

Online Appendix

A Matching subnational districts

Steps in matching gridded data with the regional information in the pooled WVS/EVS:

1. The disaster data is available at the grid-cell level, while the finest spatial information in the pooled WVS/EVS 1981-2009 is variable x048 indicating the subnational district where the interview was conducted. The WVS/EVS "districts" can be both actual districts, but in a few cases also cities. The two types of information are matched with a shapefile from ESRI with first administrative districts across the globe, which means a unit of disaggregation just below the country-level.
2. The ESRI-shapefile also has information on the type of land within the district: Primary land, large island, medium island, small island, and very small island. To prevent averaging across for instance islands and primary land, the five categories are ranked with primary land as the preferred and very small island as the least preferred. When a district is divided into several polygons, only the highest ranked polygon is kept.
3. In many cases, the x048 variable varies across time. For instance, the same country can be divided into 15 districts in one year and only five larger districts in another year. The most disaggregate division is chosen, provided that it matches the shapefile for first administrative districts as well as possible.
4. For many countries, the level of aggregation in the ESRI shapefile is different from that in the district identifier, x048, from EVS/WVS. In these cases, the districts are aggregated to the finest level possible.
5. The districts are illustrated in Figure 2 in the paper. The districts included in the cross-district analysis encompass both types of green, while the districts included in the event study are indicated with dark green.

B Additional results for cross-district analysis

Most robustness checks replicate Panel A of Table 2, but to keep the tables from exploding in size, checks replicate only column (8) of the same table when more parameters are changed. This specification uses the preferred aggregate measure, Strength of Intrinsic Religiosity Scale.

B.1 Summary statistics

Table A1. Summary statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Strength of Religiosity Scale	106,054	.736	.296	0	1
Strength of Intrinsic Religiosity Scale	107,022	0.775	0.311	0	1
Dist(earthquakes) 1000 km	211,883	.441	.544	0	3.355
Age	207,293	41.602	16.555	15	108
Male	209,899	.478	.500	0	1
Married dummy	211,193	.575	.494	0	1
Absolute latitude	211,883	34.174	15.064	.119	67.669
Dist(coast) 1000 km	211,883	.239	.257	0	1.990
Earthquake dummy period t	211,714	.068	.250	0	1
Earthquake dummy period t-1	211,714	.073	.259	0	1
Year	211,883	2002	6.060	1981	2009

Table A2. Differences in means based on median earthquake risk

Sample	Full		Below median risk		Above median risk		Difference	Difference after geo var accounted for
Variable	Obs	Mean	Obs	Mean	Obs	Mean		
Intrinsic religiosity	107,022	0.775	47,178	0.702	59,844	0.834	0.132***	0.028***
Male	209,730	0.478	105,665	0.470	104,065	0.486	0.015***	-0.011**
Married	211,034	0.575	105,658	0.562	105,376	0.587	0.025***	0.012
Age	207,292	41.602	104,507	43.161	102,785	40.017	-3.145***	-0.415
Income category	159,712	4.570	75,673	4.797	84,039	4.365	-0.432***	-0.156
Education category	196,123	4.505	99,422	4.495	96,701	4.514	0.019*	0.116
Lights per km2	210,787	0.101	105,902	0.009	104,885	0.194	0.185***	-0.006
Unemployed	206,206	0.095	105,162	0.091	101,044	0.099	0.008***	-0.004

Notes. Geographic variables include dummies for earthquake in year t and t-1, distance to the coast, absolute latitude, and country fixed effects.

B.2 Different earthquake risk measures

The main measure of earthquake intensity throughout Section 3.4 is the distance to earthquake zones 3 or 4. Table A3 reproduces column (8) of Panel A of Table 2 using distance (and log distance) to zones 1-4, 2-4, 3-4, and 4. Table A4 uses instead the average value of earthquake zones across pixels within a district. Panel A of Table A4 shows that the result

that the result is maintained across all religiosity measures when all controls, except country-by-year fixed effects, are included. Panel B shows that the mean-measure does not hold enough within-country variation to exert an effect on churchgoing and the feeling that God gives comfort within countries. The no-effect on churchgoing is consistent with the religious coping literature. Panel C shows that the distance to earthquake zones wins the horse race between the two measures. This may be because the mean-based measure does not vary for the districts that lie outside the earthquake zones 1-4. For these districts, the measure takes the value zero. However, the actual probability of an earthquake hitting is not equal to zero. This can be realized when comparing Figures 3 and 6; some earthquakes hit in earthquake zones zero. The distance-based measure captures better this variation.

Table A3. Main results with alternative earthquake measures

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dependent variable: Strength of Intrinsic Religiosity Scale										
Distance to earthq zones 1-4	-0.061** (0.029)									
Distance to earthq zones 2-4		-0.084*** (0.029)								
Distance to earthq zones 3-4			-0.063*** (0.016)							
Distance to earthq zone 4				-0.027*** (0.008)						
Log (1+) Dist(earthq zones 1-4)					-0.086** (0.040)					
Log (1+) Dist(earthq zones 2-4)						-0.122*** (0.042)				
Log (1+) Dist(earthq zones 3-4)							-0.096*** (0.024)			
Log (1+) Dist(earthq zone 4)								-0.076*** (0.018)		
Distance to fault line									-0.037*** (0.011)	
Log (1+) Dist(fault line)										-0.058*** (0.019)
Observations	104,040	104,040	104,040	104,040	104,040	104,040	104,040	104,040	102,112	102,112
R-squared	0.325	0.325	0.325	0.325	0.325	0.326	0.325	0.326	0.318	0.318
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Regions	591	591	591	591	591	591	591	591	579	579
Countries	66	66	66	66	66	66	66	66	66	66

Notes. The dependent variable is the Strength of Intrinsic Religiosity Scale [0,1]. Baseline controls are the same as Panel A, Table 2.

Table A4. Main results with average earthquake zones as risk measure

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	impgod	relpers	service	comfort	believe	afterlife	SRS	SIRS
Panel A. Excluding country-by-year FE								
Mean earthquake zone	0.123*** (0.032)	0.105*** (0.030)	0.036* (0.020)	0.072** (0.033)	0.087*** (0.029)	0.063* (0.035)	0.063** (0.026)	0.073*** (0.027)
Observations	198,265	192,121	196,861	126,196	129,911	120,073	103,283	104,041
R-squared	0.192	0.054	0.151	0.100	0.085	0.058	0.145	0.130
District and indl controls	Y	Y	Y	Y	Y	Y	Y	Y
Panel B. Including country-by-year FE								
Mean earthquake zone	0.039*** (0.014)	0.025* (0.013)	0.008 (0.010)	0.009 (0.012)	0.013* (0.007)	0.042** (0.020)	0.016* (0.008)	0.019** (0.009)
Observations	198,264	192,120	196,860	126,195	129,910	120,072	103,282	104,040
R-squared	0.406	0.207	0.278	0.263	0.226	0.201	0.336	0.325
District and indl controls	Y	Y	Y	Y	Y	Y	Y	Y
Country-by-year FE	Y	Y	Y	Y	Y	Y	Y	Y
Panel C. Horse race								
Mean earthquake zone	0.029** (0.012)	0.016 (0.013)	-0.000 (0.009)	-0.001 (0.011)	0.008 (0.006)	0.025 (0.018)	0.007 (0.007)	0.009 (0.007)
Distance to earthq zones 3-4	-0.043*** (0.014)	-0.039** (0.020)	-0.035** (0.016)	-0.060*** (0.021)	-0.033* (0.018)	-0.107*** (0.026)	-0.059*** (0.016)	-0.060*** (0.016)
Observations	198,264	192,120	196,860	126,195	129,910	120,072	103,282	104,040
R-squared	0.407	0.208	0.278	0.263	0.226	0.202	0.337	0.325
District and indl controls	Y	Y	Y	Y	Y	Y	Y	Y
Country-by-year FE	Y	Y	Y	Y	Y	Y	Y	Y

