Matilda.
England	1413	Henry IV	Lollard uprising	Yes	Not related to the succession. Sparked by attempt to arrest heretics.
England	1553	Edward VI	Northumberland's insurrection	Yes	Succession dispute.
England	1685	Charles II	Monmouth's rebellion	Yes	Succession dispute.
France	1461	Charles VII	France (Genoa)	No	According to Ilardi, the revolt of the republic of Genoa took place before the death of Charles VII, March-July.
France	1643	Louis XIII	France (South-West)	No	According to Beik 1974, the (tax) revolt was already underway in Rouergue when news came of the king's death.

Holy Roman Empire	1002	Otto III	Ardoin's revolt	No	The revolt started before Otto III died.
Holy Roman Empire	1125	Henry V	Civil war	Yes	Succession war between Lothair II and Fredrick Hohenstaufen following Henry V's death
Holy Roman Empire	1137	Conrad III	Civil war	Yes	Henry the Proud (and his son Henry the Lion) refuses allegiance to the new emperor Conrad III, becoming kings in their own.
Holy Roman Empire	1197	Henry VI	German civil war	Yes	Succession quarrel after Henry's death between Otto of Brunswick and Philip of Swabia
Hungary	1301	Andrew III	Hungarian civil war	Yes	Succession war after Andrew III died without surviving issue.
Hungary	1437	Sigismund	Polish-Bohemian war	Yes	Succession war after the death of Sigismund.
Hungary	1439	Albert II	Hungarian civil war	Yes	Death of Albert II sparked war of succession.
Naples	1435	Joan II	Naples (Succession, Anjou and Aragon)	Yes	Succession war after the death of Joan II.
Norway	1130	Sigurd the Crusader	Civil wars	Yes	The civil wars started when Sigurd died without legitimate male heirs.
Norway	1448	Christopher III	Scandinavian war of 1448-1471	Yes	Christopher III's death sparked succession war between Charles VIII and Christian I.
Ottoman Empire	1421	Mehmed I	Turkey (Succession)	Yes	Succession war between the son and brother of Mehmed I.
Ottoman Empire	1481	Mehmed II	Ottoman Civil War	Yes	Succession war between brothers.
Ottoman Empire	1520	Selim I	Turkey (Syria)	Yes	Revolt of the governor of Syria, Janbirdi, upon the death of Selim I.
Poland	1305	Wenceslaus II	Polish-Bohemian war	Yes	The successor Wenceslaus III was beset by challenges to his right to rule Poland and was later assassinated.
Poland	1382	Louis	Polish Civil War	Yes	Succession war.
Poland	1648	Ladislas IV	Chmielnicki's revolt	No	The revolt broke out before the death of Ladislas IV.
Poland	1733	Augustus II	War of the Polish Succession	Yes	Succession war between Augustus III (son of Augustus II) and Stanislaus I Leszczynski.
Portugal	1481	Alfonso V	Portuguese Civil War	Yes	The nobility revolt against the new king, and his new regulations.
Russia	1425	Basil I	Russian Civil War	Yes	Basil II, the son of Basil I came to power and was immediatly challenged by his uncle Yuri, who was supported by the Tartars.
Russia	1682	Feodor III	Streltsy rebellions	Yes	The Streltsy revolted after the death of Feodor III, making Sophia regent over Peter I.
Russia	1725	Peter I	Guerilla rebellion in the Caucasus	Yes	Seems to have broken out after Peter's death (but unclear start date).
Savoy	1637	Victor Amadeus I	Savoy	Yes	War over the control of the regencies of the underage sons of Victor Amadeus.
Scotland	1685	Charles II	Covenanters' Rebellion of 1685	Yes	The Lord of Argyll leads an attempt to overthrow the new king James VII.
Sweden	1290	Magnus III	Civil disorder	Yes	Struggles between Magnus' son Birger Magnusson and his brothers and the nobility.
Sweden	1448	Christopher III	Scandinavian war of 1448-1471	Yes	Succession war between Charles VIII and Christian I.
Sweden	1470	Charles VIII	Denmark (Sweden)	No	The rebellion broke out before the death of Charles.

**1k: International wars in which a country was attacked by foreign enemies the same year as it monarch died of natural reasons**

As with civil wars, we have investigated whether interstate wars that started years in which a monarch died broke out before or after the death. We find that 26 of 33 wars did so – a slightly smaller proportion than for civil wars, but still indicative that the results are not driven by changes in the dependent variable that preceded the independent variable.

