1 Controlling for non-linearities

Since previous studies have found significant evidence for deaths from natural catastrophes to be non-linearly related to different measures of development (Brooks et al. 2005, Kellenberg and Mobarak 2008, Patt et al. 2010, Costa 2012), Table A presents the results of our panel regression analysis controlling for quadratic effects. Two neighboring columns always belong to one model specification. As can be seen from the number of observations, the left column corresponds to 5-year intervals and the right column to 10-year intervals. The dependent variable is the logged value of the number of people killed per 1000 of national population.

Model (4) reproduces Model (1) from Table 1 in the main article. As an additional control it includes HDI squared. While the squared term does not turn out to be significant, the linear effect remains unchanged for both panels (the 5-year and 10-year intervals). Model (5) corresponds to Model (2) from Table 1 in the main article and it shows a similar result controlling for the three squared components of the HDI. While there is no additional explanatory power coming from the GDP component of the HDI - neither in linear, nor in non-linear form - there seems to be some evidence for the relationship between life expectancy and death counts to be u-shaped. The education index, however, remains the strongest and most significant component of the HDI in explaining variation in the number of deaths from natural catastrophes and again, there doesn't appear to be a non-linear relationship.

Since we find an unexpected positive relationship between the polity score and our measure of vulnerability, in Model (6) of Table A we also test for non-linearities in democratization. But even in this specification, we find no evidence of a u-shaped pattern.

Finally, Figure A corresponds to Figure 1 in the article showing the bivariate relationship between deaths from natural catastrophes and the share of women aged 20-39 with at least secondary education. As can be seen, we find the same pattern when plotting the total number of deaths against the average HDI-value for each country between 1980 and 2010.

1

References

- Brooks N, Adger WN, and Kelly PM (2005), *The determinants of vulnerability and adaptive capacity at the national level and the implications for adaptation*. Global Environmental Change 15(2):151-163.

- Patt AG, et al. (2010) *Estimating least-developed countries' vulnerability to climate-related extreme events over the next 50 years*. (Translated from English) P Natl Acad Sci USA 107(4):1333-1337.

- Kellenberg DK and Mobarak AM (2008) *Does rising income increase or decrease damage risk from natural disasters?* Journal of Urban Economics 63(3):788-802.

- Costa S (2012) *Government Repression and the Death Toll from Natural Disasters*.

Figure A: Relationship between the log of disaster deaths (per 1000 of 1980 population) and the 1980-2010 mean value of HDI for all 130 countries (left side) and 63 countries with one or more disasters on average per year (right side).
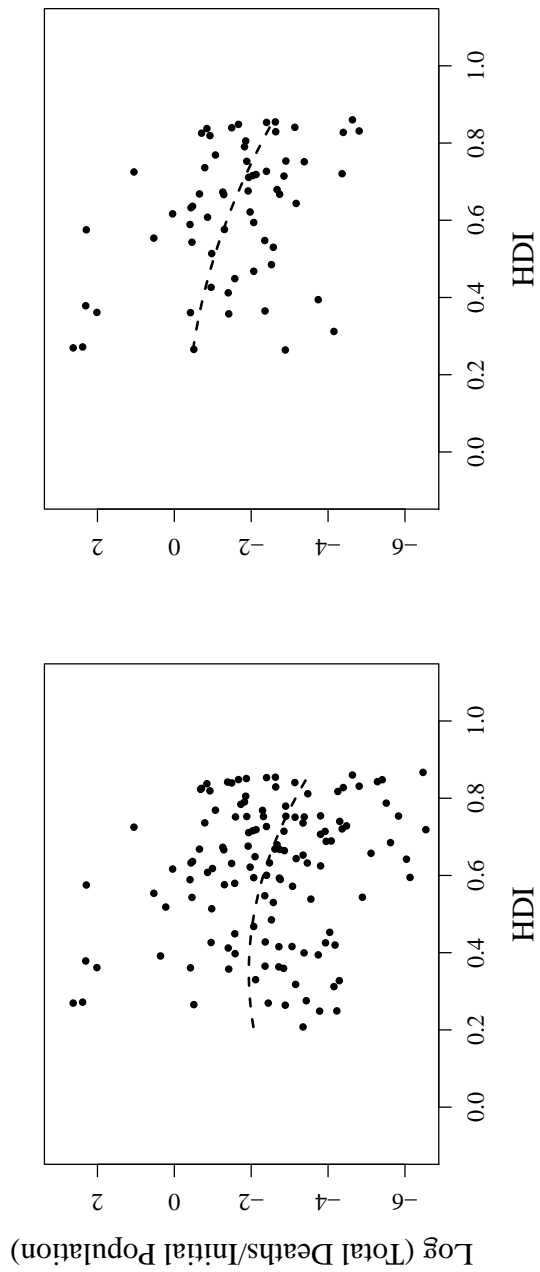
Table A: Determinants of National Death From Natural Disaster. Notes: Panel regression for 125 countries over 5- and 10-year intervals between 1980 and 2010 using time fixed effects. The dependent variable is the log of deaths per capita. Numbers in parentheses are standard errors based on the heteroskedasticity- and autocorrelation-resistant covariance matrix. Other independent variables not reported here are dummy variables for 17 world regions.

Significance codes: 0.01 = '***'; 0.05 = '**'; 0.1 = '*' .