Notes. Panel A and B replicate Panel A of Table 2 with the average of earthquake zones as an alternative measure of long-term earthquake risk, excluding country-by-year FE in Panel A and including them in Panel B. Panel C includes country-by-year FE and works as a horse race between the mean earthquake measure and the distance measure. District and individual controls for distance to coast, absolute latitude, individuals' age, age squared, sex, and marital status

B.3 The impact of earthquakes in surrounding areas

I show below whether people in surrounding areas are affected by earthquakes that did not hit their local neighbourhood. I do so by showing that google searches on earthquakes also increase in surrounding areas after one specific earthquake. The United States is a suitable place to investigate google searches, as the assumption that everyone has access to the internet is rather believable. I pick the South Napa Earthquake, that hit Napa Valley in California on the 24th of August 2014. The consequences included reconstruction costs for around 1 billion dollars, 1 dead, and 200 injured. The earthquake had a score of 6.0 on the Richter scale.

The maps below show the share of total google searches that included the search term

"South Napa earthquake" in year 2014.⁵⁵ Results are similar for searches on "earthquake". The state with the highest share of searches on "South Napa earthquake" is California, followed by Hawaii and states located close to California. These other states were not hit by the earthquake, but searched for information about it nevertheless. Similarly with metropolitan areas; areas closer to the epicenter searched more for information.

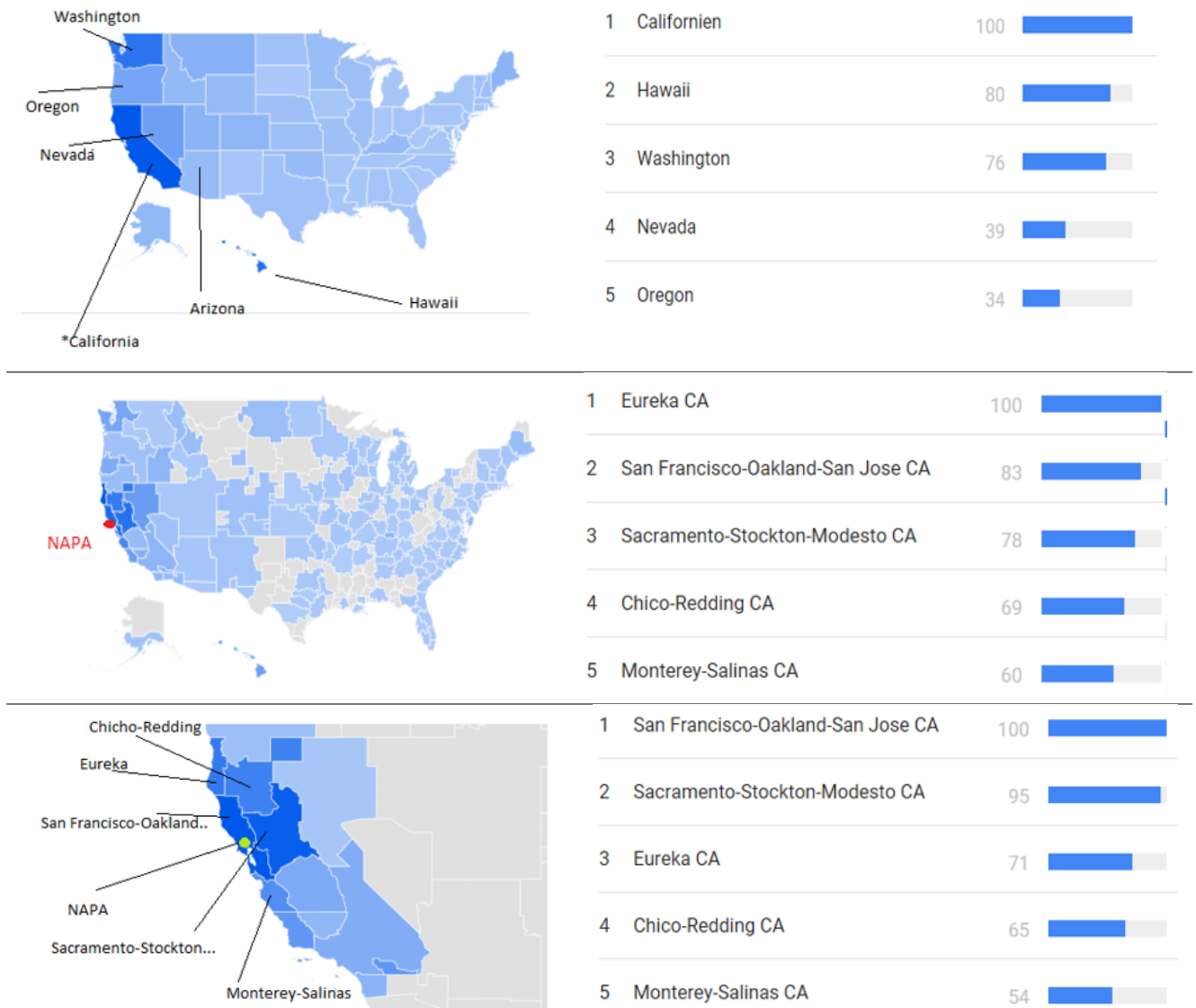


Figure A1. Google searches on "South Napa earthquake"

⁵⁵Ideally, I would have liked to restrict the analysis to the period just after the earthquake, but Google trends only allows restricting the searches to one specific year. The vast majority of searches on "South Napa earthquake" in 2014 occurred in the month after the South Napa earthquake.

B.4 Number of individuals in each subnational district

While the main regressions are estimated for districts with more than 10 respondents per year, Table A5 shows the results for the full sample and the sample excluding districts with less than 10, 20, 30, 40, 50, 75, and 100 respondents respectively.

Table A5. Main results restricted by number of respondents within each district

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variable: Strength of Intrinsic Religiosity Scale								
Dist(earthq), 1000km	-0.063*** (0.016)	-0.063*** (0.016)	-0.064*** (0.017)	-0.064*** (0.017)	-0.063*** (0.017)	-0.065*** (0.017)	-0.069*** (0.019)	-0.071*** (0.021)
Observations	104,122	104,040	103,651	102,860	101,421	99,022	94,590	88,688
R-squared	0.325	0.325	0.325	0.325	0.325	0.325	0.323	0.321
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y
Sample	Full	>10	>20	>30	>40	>50	>75	>100
Districts	600	591	565	529	501	450	383	315

Notes. OLS estimates. The table replicates column (8) of Panel A of Table 2, varying the criteria for the minimum number of respondents in the district. Sample refers to whether the sample is unrestricted (full sample) or restricted to districts with more than 10, 20, 30, 40, 50, 75, or 100 respondents, respectively.

Table A6 replicates Panel A of Table 2, weighting the observations by the number of respondents in each district.