Table A17.

<i>Country</i>	<i>Year</i>	<i>Name of dead king</i>	<i>Name of conflict in source</i>	<i>After</i>	<i>Comment</i>
Austria	1564	Ferdinand I	Emperor-Transylvania	Yes	The Transylvanian Diet declared war on the Habsburgs in the wake of Ferdinand I's death.
Austria	1657	Ferdinand III	Sweden, – Poland, Russia, Denmark, Austria	No	Austria entered the war before Ferdinand III died.
Austria	1740	Charles VI	War of the Austrian Succession	Yes	Neighboring countries declared war after refusing to acknowledge Maria Theresa's succession.
Byzantine Empire	1341	Andronikus III	Byzantine Civil War	Yes	Neighboring countries intervened in civil war over the regency of John V.
Byzantine Empire	1391	John V	Ottoman blockade of Constantinople	Yes	Ottomans blockaded Constantinople.
Bohemia	1740	Charles VI	War of the Austrian Succession	Yes	Neighboring countries declared war after refusing to acknowledge Maria Theresa's succession.
Castile	1214	Alfonso VIII	Castilian Civil War	Yes	The king of Leon took advantage of an ongoing civil war and invaded Castile.
Castile	1474	Henry IV	Castilian Civil War	Yes	Portugal intervened in Castilian civil war.
Denmark	1047	Magnus I	War with Harald Hardrada	Yes	Harald Hardrada of Norway invaded Denmark to take the throne from Magnus' successor Sweyn.
Denmark	1182	Valdemar I	German invasion	Yes	Fredrik Barbarossa ordered an invasion of Denmark after the new king Canute VI refused to swear loyalty to the Emperor.
Denmark	1448	Christopher III	Scandinavian War of 1448	Yes	In the wake of Christopher III's death civil war broke out in Norway with interventions by first Sweden and then Denmark.
Denmark	1533	Frederick I	Count's War	Yes	Christopher of Oldenburg and Lübeck intervened in Danish civil war.
England	1685	Charles II	Covenanter's rebellion	Yes	Rebellion against English rule in Scotland after the death of Charles II.
England	1727	George I	Anglo-Spanish War of 1727	No	War broke out before the death of George I.
France	1223	Phillip II	War with England	Yes	War broke out with England over Poitou.
Holy Roman Empire	1197	Henry VI	German Civil War	Yes	England and France intervened in succession conflict between Otto of Brunswick and Philip of Swabia.
Hungary	1301	Andrew III	Hungarian civil war	Yes	Succession war with several foreign interventions after Andrew III died without surviving issue.
Hungary	1564	Ferdinand I	Emperor - Transylvania	Yes	The Transylvanian Diet declared war on the Habsburgs in the wake of Ferdinand I's death.
Hungary	1740	Charles VI	War of the Austrian Succession	Yes	Neighboring countries declared war after refusing to acknowledge Maria Theresa's succession
Naples	1435	Joan II	Aragonese-Neapolitan War	Yes	Succession war with foreign interventions after the death of Joan



II.

Naples	1494	Ferdinand I	Italian War of Charles VIII	Yes	Charles VIII invaded Naples after the death of Ferdinand I to claim the throne from his son Alfonso II.
Ottoman Empire	1695	Ahmed II	Russo-Turkish War of 1695	Yes	Russia tried to conquer Azov from the Ottoman Empire.
Poland	1305	Wenceslaus II	Polish-Bohemian war	Yes	Bohemian forces intervened in Polish civil war in support of Wenceslaus III.
Poland	1434	Wladyslaw II	Teutonic Order – Poland-Lithuania	No	War broke out before Wladyslaw II died?
Poland	1632	Zygmunt III	Russo-Polish War	Yes	Russia attempted to conquer Smolensk during the power vacuum following Zygmunt III's death.
Poland	1733	Augustus II	War of the Polish Succession	Yes	Succession war between Augustus III (son of Augustus II) and Stanislaus I Leszczynski with intervention of foreign powers.
Portugal	1580	Cardinal Henry	Spanish-Portugese War of 1580-1589	Yes	The king of Spain invades Portugal to claim the throne after the death of Cardinal Henry.
Prussia	1688	Frederick William	War of the Grand Alliance/League of Augsburg	No	War broke out before the death of Frederick William.
Saxony	1733	Augustus II	War of the Polish Succession	Yes	France declared war on Saxony (and Austria) due to the country's involvement in the War of the Polish Succession.
Scotland	1542	James V	Anglo-Scottish War of 1542	No	War broke out before the death of James V.
Sweden	1470	Charles VIII	Denmark (Sweden)	No	War broke out before the death of Charles VIII.
Sweden	1611	Charles IX	War of Kalmar	No	War broke out before the death of Charles IX.
Lithuania	1492	Casimir	Muscovy-Lithuania	Yes	Muscovy invaded border regions shortly after Casimir's death.