	Model (4)		Model (5)		Model (6)	
	5-yr	10-yr	5-yr	10-yr	5-yr	10-yr
Log (Disasters/Pop in 1000)	0.707***	0.715***	0.702***	0.686***	0.698***	0.681***
	(0.076)	(0.115)	(0.076)	(0.116)	(0.075)	(0.114)
Log (Density)	0.124*	0.162*	0.180**	0.221**	0.141**	0.157
	(0.067)	(0.096)	(0.071)	(0.102)	(0.069)	(0.098)
Polity Score	0.277**	0.333	0.291**	0.345*	0.289**	0.355*
	(0.137)	(0.207)	(0.136)	(0.203)	(0.137)	(0.205)
Coastal Country	1.248***	1.079***	1.186***	0.970***	1.175***	0.946***
	(0.191)	(0.275)	(0.193)	(0.275)	(0.188)	(0.270)
HDI	-9.681^{***}	-11.780^{***}				
	(2.862)	(4.146)				
HDI^2	3.395	4.675				
	(2.492)	(3.629)				
LEX component of HDI			4.646	11.126*	-2.822^{**}	-1.271
			(4.455)	(6.436)	(1.141)	(1.642)
GDP component of HDI			-2.274	-3.993	-0.531	-0.841
			(2.314)	(3.335)	(0.796)	(1.160)
EDU component of HDI			-6.789^{***}	-10.324^{***}	-3.623^{***}	-5.171^{***}
			(2.314)	(3.395)	(0.746)	(1.086)
LEX component of HDI^2			-6.319^{*}	-10.592^{**}		
			(3.622)	(5.264)		
GDP component of HDI^2			2.182	3.803		
			(2.346)	(3.396)		
EDU component of HDI^2			3.129	5.138		
			(2.173)	(3.198)		
Polity Score^2					0.011	-0.126
					(0.275)	(0.389)
F-Statistic	15.22	8.54	14.22	8.22	14.97	8.55
N	706	355	706	355	706	355

4

Table B: Regional Dummies Used in Table 1 and Table A.

	South America	Australia/New Zealand	Western Europe	South-Central Asia	Western Asia	Eastern Europe
1	Argentina	Australia	Austria	Bangladesh	Armenia	Bulgaria
2	Bolivia	New Zealand	Belgium	Sri Lanka	Cyprus	Czech Republic
3	Brazil		France	India	Jordan	Hungary
4	Chile		Germany	Iran (Islamic Republic of)	Saudi Arabia	Poland
5	Colombia		Netherlands	Kazakhstan	Syrian Arab Republic	Romania
6	Ecuador		Switzerland	Kyrgyzstan	Turkey	Russian Federation
7	Guyana			Nepal		Slovakia
8	Paraguay			Pakistan		Ukraine
9	Peru			Tajikistan		
10	Uruguay			Turkmenistan		
11				Uzbekistan		

	South-Eastern Asia	Middle Africa	Northern America	Eastern Asia	Eastern Africa	Central America
1	Cambodia	Cameroon	Canada	China	Comoros	Costa Rica
2	Indonesia	Central African Republic	United States of America	Japan	Ethiopia	El Salvador
3	Lao People's Democratic Republic	Chad		Republic of Korea	Eritrea	Guatemala
4	Malaysia	Gabon		Mongolia	Kenya	Honduras
5	Philippines				Madagascar	Mexico
6	Viet Nam				Malawi	Nicaragua
7	Thailand				Mauritius	Panama
8					Mozambique	
9					Rwanda	
10					Zimbabwe	
11					Uganda	
12					United Republic of Tanzania	
13					Zambia	

	Southern Europe	Caribbean	Western Africa	Northern Europe	Northern Africa	Southern Africa
1	Croatia	Cuba	Benin	Denmark	Morocco	Namibia
2	Greece	Dominican Republic	Ghana	Estonia	Egypt	South Africa
3	Italy	Haiti	Guinea	Finland		
4	Portugal		Côte d'Ivoire	Ireland		
5	Slovenia		Mali	Latvia		
6	Spain		Mauritania	Lithuania		
7	TFYR Macedonia		Niger	Norway		
8			Nigeria	Sweden		
9			Togo	United Kingdom		
10			Burkina Faso			

Table C: Regional aggregation of data used in Table 1 and Table A. The regional aggregate is the population-weighted mean of the individual countries' values. Population figures are in 1000s.

Region	Population	Density	Polity2	HDI	LEXhdi	GDPhdi	EDUhdi	EDU
Australia/New Zealand	16351	4	1.00	0.87	0.92	0.80	0.91	0.88
Caribbean	6651	196	0.77	0.68	0.78	0.56	0.71	0.65
Central America	72353	64	0.40	0.71	0.81	0.62	0.72	0.44
Eastern Africa	33916	76	-0.09	0.36	0.48	0.24	0.45	0.15
Eastern Asia	1093327	157	-0.51	0.61	0.80	0.43	0.68	0.61
Eastern Europe	85364	55	0.18	0.74	0.77	0.63	0.83	0.98
Melanesia	784	43	0.39	0.65	0.74	0.49	0.75	0.72
Middle Africa	36477	21	-0.23	0.34	0.46	0.22	0.45	0.20
Northern Africa	44165	45	-0.52	0.56	0.70	0.48	0.52	0.29
Northern America	257255	26	1.00	0.87	0.90	0.84	0.88	0.96
Northern Europe	38939	168	0.99	0.84	0.89	0.78	0.86	0.84
South-Central Asia	742085	330	0.59	0.48	0.64	0.36	0.49	0.25
South-Eastern Asia	133986	154	-0.08	0.59	0.72	0.42	0.70	0.42
South America	98505	22	0.65	0.71	0.78	0.60	0.77	0.49
Southern Africa	1576	39	0.12	0.53	0.55	0.46	0.61	0.38
Southern Europe	40248	133	0.95	0.83	0.91	0.76	0.82	0.79
Western Africa	76267	98	-0.02	0.39	0.46	0.33	0.43	0.19
Western Asia	39730	87	0.19	0.69	0.77	0.64	0.69	0.45
Western Europe	39421	167	0.93	0.86	0.91	0.80	0.86	0.85