Table A6. Main results weighted by number respondents

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variable:	impgod	relpers	service	comfort	believe	afterlife	rel	reli
Dist(earthq), 1000km	-0.050*** (0.016)	-0.062*** (0.020)	-0.047** (0.021)	-0.039* (0.022)	-0.026* (0.015)	-0.124*** (0.023)	-0.055*** (0.015)	-0.054*** (0.016)
Observations	198,527	192,387	197,121	126,291	130,019	120,170	103,363	104,122
R-squared	0.393	0.173	0.267	0.233	0.204	0.176	0.313	0.297
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y
Regions	911	907	893	620	602	602	600	600
Countries	85	84	83	67	66	66	66	66

Notes. The table replicates Panel A of Table 2 where observations are weighted with the number of respondents in each district.

B.5 Standardized coefficients

Table A7. Main results with standardized betas

Dep. var.	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	impgod	relpers	service	comfort	believe	afterlife	rel	reli
Dist(earthq)	-0.082*** (0.022)	-0.053** (0.023)	-0.053** (0.023)	-0.073*** (0.025)	-0.057** (0.028)	-0.131*** (0.029)	-0.113*** (0.029)	-0.110*** (0.029)
Age	-0.143*** (0.016)	-0.054*** (0.017)	-0.051*** (0.019)	-0.104*** (0.020)	-0.150*** (0.020)	-0.138*** (0.023)	-0.146*** (0.022)	-0.151*** (0.022)
Age squared	0.240*** (0.018)	0.163*** (0.016)	0.149*** (0.019)	0.222*** (0.020)	0.222*** (0.023)	0.142*** (0.023)	0.256*** (0.023)	0.253*** (0.023)
Male dummy	-0.107*** (0.004)	-0.110*** (0.004)	-0.056*** (0.008)	-0.121*** (0.006)	-0.100*** (0.006)	-0.096*** (0.006)	-0.131*** (0.007)	-0.136*** (0.006)
Married dummy	0.033*** (0.004)	0.048*** (0.004)	0.057*** (0.004)	0.049*** (0.004)	0.036*** (0.005)	0.013*** (0.005)	0.055*** (0.005)	0.050*** (0.005)
Absolute latitude	-0.092** (0.036)	-0.051* (0.030)	-0.041 (0.031)	-0.076*** (0.027)	-0.112*** (0.030)	0.094** (0.039)	-0.066* (0.037)	-0.069* (0.036)
Distance to the coast	0.040*** (0.013)	0.055*** (0.013)	0.041*** (0.012)	0.032*** (0.012)	0.049*** (0.015)	0.083*** (0.016)	0.063*** (0.015)	0.064*** (0.015)
Earthq t	-0.009* (0.006)	-0.001 (0.006)	0.010* (0.006)	-0.008 (0.006)	-0.011** (0.005)	-0.003 (0.006)	-0.005 (0.007)	-0.009 (0.006)
Earthq t-1	-0.007 (0.004)	0.002 (0.007)	-0.008 (0.005)	-0.008 (0.006)	-0.014** (0.005)	0.004 (0.005)	-0.007 (0.006)	-0.006 (0.006)
Observations	198,264	192,120	196,860	126,195	129,910	120,072	103,282	104,040
R-squared	0.407	0.208	0.278	0.263	0.226	0.202	0.337	0.325
Country and year fixed effects	Y	Y	Y	Y	Y	Y	Y	Y
Dist=-.081 p-value	1	0.211	0.225	0.737	0.379	0.0940	0.273	0.319

Notes. The table replicates Panel A of Table 2 with standardized betas.

B.6 Binned scatterplots

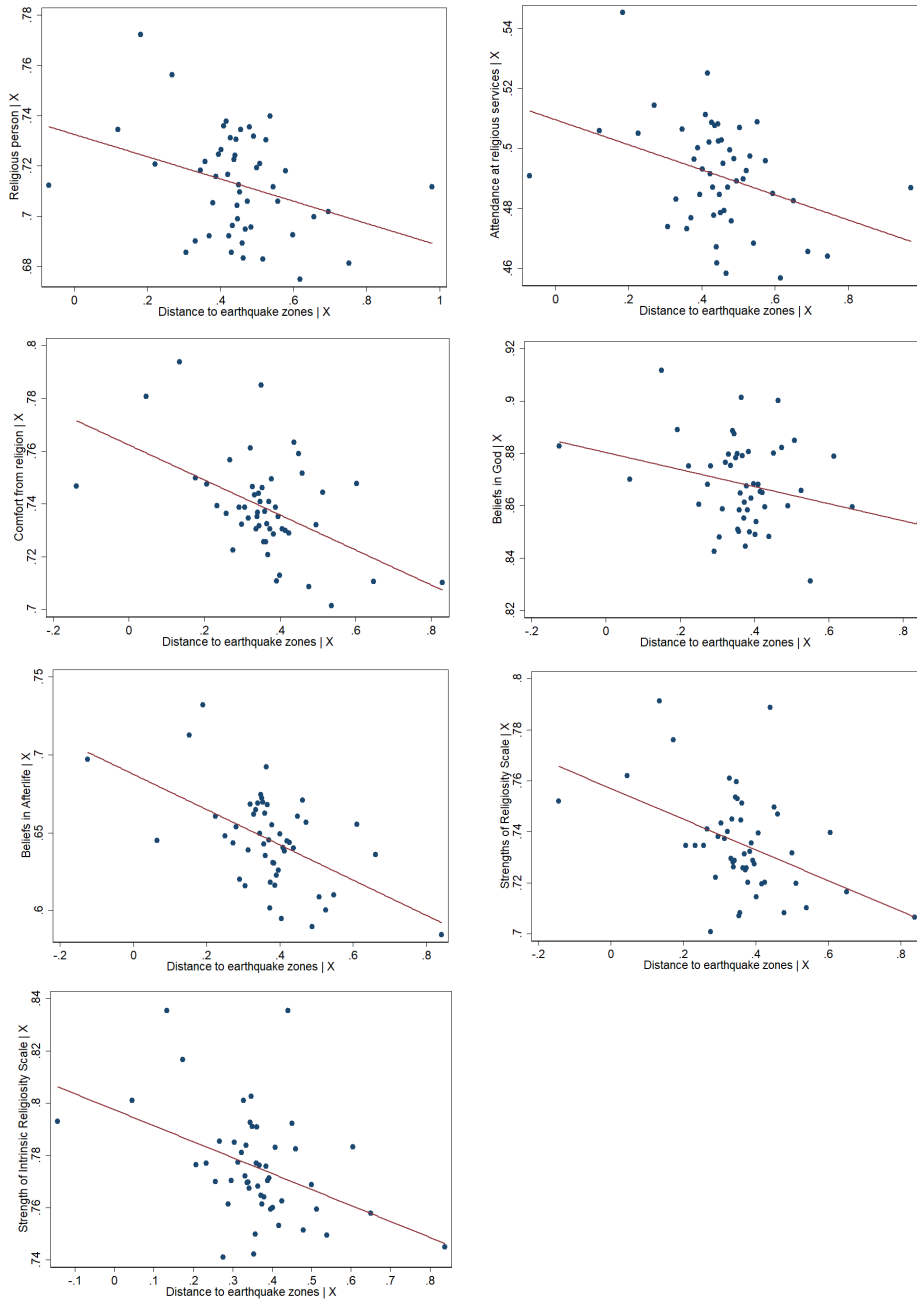


Figure A2. Binned scatterplots for remaining religiosity measures

B.7 Actual earthquakes

While the main results include controls for actual earthquakes in year t and $t-1$, Table A8 replicates the result of column (8) of Panel A of Table 2 controlling for additional past earthquakes. Compared to Table 2, the sample is restricted to the sample without districts hit by an earthquake in the year of interview. The pooled WVS-EVS only

provides data on the year in which the interview took place. Thus, it is not possible to tell whether an earthquake that hit in the same year, hit before or after the interview, which jeopardizes the interpretation. Column (12) interacts long-term earthquake risk with a dummy indicating whether an earthquake hit in the year before the interview. The interaction is positive, but insignificant. However, only 24 districts in the sample were hit within the last year, so this result should be taken with caution.