## 2. Data description

There are four main parts of the data used in the paper: data on succession orders, monarchs, wars, and children. Below, we describe each.

### 2a. Principles of succession

The data for principles of succession builds on the databased compiled by Kokkonen & Sundell (2014), with the addition of the Ottoman Empire, which was not included in that dataset. The Ottoman Empire was coded using the same principles as the rest of the data.

The coding has been done on the basis of secondary sources, and whenever possible, to reflect *de jure* principles of succession. For states without codified succession laws, established customs are coded. Please refer to Kokkonen & Sundell (2014) for a more in-depth discussion of the coding.

Table A18. Succession orders

State	Succession order	Sources
Aragon	Primogeniture (Interregnum 1410-1412)	Abulafia 1997, Bisson 1986, Chaytor 1933, O'Callaghan 1983, Reily 1993
Austria	Primogeniture	Berenger & Simpson 1994, Evans 1979, Kann 1980
Bavaria	Primogeniture (Occupied 1704-1713)	Whaley 2011, Wilson 2009
Bohemia	Primogeniture 1230 - 1305 Election 1306 – 1345 (from Henry the Carinthian) Primogeniture 1346 – 1419 (from Charles IV) Election 1436 – 1620 (from Sigismund) Primogeniture 1620 – 1740 (from Ferdinand II) (Interregnum 1419-1436)	Agnew 2004, Betts 1955, Sedlar 1994,
Brandenburg/Prussia	Primogeniture	Adams 1913, Koch 1978, Urban 2003, Whaley 2011
Byzantine Empire	Election/selection	Norwich 1992, 1995, Treadgold 1997
Castile	Primogeniture	MacDonald 1965, O'Callaghan 1983, Palenzuela 2003, Reilly 1993
Denmark	Election 1014 -1648 (1660) Primogeniture 1648 (1660) – 1808 (from Frederick III) (Interregnum 1332-1340, 1553-1554)	Kurrild-Klitgaard 2000, Kurrild-Klitgaard 2004.
England	Election/selection 1066-1215 Primogeniture 1216-1811 (from Henry III) (Interregnum 1649-1659)	Bennett 1998, Dunham & Wood 1976, McKenna 1979, Mortimer 2006, Lieberman 1913, Whitelock 1956
France	Election 1031 – 1222	Giesey 1961, Jackson 1972, Le Patourel 1971, Lewis

	Primogeniture 1223 – 1793 (from Louis VIII)	1978, Potter 1937, Taylor 2001
Holy Roman Empire	Election (Interregnum 1137-1152, 1250-1308)	Gillingham 1991, Kannowski 2008, Weiler 2008, Whaley 2011
Hungary	Agnatic seniority 1001 - 1204 Primogeniture 1205 – 1300 (Andrew II) Election 1301 – 1655/1687 (from Wenceslaus) Primogeniture 1655/1687 – 1740 (from Leopold I)	Engel 2001, Frey & Frey 1978, Rady 2008, Sedlar 1994,
Leon	Primogeniture	O’Callaghan 1983, Reilly 1993
Lithuania	Primogeniture	Stone 2001
Naples	Primogeniture	Bisson 1986; Kelly 2003; Mathew 1992; Norwich 2004;
Navarre	Primogeniture	O’Callaghan 1983, Reilly 1993
Norway	Election 1000 - 1216 Primogeniture 1217- 1388 (from Haakon IV) Election 1389 – 1559 (from Eric of Pomerania) (Interregnum 1481-1483)	Helle 1981, 2003, Jochens 1997, Orning 2008
Ottoman Empire	Free for all (male members of the house of Osman)	Alderson 1957, Peirce 1993, Quataert 2005
Palatinate	Primogeniture	Whaley 2011, Wilson 2009
Poland/Polish-Lithuanian Commonwealth	Agnatic seniority 1025 - 1305 Primogeniture 1305 – 1369 (from Wladyslaw I) Election 1370 – 1795 (from Louis I) (Interregnum 1444-1447)	Davies 1981, Dvornik 1962, Knoll 1972, Maczak 1982, Samsonowicz 1982, Stone 2001,
Portugal	Primogeniture (Interregnum 1383-1385)	De Oliveira Marques 1972, Livermore 1969, Oresko 1998
Russia	Agnatic seniority 1359 – 1446 Primogeniture 1447 – 1682 (from Vasily II’s third reign) Election/selection 1682 – 1801 (from Peter I) (Interregnum 1610-1613)	Pierre 2006, Lieven 2006, Whittaker 2001
Savoy	Primogeniture	Cox 1974, Lins 1913, Previt�-Orton 1912
Saxony	Primogeniture	Whaley 2011
Scotland	Election/selection (Tanistry) 1034 - 1123 Primogeniture 1124 – 1625 (from David I) (Interregnum 1290-1292, 1296-1306)	Penman 2003, 2008, Stevenson 1927
Sicily	Primogeniture	Bisson 1986; Mathew 1992, Norwich 2004
Spain	Primogeniture	MacDonald 1965, O’Callaghan 1983, Palenzuela 2003, Reilly 1993
Sweden	Election 1130 – 1521 (1544) Primogeniture 1521 (1544) -1792 (from Gustav I)	Helle 2003, Lagerqvist & �berg 2002, Liljegren 2004, Oresko 1998, Sch�ck 1984

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## **2b. Monarch data**

The data consists of entries for each monarch in the included states, including year of birth and death, ascension to and descension from the throne, and most importantly, reason for leaving the throne. In this paper, we construct a variable that indicates whether monarch died in office, from natural – or rather, non-political – causes. Accidents are included in these non-political deaths. The data is compiled from biographical sources, and is described in more detail in Kokkonen & Sundell (2014), where the data was first used.

## **2c. War data**

Our data on wars is an aggregation of other compilations in other sources. We have scoured previous research on historical wars for compilations to include, and have selected those that cover many countries, for long periods of time. The wars also need to be listed in a structured way – textual histories in running texts have not been included. It was also necessary that there were some indication whether the war was “civil” or “interstate”.

A war has been included in the dataset if it is mentioned in at least one source. Our rationale is that the most likely explanation for differences in which wars that are mentioned in are differing priorities, not beliefs about which wars actually took place. The more well-known wars are generally covered by most sources, whereas lesser wars perhaps are left out of some sources for considerations of space. By combining them, we get a fuller picture. The start date has been set to the earliest reported, and the end date to the latest, for similar reasons. When possible, we have recorded

separate start and end dates for countries that participated in larger conflicts, such as the Thirty Years' War.

*Correspondence between sources*

There are large differences among how well the different sources overlap. The highest correspondence is found between sources that explicitly build on each other. Phillips and Axelrod cite Kohn as the main basis of their work (Phillips and Axelrod 2005:xxi), and Brecke does the same for Luard (Brecke 2001). 79 percent of the civil wars in Kohn are subsequently covered by Phillips and Axelrod, and 85 percent of Luard's wars are included in the Brecke dataset.



Table A19. Percentage of wars mentioned by the source listed in the row that are also mentioned by the source listed in the column.

Panel A: 1000-1800							
	Phillips & Axelrod	Kohn	Dupuy & Dupuy	Clodfelter	Luard	Brecke	Nr of country-wars
Phillips & Axelrod		88	58	22	52	54	138
Kohn	79		58	20	48	50	153
Dupuy & Dupuy	55	61		17	38	47	146
Clodfelter	67	65	54		63	72	46
Luard	47	48	36	19		85	153
Brecke	30	31	28	12	53		247
Panel B: 1494-1800							
	Phillips & Axelrod	Kohn	Dupuy & Dupuy	Clodfelter	Luard	Brecke	Nr of country-wars
Phillips & Axelrod		89	61	41	69	71	75
Kohn	82		61	37	65	67	82
Dupuy & Dupuy	68	74		38	58	67	66
Clodfelter	68	65	54		63	72	46
Luard	49	50	36	27		84	107
Brecke	29	30	25	18	50		181

Note: For example, in the period 1494-1800, Clodfelter covers 41 percent of the wars that are mentioned by Phillips and Axelrod, but Phillips & Axelrod cover 68 percent of the wars mentioned by Clodfelter.