Table A8. Main results accounting for actual earthquakes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Dep. var.: Strength of Intrinsic Religiosity Scale												
Dist(earthq), 1000km	-0.062*** (0.017)	-0.063*** (0.017)	-0.062*** (0.017)	-0.062*** (0.017)	-0.063*** (0.017)	-0.063*** (0.017)	-0.063*** (0.017)	-0.065*** (0.018)	-0.064*** (0.018)	-0.065*** (0.018)	-0.065*** (0.018)	-0.063*** (0.017)
Earthquake year t-1		-0.003 (0.008)	-0.006 (0.008)	-0.005 (0.008)	-0.004 (0.008)	-0.004 (0.008)	-0.002 (0.007)	-0.002 (0.007)	-0.004 (0.007)	-0.003 (0.007)	-0.006 (0.008)	-0.005 (0.009)
Earthquake year t-2			0.007 (0.009)	0.009 (0.009)	0.009 (0.009)	0.009 (0.010)	0.009 (0.010)	0.011 (0.010)	0.011 (0.009)	0.011 (0.009)	0.014 (0.009)	
Earthquake year t-3				-0.006 (0.010)	-0.006 (0.010)	-0.006 (0.010)	-0.006 (0.010)	-0.006 (0.010)	-0.006 (0.010)	-0.006 (0.010)	-0.006 (0.011)	-0.009 (0.011)
Earthquake year t-4					-0.005 (0.008)	-0.005 (0.008)	-0.004 (0.008)	-0.003 (0.008)	-0.009 (0.008)	-0.013 (0.008)	-0.011 (0.009)	
Earthquake year t-5						-0.000 (0.013)	0.000 (0.013)	-0.000 (0.013)	-0.001 (0.012)	-0.003 (0.012)	-0.004 (0.012)	
Earthquake year t-6							-0.005 (0.009)	-0.004 (0.009)	-0.010 (0.009)	-0.010 (0.009)	-0.011 (0.009)	
Earthquake year t-7								-0.011 (0.018)	-0.010 (0.018)	-0.011 (0.018)	-0.010 (0.017)	
Earthquake year t-8									0.019* (0.011)	0.016 (0.011)	0.016 (0.011)	
Earthquake year t-9										0.013 (0.010)	0.014 (0.011)	
Earthquake year t-10											-0.011 (0.009)	
Dist(earthq) X earthq t-1												0.080 (0.098)
Observations	96,811	96,811	96,811	96,811	96,811	96,811	96,811	96,811	96,811	96,809	96,809	96,811
R-squared	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321	0.321
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes. The table replicates column (8) of Panel A, Table 2 on a sample restricted to districts that were not hit in the year of interview.

Table A9 shows the correlations between actual earthquakes and the two earthquake risk measures.

Table A9. Correlation matrix between earthquake measures

	Dist	Mean	Sum
Distance to earthquake zones 3 and 4	1.00		
Mean of all earthquake zones	-0.63***	1.00	
Sum of all earthquakes 1973-2014	-0.15***	0.49***	1.00

B.8 Controls

B.8.1 Main results without baseline controls

Table A10 replicates Panel A of Table 2 without controls in Panel A and with country-by-year fixed effects in Panel B. Churchgoing turns insignificant in the specification without country-by-year fixed effects. This could be either due to problems of comparability across countries or it could be in consistence with the findings in the religious coping literature that churchgoing is less affected than intrinsic religiosity.

Table A10. Main results adding controls consequitively

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	impgod	relpers	service	comfort	believe	afterlife	rel	reli
Panel A. No controls								
Dist(earthq), 1000km	-0.069*** (0.020)	-0.028* (0.017)	-0.024 (0.020)	-0.123*** (0.028)	-0.086*** (0.021)	-0.077*** (0.026)	-0.094*** (0.023)	-0.099*** (0.022)
R-squared	0.012	0.001	0.001	0.016	0.015	0.006	0.021	0.021
Panel B. Country-by-year fixed effects								
Dist(earthq), 1000km	-0.056*** (0.015)	-0.049** (0.020)	-0.039** (0.015)	-0.070*** (0.021)	-0.042** (0.018)	-0.122*** (0.032)	-0.068*** (0.017)	-0.072*** (0.018)
R-squared	0.383	0.182	0.263	0.230	0.207	0.185	0.304	0.292
Observations	203,100	196,721	201,254	130,139	133,948	123,744	105,947	107,022
Regions	884	880	868	611	592	592	591	591
Countries	85	84	83	67	66	66	66	66

Notes. Panel A of Table 2 without controls in Panel A and with country-by-year fixed effects in Panel B.

B.8.2 Additional controls

Panel A of Table A11 replicates Panel A of Table 2 on the restricted sample, where information on individual income is available. Panel B adds the ten income dummies (variable x047 in the WVS-EVS dataset).

Table A11. Main results including income dummies

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variable:	impgod	relpers	service	comfort	believe	afterlife	rel	reli
Panel A. Restricted sample with information on income								
Dist(earthq), 1000km	-0.046*** (0.014)	-0.037* (0.019)	-0.029* (0.015)	-0.039** (0.020)	-0.020 (0.016)	-0.102*** (0.029)	-0.055*** (0.014)	-0.054*** (0.015)
R-squared	0.415	0.212	0.275	0.255	0.223	0.220	0.312	0.308
Panel B. Including income dummies								
Dist(earthq), 1000km	-0.044*** (0.014)	-0.036* (0.019)	-0.028* (0.015)	-0.035* (0.020)	-0.018 (0.016)	-0.100*** (0.029)	-0.052*** (0.014)	-0.051*** (0.015)
R-squared	0.417	0.212	0.275	0.257	0.224	0.220	0.314	0.310
Observations	150,035	145,632	148,251	85,447	88,709	82,755	70,827	71,376
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y

Notes. Panel A replicates Panel A of Table 2, but on the restricted sample, where information on individual income is available. Panel B adds the ten income dummies (variable x047 in the WVS-EVS dataset).

Table A12 replicates column (8) of Panel A of Table 2 adding individual-level controls for trust (variable a165 from the pooled EVS-WVS), an unemployment dummy,⁵⁶ and ethnicity fixed effects (variable x051). The coefficient on long term earthquake risk stays remarkably stable throughout.

Table A13 adds the following district-level controls to the same specification: population density in year 2000, arable land shares (calculated based on irrigated and rainfed agriculture, plate 47 from the FAO GAEZ 2002 database), average temperatures 1961-1990 (spatial data from GAEZ), average precipitation and variation therein (spatial data from GAEZ), district area in square km, average district-level ruggedness (based on Nunn & Puga (2012)), average elevation, soil quality (plate 27 from the FAO GAEZ 2002 database), and a dummy equal to zero if the distance to earthquake zones 3 or 4 is equal to zero.⁵⁷ Column (11) includes all significant variables simultaneously with no change to

⁵⁶The unemployment dummy is equal to one if the person indicated his/her unemployment status as "Unemployed", zero otherwise (variable x028 in the pooled WVS-EVS).

⁵⁷In line with the work by Ager & Ciccone (forthcoming), the results show that increased within-year variation in precipitation increases religiosity.

the results. The estimate on earthquake risk stays remarkably constant throughout. The largest reduction in the estimate on earthquake risk is caused by including ruggedness, which reduce $\hat{\beta}$ from 0.063 to 0.055. Were any omitted variable to explain $\hat{\beta}$ entirely, its inclusion should result in an eight times larger reduction in $\hat{\beta}$ compared to the reduction caused by ruggedness (Altonji *et al.* (2005)).

Table A12. Main results including additional individual level controls

	(1)	(2)	(3)	(4)	(5)
Dependent variable: Strength of Intrinsic Religiosity					
Dist(earthq), 1000km	-0.063*** (0.016)	-0.064*** (0.016)	-0.063*** (0.016)	-0.053*** (0.014)	-0.057*** (0.018)
Trust		0.001 (0.003)			
Unemployed dummy			0.002 (0.004)		
Agricultural worker				0.025*** (0.004)	
Observations	104,040	100,371	101,045	76,464	61,340
R-squared	0.325	0.325	0.330	0.311	0.330
Baseline controls	Y	Y	Y	Y	Y
116 ethnicity FE	N	N	N	N	Y
Regions	591	591	586	475	375

Notes. The table replicates column (8) of Panel A of Table 2 including additional control variables.

Table A13. Main results including additional geographic controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Dependent variable: Strength of Intrinsic Religiosity											
Dist(earthq), 1000km	-0.063*** (0.016)	-0.063*** (0.016)	-0.063*** (0.016)	-0.063*** (0.016)	-0.061*** (0.016)	-0.060*** (0.016)	-0.055*** (0.017)	-0.064*** (0.016)	-0.060*** (0.016)	-0.067*** (0.017)	-0.054*** (0.017)
Popdens 2000	-0.003** (0.001)										-0.002* (0.001)
Arable land (%)		-0.003 (0.010)									
Avg temp 1961-90			0.001 (0.001)								
Prec 1961-90				0.016 (0.010)							
Var(prec) 1961-90					0.134*** (0.048)						0.105** (0.046)
Area 1000km						-0.000 (0.000)					
Average ruggedness							0.091*** (0.027)				0.073** (0.029)
Average elevation								0.014* (0.008)			0.001 (0.008)
Soil quality									0.023 (0.018)		
Disaster>0										0.012 (0.010)	
Observations	103,489	104,040	103,365	103,365	102,434	104,040	101,484	101,907	103,284	104,040	100,768
R-squared	0.325	0.325	0.325	0.325	0.326	0.326	0.319	0.318	0.325	0.325	0.319
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Regions	590	591	589	589	583	591	574	577	588	591	572
Ethnicity FE											N

Notes. The table replicates column (8) of Panel A of Table 2 including additional control variables.

Table A14 replicates column (8) of Panel A of Table 2 including all eleven answers from one particular question in the pooled WVS-EVS. The question sounds: Here is a list of qualities that a child can be encouraged to learn at home. Which, if

any, do you consider to be especially important? Please choose up to five.⁵⁸ The list of qualities includes: Manners (column 1), independence (column 2), hard work (3), feeling of responsibility (4), imagination (5), tolerance and respect for other people (6), thrift saving money and things (7), determination and perseverance (8), religious faith (9), unselfishness (10), and obedience (11).

Table A14. Adding alternative values as controls and dependent variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Alternative value:	Manners	Independence	Work	Responsibility	Imagination	Respect	Thrift	Perseverance	Faith	Unselfish	Obedience
Dependent variable: Strength of Intrinsic Religiosity Scale											
Dist(earthq), 1000km	-0.073*** (0.019)	-0.072*** (0.019)	-0.074*** (0.019)	-0.075*** (0.019)	-0.072*** (0.019)	-0.074*** (0.019)	-0.074*** (0.019)	-0.074*** (0.019)	-0.064*** (0.020)	-0.074*** (0.019)	-0.073*** (0.019)
Alternative value	0.030*** (0.004)	-0.052*** (0.004)	-0.004 (0.003)	-0.019*** (0.003)	-0.047*** (0.005)	0.002 (0.003)	-0.011*** (0.004)	-0.041*** (0.003)	0.181*** (0.009)	-0.008** (0.004)	0.024*** (0.003)
R-squared	0.312	0.317	0.311	0.312	0.314	0.311	0.311	0.314	0.364	0.311	0.312
Observations	69,857	69,857	69,857	69,857	69,857	69,857	69,857	69,857	69,857	69,857	69,857

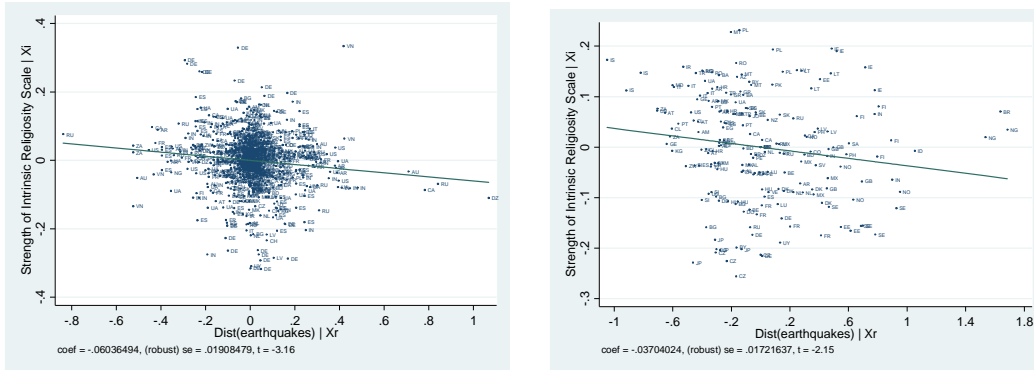
Notes. OLS estimates. The table replicates column (8) of Panel A of Table 2.

⁵⁸ Respondents that answered yes to more than five of the values were removed.

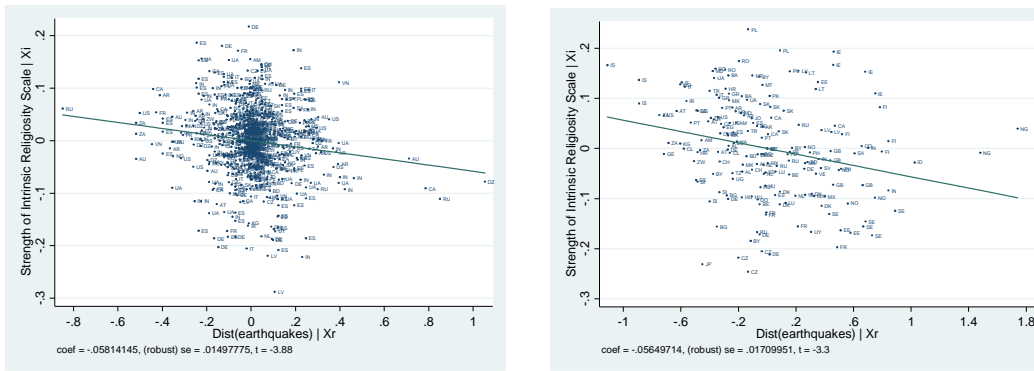
B.9 Aggregation at the district and country level

The district-level aggregation is done in the following way: $religiosity_{dct} = \frac{1}{N} \sum_{i=1}^N w_{idct} \cdot \widehat{religiosity}_{idct}$, where the weights, w_{idct} , are based on variable `s017` used throughout. $\widehat{religiosity}_{idct}$ measures the residuals of a regression of $religiosity_{idct}$ on the particular individual-level controls for age, age squared, married, and male. Panel A of Table 2 has 591 districts and 75 countries. In addition to the controls included in Panel A of Table 2, the country-level aggregates also include a dummy for whether the country is communist together with continent fixed effects. Excluding these additional control variables leaves the parameter estimate on earthquake risk and the level of significance unchanged (-0.032 (se 0.017)).