### *Descriptive statistics*

Table A20 describes the percentages of years with onset of war and ongoing war, both civil and interstate, for countries in the sample. Although there is substantial variation, one could suspect that there is a slight bias in the reporting. The sources used are written in English, and England is the country with the most frequent onset of civil war in the data. Also notable is that other large states like the Ottoman Empire, France and the Holy Roman Empire rank as the most civil war-prone. This could however be a reflection of the reality that it is harder to keep order in a large empire without rebellions and civil war breaking out somewhere. Nevertheless, one should be wary of interpreting too much into differences in country averages. Therefore, we run separate models with country fixed effects, both in the logit and the linear probability models (reported in section 1f in the appendix), thereby removing between-country variation.

Table A20. Descriptive statistics on years with war onset and ongoing war for states in the sample.

State	Civil war		Interstate war		Years
	War onset	Years in war	War onset	Years in war	
Aragon	1.1%	5.2%	3.1%	20.0%	445
Austria	3.7%	15.2%	16.8%	78.8%	434
Byzantine Empire	5.1%	31.7%	11.0%	55.2%	429
Bavaria	0.7%	1.3%	2.7%	25.5%	149
Bohemia	2.3%	23.9%	3.7%	29.2%	511
Castile	1.0%	7.9%	3.7%	32.6%	482
Denmark	1.4%	8.3%	6.5%	37.0%	786
England	8.6%	32.4%	12.9%	62.9%	734
France	6.7%	24.4%	13.0%	68.8%	763
Holy Roman Empire	5.8%	48.8%	8.2%	40.8%	377
Hungary	2.6%	15.1%	8.6%	45.7%	740
Leon	0.0%	0.0%	2.5%	31.5%	203
Lithuania	1.1%	10.6%	11.7%	53.2%	188
Naples	1.6%	11.1%	3.7%	20.8%	433
Navarre	0.2%	0.7%	0.8%	8.2%	607
Norway	1.1%	22.5%	2.3%	18.0%	560
Ottoman Empire	7.7%	38.7%	21.8%	83.8%	431
Palatinate	0.5%	0.9%	2.5%	19.4%	444
Poland	3.1%	12.6%	8.0%	44.1%	771
Portugal	0.6%	1.3%	4.1%	30.2%	635
Prussia	0.2%	3.2%	1.6%	13.5%	431
Russia	5.2%	24.3%	14.7%	69.8%	441
Savoy	0.5%	1.2%	5.5%	42.0%	417
Saxony	0.5%	2.7%	2.7%	23.9%	444
Scotland	4.3%	10.7%	5.0%	26.1%	656
Sicily	0.8%	16.4%	0.8%	16.4%	128
Spain	4.0%	47.6%	22.7%	81.7%	273
Sweden	2.7%	24.3%	6.2%	41.8%	663

### *Civil/interstate wars*

Many wars does not fit squarely into a category of “civil war” or “interstate war”. Any categorization will naturally be subject to possible criticism, especially given the limited data available. However, our main principle of coding is that wars within states – outright wars between different factions, but also rebellions and uprisings – constitute civil wars. Conflict between countries constitute interstate wars. When one country intervenes in another conflict, for instance by supporting a rebellion, the war is counted differently for the countries involved. If England sends troops to support a rebellion in France, the war is counted as interstate for England, as it is in conflict with another state. For France, it is counted both as a civil war – as it is a conflict against elements within the state – and an interstate conflict. Financial or political support without actually sending troops are however not counted as being involved in the conflict.

### *Personal unions*

In general, we treat kingdoms that were joined in a personal union as separate entities. However, things become complicated when there is a civil war in one of the kingdoms, and the other kingdom joins in the fight, for instance when the Swedes rebelled against the Christian II, who was king of the Kalmar Union, who sent danish troops to suppress the rebellion. Our coding principle is that the war counts differently in Sweden and Denmark. For Sweden, it is a civil war, as part of the population was in rebellion against the king of Sweden (Christian). However, in Denmark, it counts as an interstate war, as Christian was sending Danish troops abroad. There was no civil strife within Denmark.

Sometimes the sources describe a war by a king who ruled several countries, without making it explicit whether all of the countries were involved or not. We have then tried to determine which countries that joined in the fight from the textual information in the sources.