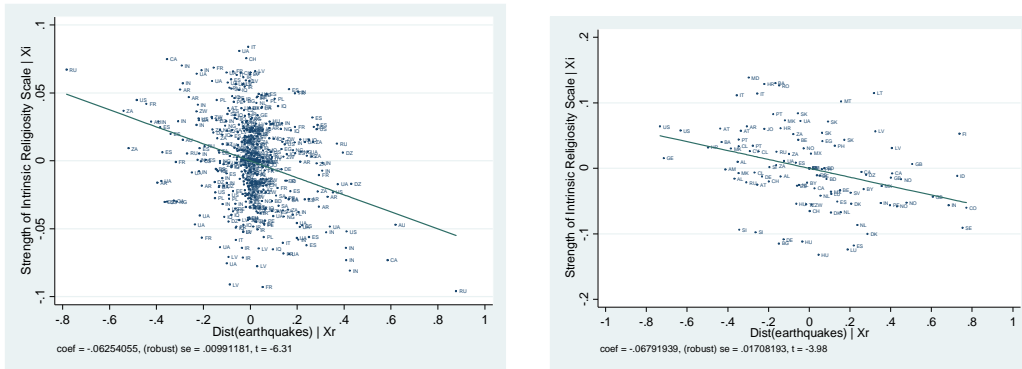
Panel A. Full sample



Panel B. Excluding outliers (diff <= 1)



Panel C. Excluding outliers (diff <= 0.1)



District aggregates

Country aggregates

Figure A3. Added variable plots of religiosity on long-term earthquake risk

Notes. AV-plots of OLS estimation across district aggregates in the left panels and across country aggregates in the right. The estimation corresponds to that in column (8) of Panel A in Table 2, where the individual-level controls are accounted for before aggregation. Panel A includes the full sample, Panel B excludes outliers based on Cooks $D > 1$, and Panel C excludes outliers based on Cooks $D > 0.1$. Labels: Country ISO codes.

B.9.1 Further investigation of country weights

Table A15 shows results aggregated to the country-level, using country weights (variable s017) in Panel A, and aggregating without country weights in Panel B.

Table A15. Main results aggregated to the country level							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep.var.	impgod	rel_pers	service	comfort	believe	after	reli
Panel A. Baseline							
Dist(earthq)	-0.053*** (0.012)	-0.048*** (0.013)	-0.003 (0.012)	-0.045*** (0.017)	-0.055*** (0.015)	0.001 (0.019)	-0.037** (0.018)
Observations	320	320	318	204	252	202	196
R-squared	0.643	0.425	0.611	0.539	0.493	0.414	0.462
Panel B. Baseline without weights							
Dist(earthq)	-0.054*** (0.012)	-0.049*** (0.013)	-0.003 (0.012)	-0.045*** (0.017)	-0.056*** (0.015)	0.001 (0.019)	-0.037** (0.018)
Observations	320	320	318	204	252	202	196
R-squared	0.643	0.424	0.610	0.539	0.492	0.413	0.462
Baseline controls	Y	Y	Y	Y	Y	Y	Y

B.10 Actual losses from earthquakes

An alternative measure of the impact from an earthquake is the costs of the disaster. The International Disaster Database EM-DAT provides information at the country-level of all newer disasters of a certain impact and size. It also provides information on the costs of the disasters, both human (number of injured, number of deaths) and economical. Data was downloaded at www.emdat.be. The database is created from information from various sources, ranging from UN agencies to press agencies. Most prioritized is the information from UN agencies, governments and the International Federation of Red Cross.

I have divided the human and economic costs of the disasters with the population in each country. Table A16 shows the correlation between a dummy equal to one if the country is located within a high-risk earthquake zone, zero otherwise, the distance-based and the mean-based measures of earthquake risk and the three actual costs of earthquakes. Countries located within high risk earthquake zones experience more human and economic costs from earthquakes. Likewise for the mean-based measure. The distance-based measure does not correlate significantly with any of the costs. This indicates that the results using the distance-based measure are not likely to be driven by the actual costs of earthquakes.

Table A16. Correlations between actual losses and different risk measures

	Eq zone dummy	Dist(earthq)	Mean(earthq)	Deaths	Affected	Damage
Earthquake zone dummy	1.00					
Dist(earthquake zones)	-0.54***	1.00				
Mean(earthquake zones)	0.72***	-0.48***	1.00			
Deaths per capita	0.13*	-0.07	0.16**	1.00		
Affected per capita	0.22***	-0.12	0.30***	0.51***	1.00	
Damage per capita	0.15**	-0.08	0.28***	0.15**	0.32***	1.00

Table A17 investigates the relationship between the intrinsic religiosity scale and the human and economic cost of earthquakes from the EM-DAT database. There is a positive relationship between religiosity and human costs from disasters, also when controlling for GDP per capita (Panel A). The relation seems to be driven mainly by differences across continents, though (Panel B). There seems to be no relation between the economic costs from earthquakes and religiosity. If anything, economic damage reduces religiosity, but this effect becomes insignificant once GDP per capita is included.

Table A17. OLS of religiosity on actual losses from earthquakes across countries

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: Strength of Intrinsic Religiosity Scale						
Panel A. Including baseline individual level controls						
Deaths per capita	0.785*** (0.212)			0.562*** (0.158)		
Affected people per capita		0.006*** (0.002)			0.004*** (0.001)	
Total damage per capita			-0.000 (0.000)			-0.000 (0.000)
GDP per capita PPP 2010				-0.006*** (0.001)	-0.005*** (0.001)	-0.006*** (0.001)
Observations	208	208	208	205	205	205
R-squared	0.011	0.039	0.006	0.191	0.202	0.186
Panel B. Including individual level controls and continent and year fixed effects						
Deaths per capita	0.380 (0.476)			0.423 (0.453)		
Affected people per capita		0.004* (0.002)			0.003* (0.002)	
Total damage per capita			-0.000* (0.000)			-0.000 (0.000)
GDP per capita PPP 2010				-0.005*** (0.001)	-0.004*** (0.001)	-0.004*** (0.001)
Observations	203	203	203	200	200	200
R-squared	0.331	0.341	0.340	0.408	0.414	0.408

Notes. The individual level controls are the same as those included throughout. They are accounted for before aggregating the data.

B.11 Different religiosity measures

The original variables used in Table 1 are: (1): f063, (2): f064, (3): f050, (4): f034, (5): f051, and (6): f028. The original variable f034 (religious person) also had a category for convinced atheists. Following Inglehart & Norris (2003), I group people who rank themselves as not religious or atheist into one category, as there are very few respondents in the latter group. The variables f063 (importance of god) and f028 (churchgoing) are described and investigated further below.

B.11.1 Different categorizations of the religiosity measures

Two of the religiosity measures are not dummy measures: Attendance at religious service and importance of God. This section shows that the results for importance of God are robust to different categorizations, while attendance is not. The impact of earthquake risk occurs at the intensive margin and not at the extensive margin for both measures.

Table A18 replicates column (3) of Panel A of Table 2 with different measures of

attendance at religious services. The different columns perform different aggregations of the variable f028 from the WVS-EVS. The variable is based on the question: "How often do you attend religious services?" The possible answers are "More than once a week" (1), "Once a week" (2), "once a month" (3), "only on special holy days/Christmas/Easter" (4), "other specific holy days" (5), "once a year" (6), "less often" (7), "never, practically never" (8). The original variable takes on values from 1 to 8. All permutations of this variable depicted in Table A18 are rescaled to lie between 0 and 1 and are flipped around so larger values mean more churchgoing. Column (1) uses variable f28 directly. Column (2) replicates column (3) of Panel A of Table 2, where categories (4) and (5) are aggregated, due to few observations in the latter and since it is not obvious how to rank the two. Columns (3) and (4) investigate the impact of earthquake risk on dummies indicating frequent churchgoers, defined as attending religious services more than weekly (category 1) in column (3) and weekly (category 1 and 2) in column (4). Column (5) reduces the measure to the extensive margin using a dummy measuring churchgoing or not. "Not" is defined as "Never, practically never" (category 8). Column (6) investigates the intensive margin, where those who never or practically never are removed from the sample.

Table A18. Main results with different categorizations of churchgoing

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var: Attendance at religious services						
Dist(earthq), 1000km	-0.037** (0.016)	-0.035** (0.015)	-0.044*** (0.017)	-0.024 (0.019)	-0.017 (0.016)	-0.043*** (0.016)
Observations	196,860	196,860	196,860	196,860	196,860	152,476
R-squared	0.268	0.278	0.202	0.251	0.195	0.227
Baseline controls	Y	Y	Y	Y	Y	Y
Service measure	org	base	frequent1	frequent2	extensive	intensive
Standardized coef: Dist(earthq), 1000km	-0.055** (0.023)	-0.053** (0.023)	-0.071*** (0.027)	-0.028 (0.022)	-0.022 (0.021)	-0.073*** (0.027)

Notes. OLS estimates. The table replicates column (3) of Panel A of Table 2 with different measures of attendance at religious services. The individual measures are described above the table

The measure of importance of God is based on the question "How important is God in your life?", where individuals can answer a number between 1 and 10. 1 indicates "Not at all important" and 10 indicates "Very important". I have rescaled the variable to lie between 0 and 1. In table A19, column (1) replicates the baseline result in column (1) of Panel A of Table 2. Columns (2) and (3) aggregate the variable to a dummy variable measuring the difference between regarding God as important and the rest. "Important" is defined as rating God as very important (category 10) in column (2) and categories 10 and 9 in column (3). Column (4) investigates the extensive margin by using a dummy

variable measuring whether the individual is religious or not. Non-religious is defined as rating God as being not at all important (category 1). Column (5) restricts the sample to the intensive margin, by excluding individuals who answer that God is not important at all.

Table A19. Main results with different categorizations of importance of God

	(1)	(2)	(3)	(4)	(5)
Dep. var: Importance of God					
Dist(earthq), 1000km	-0.052*** (0.014)	-0.074*** (0.020)	-0.074*** (0.023)	-0.025* (0.013)	-0.046*** (0.013)
Observations	198,264	198,264	198,264	198,264	180,273
R-squared	0.407	0.390	0.394	0.160	0.356
Baseline controls	Y	Y	Y	Y	Y
Importance of God measure	org	frequent1	frequent2	extensive	intensive
Standardized coef: Dist(earthq), 1000km	-0.082*** (0.022)	-0.081*** (0.022)	-0.081*** (0.025)	-0.047* (0.024)	-0.084*** (0.023)

Notes. OLS estimates. The table replicates column (1) of Panel A of Table 2 with different measures of importance of God. The individual measures are described above the table

B.11.2 Religiosity independent of churchgoing

This section exploits answers to the question "How often do you pray to God outside religious services?"⁵⁹ The respondents can answer "Every day", "more than once a week", "once a week", "at least once a month", "several times a year", "less often", and "never". I rescaled the variable to lie between 0 (never) and 1 (every day). One issue with the measure is that people who go to church more often may be less likely to pray when they are not in church. Since earthquake risk also influences churchgoing, this may affect the results. Column (3) shows that earthquake risk increases the degree of prayer outside religious services, but less so for those who go to church more often. These results are consistent with religious coping and cannot be explained by alternative theories that involve churchgoing. The variable measuring attendance at religious services takes the values 0 to 1, where 1 indicates those who attend religious services more than once a week. This variable is not available for enough observations to estimate the corresponding regression in the event study.

⁵⁹Thanks to an anonymous referee for suggesting to use this question.

Table A20. Main results with prayer outside religious services as alternative measure of religiosity

	(1)	(2)	(3)
Dependent variable: Prayer outside religious services			
Dist(earthquake zones), 1000km	-0.103** (0.044)	-0.025 (0.029)	-0.101*** (0.030)
Dist(earthquake zones) x attendance at religious services			0.246*** (0.040)
Attendance at religious services			0.469*** (0.027)
Observations	66,192	66,192	64,058
R-squared	0.166	0.327	0.506
Baseline controls	Y	Y	Y
Country-by-year FE	N	Y	Y

B.12 Heterogeneity by religion and continents

To investigate whether people from different denominations engage differently in religious coping, the following equation is estimated:

$$religiosity_{idct} = \alpha + \beta_1 disasters_{dc} + \beta_2 disasters_{dc} \cdot I_{idct}^g + \beta_3 I_{idct}^g + \gamma_{ct} + X'_{dc} \eta + W'_{idct} \delta + \varepsilon_{idct} \quad (1)$$

where I^g are dummy variables equal to one if individual i belonged to the religious denomination g at time t . g refers to one of the major religions: Christianity (split into Catholicism and Protestantism), Islam, Buddhism, Hinduism, Judaism, and Other religions.⁶⁰ $\beta_1 + \beta_2$ is the impact of earthquake frequency for individuals belonging to religion g .

Table A21 shows estimation results for equation (1). Column (1) includes no interaction effects, but restricts the sample to the sample where information on individuals' religious denomination is available. The estimate drops in absolute value from -0.063 (column 8, Panel A, Table 2) to -0.043 on this restricted sample. This is probably because we are now comparing people with more similar levels of religiosity. Panel A of the table includes the baseline controls (individual-level controls and geographic controls).

Column (2) of Panel A shows that on average, Christians do not respond differently than the rest to increased earthquake risk, but splitting Christians into Catholics and Protestants (col 3 and 5) reveals that Catholics react less than average, while Protestants react no different than the average person in the sample. Column (4) shows that Catholics do not react different than Protestants. Columns (6), (7), (8) and (10) show that neither

⁶⁰The major religions are based on answers to the question "Which religious denomination do you belong to?" (question f025). There are 84 different answers, which are grouped into the major religions and "Other". The latter covers mainly religious denominations reported as "Other" (83%) and Ancestral worshipping (9%). The latter covers 215 individuals from seven districts in Vietnam.