### *Battles excluded*

Some sources list famous battles specifically. Battles in wars that have already been listed elsewhere are excluded, but in cases where a single battle constituted the entire military confrontation in the war, and the war is not listed otherwise, the battle is included as a war.

### *Colonial wars*

Colonial wars have been excluded, as they generally are driven by different dynamics and affect the country less than a war conducted in or close to the home country. This generally means that wars outside of Europe are excluded, with the exception of Russia, the Ottoman Empire and the Byzantine Empire. When a war was fought both in the European theater and on another continent, we only include the war in the European theater. For instance, several sources record Queen Anne's war – the part of the War of the Spanish Succession fought in North America – separately. We only include the War of the Spanish Succession in the dataset.

## **2d. Children data**

The data on monarchs' children contains information on the offspring of each ruling monarch. For each child, we note the name, gender and year of birth and death. For each year, we can thus infer the age of each child. This is used to compute a variable

for whether the monarch had any living sons each year. Only legitimate children are included. The sources are listed below:

*Main sources for monarchs' children*

- Cawley, Charles. 2017. *Medieval Lands. A prosopography of medieval European noble and royal families*. Retrieved spring 2017 from <http://fmg.ac/Projects/MedLands/>
- Schwennike, Detlev. 2005. *Europäische Stammtafeln: Neue Folge*. Frankfurt am Main: Vittorio Klostermann.
- Isenburg, W. K. Prinz von & Frank Baron Freytag von Loringhoven. 1975. *Europäische Stammtafeln: Stammtafeln zur Geschichte der Europäischen Staaten*. Marburg: Verlag von J. A. Stargardt.
- Alderson, Anthony. D. 1956. *The Structure of the Ottoman Dynasty*. Oxford: Oxford University Press.

*Complementary sources for monarchs who are missing in the main sources*

*Byzantine Empire*

- Phillips, Jonathan. 2004. *The Fourth Crusade and the Siege of Constantinople*. London: Penguin Books

*Denmark*

- Nielsen, Kay & Ib Askholm. 2007. *Danmarks Kongelige Familier i 1000 år*. Copenhagen: Askholm Forlag.

*Sweden*

- Beckman, Bjarne. 1954. *Matts Kättilmundsson och hans tid I-II*. Stockholm: Wahlström och Widstrand.
- Elgenstierna, Gustav. 1934. *Den introducerade svenska adelns ättartavlor*. Stockholm: P. A. Norstedt & Söners Förlag.
- Gillingstam, Hans 1952. *Ätterna Oxenstierna och Vasa under medeltiden: släkthistoriska studier*. Stockholm: Almqvist & Wiksell.
- Gillingstam, Hans. 2017. Magnus Henriksson, *Svenskt biografiskt lexikon*. Accessed April 20, 2017 from <https://sok.riksarkivet.se/sbl/artikel/10155>
- Harrison, Dick. 2002. *Karl Knutsson: En biografi*. Stockholm: Historiska Media.
- Lagerqvist, Lars O. 1976. *Sverige och dess regenter under 1000 år*. Stockholm: Albert Bonnier Förlag.
- Larsson, Lars-Olof. 1984. *Engelbrekt Engelbrektsson och 1430-talets svenska uppror*. Stockholm: Norstedt.

*Russia*

- Dunning, Chester S. L. 2012. *Russia's First Civil War: The Time of Troubles and the Founding of the Romanov Dynasty*. Philadelphia: Penn State University Press.
- Hughes, Lindsey. 2008. *The Romanovs*. London: Hamdledon Continuum.

*Norway*

- Harrison, Dick. 2002. *Karl Knutsson: En biografi*. Stockholm: Historiska Media.

- Krag, Claus. 2009. 13 Februar. Håkon Eiriksson. In *Norsk biografisk leksikon*.  
Retrieved April 26, 2017 from [https://nbl.snl.no/H%C3%A5kon\\_Eiriksson](https://nbl.snl.no/H%C3%A5kon_Eiriksson)
- Krag, Claus. 2009. 13 Februar. Svein Håkonsson. In *Norsk biografisk leksikon*.  
Retrieved April 26, 2017 from [https://nbl.snl.no/Svein\\_H%C3%A5konsson](https://nbl.snl.no/Svein_H%C3%A5konsson)
- Krag, Claus. 2009. 13 Februar. Eirik Håkonsson. In *Norsk biografisk leksikon*.  
Retrieved April 26, 2017 from [https://nbl.snl.no/Eirik\\_H%C3%A5konsson](https://nbl.snl.no/Eirik_H%C3%A5konsson)
- Nielsen, Kay & Ib Askholm. 2007. *Danmarks Kongelige Familier i 1000 år*.  
Copenhagen: Askholm Forlag.

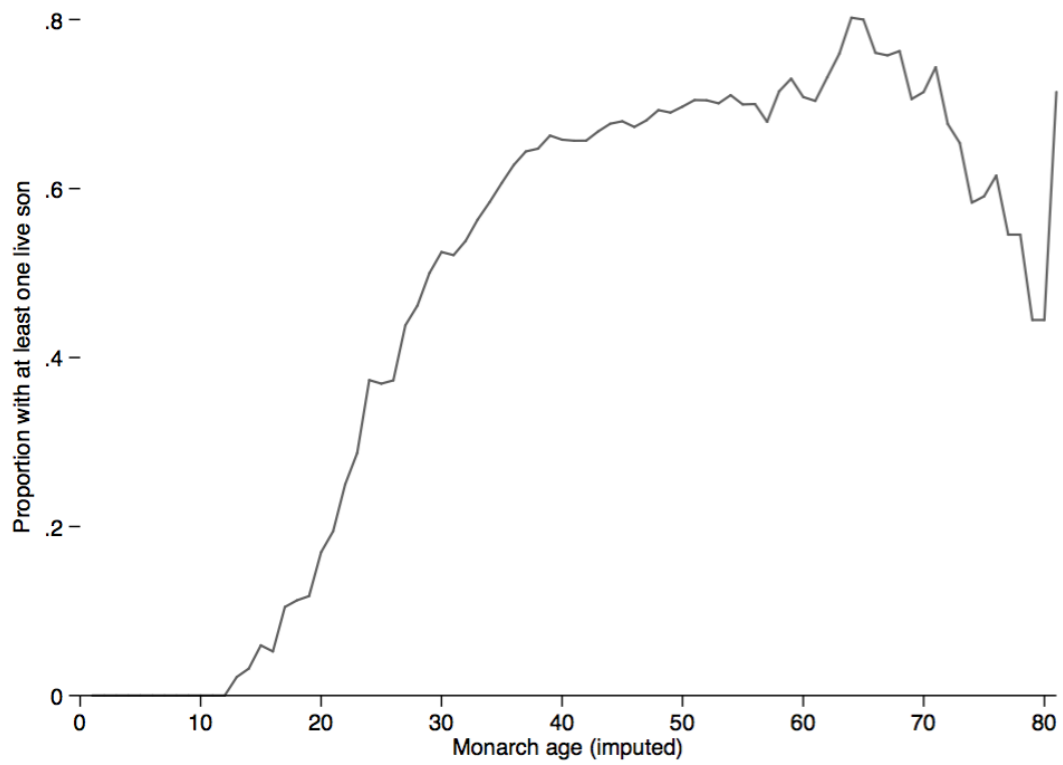
A cause for concern is that not all children are reported in the data. For instance, it is possible that girls, which often were excluded from the succession, could be missing. Overall, boys constitute 53.9 percent of the children, which is slightly higher than the natural sex ratio at birth, according to which about 51.2 percent of the children should be male. However, the difference is more exaggerated among first-born children, of which 59.5 percent are male, according to the data.

Table A21. Sex ratios for monarchs' legitimate children

	<i>Number of children</i>	<i>Percent male</i>	<i>Sex ratio</i>
First child	573	59.5	1.47
Second child	497	49.9	1.00
Third child	445	55.5	1.25
Fourth child	395	49.1	0.96
Fifth child	353	51.8	1.07
Sixth child	301	53.5	1.15
Seventh child	255	52.2	1.09
Eight child	209	54.1	1.18
Ninth child	166	48.8	0.95
Tenth Child	139	45.3	0.83
All children	3727	53.9	1.17

Note: Based on all countries except the Ottoman Empire, for which the sources on female children are less reliable than the sources on male children. Children with unknown sexes are not included in the table.

Figure A22. Proportion of monarchs in the sample with at least one living son.



Note: Only seven monarchs reached the age of 81. The uptick at the end is thus due to small sample size.