Muslims, Hindus, Jews nor the Other category react differently than average. Note, however, that there are only 405 individuals that identify as Jews in this sample. Column (9) shows that Buddhists tend to respond less to earthquake risk than the rest, leaving the composite effect for Buddhists insignificant (p-value 0.273). But note that Buddhists are very poorly represented in the sample with only 817 individuals categorising themselves as Buddhists. To increase the sample size in an attempt to be able to draw conclusions for the religious denominations with few followers, Panel B excludes the individual-level controls. There are 426 individuals who identify as Jews in this sample and 1,007 who identify as Buddhists. The correlation between disaster risk and religiosity continues to be significantly smaller for Buddhists than the rest. The Muslims seem to engage more in religious coping than the rest at the 10% significance level, but this is due to the exclusion of the individual controls: The interaction term between Muslim and disaster risk becomes significant at the 10% level when excluding the individual-level controls, but restricting to the sample in Panel A.

The finding that Catholics respond more to earthquakes than the rest of the world is consistent with the idea from the religious coping literature that those with more coping alternatives use religion less in coping. One major alternative mentioned is social networks. Catholicism is a relatively community-based religion, while for instance Calvin's doctrine of salvation is based on the principle of "faith alone" (Weber (1930)). This gives Catholics an additional coping alternative to intensified believing, namely their social networks. Note, however, that the comparison group is not just Protestants, but also the remaining religions, which can have more or less social networks. When restricting the sample to Christians, the sign on the interaction with Catholics remains positive, but is no longer significant (not shown).

Table A21. Main results across religious denominations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Dep. var.: Strength of Intrinsic Religiosity Scale										
Denomination		Christ	Cath	Cath	Prot	Musl	Hindu	Budd	Jew	Other
Panel A. Including baseline controls										
Dist(earthq), 1000 km	-0.043*** (0.014)	-0.054*** (0.018)	-0.056*** (0.015)	-0.047*** (0.014)	-0.038** (0.015)	-0.039*** (0.014)	-0.037*** (0.012)	-0.044*** (0.014)	-0.044*** (0.014)	-0.044*** (0.015)
Dist(earthq) X Denomination		0.017 (0.012)	0.030** (0.012)	0.016 (0.012)	-0.017 (0.012)	-0.018 (0.012)	-0.038 (0.046)	0.105* (0.055)	0.025 (0.046)	0.011 (0.016)
Observations	85,423	85,423	85,423	53,529	85,423	85,423	85,423	85,423	85,423	85,423
R-squared	0.237	0.238	0.237	0.215	0.237	0.240	0.237	0.237	0.237	0.237
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Districts	580	580	580	515	580	580	580	580	580	580
Districts in group		528	505	505	341	264	60	88	76	270
Panel B. Excluding individual-level controls										
Dist(earthq), 1000 km	-0.048*** (0.014)	-0.058*** (0.017)	-0.058*** (0.015)	-0.051*** (0.014)	-0.044*** (0.015)	-0.044*** (0.014)	-0.042*** (0.012)	-0.049*** (0.014)	-0.048*** (0.014)	-0.048*** (0.014)
Dist(earthq) X Denomination		0.016 (0.012)	0.024** (0.011)	0.010 (0.012)	-0.012 (0.011)	-0.019* (0.011)	-0.035 (0.045)	0.119** (0.058)	0.014 (0.043)	0.011 (0.015)
Observations	88,056	88,056	88,056	55,847	88,056	88,056	88,056	88,056	88,056	88,056
R-squared	0.214	0.215	0.215	0.181	0.215	0.217	0.214	0.215	0.215	0.214
Geo controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Districts	580	580	580	515	580	580	580	580	580	580
Districts in group		528	506	506	341	265	62	89	76	270
Sample	Full	Full	Full	Prot_Cath	Full	Full	Full	Full	Full	Full

Notes. The table replicates column (8) of Panel A of Table 2, including interaction terms between earthquake risk and the major religious denominations. All columns include both variables in the interaction term separately.

Table A22 investigates the robustness of the results to including the original variable measuring religious denominations (f025) as 59 fixed effects (column 2) and including fixed effects of the six major religions shown in Table A21 (column 3). The estimate on earthquake risk is unchanged. A literature has emphasized the importance of so-called "big gods" for the evolution of large-scale cooperation (e.g., Norenzayan & Shariff (2008)). Perhaps these religions provide a better coping tool than others. Unfortunately, there are not many respondents in the dataset that confess beliefs in religions without big gods. Only 224 respondents from seven districts directly state that they follow an indigenous religion without a big god (ancestor worshipping). The rest of the respondents belong to a religion with a big god or have stated that they belong to an "other" religion than those suggested in the survey. As all the large religions with big gods are already listed, respondents that identify with "other" are very likely to belong to a religion without a big god. I have recoded the data as such, which increases the number of adherents to a religion without a big god to 2,268. Column (4) shows that adherents to religions with big gods do not respond to earthquake risk any different than the rest. Column (5) includes an interaction with monotheism, which encompasses the same religions as those with big gods, except that Hinduism is not a monotheistic religion, but is defined as a religion with big gods.

Table A22. Main results with additional denominational controls and interactions

	(1)	(2)	(3)	(4)	(5)
Dep. var.: Strength of Intrinsic Religiosity Scale					
Dist(earthquakes), 1000 km	-0.043*** (0.014)	-0.045*** (0.014)	-0.040*** (0.015)	-0.038** (0.019)	-0.038* (0.022)
Dist(earthquakes) x big gods dummy				-0.006 (0.016)	
Dist(earthquakes) x monotheism					-0.007 (0.017)
Observations	85,423	85,411	85,423	85,423	85,423
R-squared	0.237	0.250	0.241	0.237	0.237
Baseline controls	Y	Y	Y	Y	Y
59 denomination FE	N	Y	N	N	N
6 major denomination FE	N	N	Y	N	N

B.12.1 Continents

Table A23 allows the impact of distance to earthquakes to vary across continents by including the interaction term $disaster \cdot I_g$, where I_g is a dummy variable equal to one if the individual lives on that particular continent. The impact of distance to earthquake zones does not vary across continents.

Table A23. Main results across continents

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var.: Strength of Intrinsic Religiosity Scale						
Dist(earthquakes), 1000 km	-0.063*** (0.016)	-0.067*** (0.021)	-0.046*** (0.016)	-0.066*** (0.018)	-0.069*** (0.019)	-0.067*** (0.017)
Dist(earthquakes) X America		0.016 (0.032)				
Dist(earthquakes) X Europe			-0.062 (0.044)			
Dist(earthquakes) X Asia				0.011 (0.049)		
Dist(earthquakes) X Africa					0.031 (0.029)	
Dist(earthquakes) X Oceania						0.051 (0.048)
Observations	104,040	104,040	104,040	104,040	104,040	104,040
R-squared	0.325	0.325	0.326	0.325	0.325	0.325
Baseline controls	Y	Y	Y	Y	Y	Y
Districts	591	591	591	591	591	591
Districts in group		97	287	145	53	9

Notes. The table replicates column (8) of Panel A of Table 2, including interaction terms between earthquake risk and continents. All columns include both variables in the interaction term separately.

B.13 Additional disasters

The data on tropical storm intensity zones are based on the probability of occurrence of storms falling within five wind speed categories of the Saffir-Simpson Hurricane Scale.⁶¹ The five wind speed categories are: 1) 118-153 km/h, 2) 154-177 km/h, 3) 178-209 km/h, 4) 210-249 km/h, and 5) 250+ km/h. The Storm Intensity Zone layer shows areas where each of these wind speed categories has a 10% probability of occurring within the next 10 years. For each district, the distance to storm intensity zones 2 or above is calculated. Storm intensity zones 2 or above are depicted in Figure A4 below as the dark blue areas.

The data on volcanic eruption intensity zones measure the density of volcanic eruptions based on the explosivity index for each eruption and the time period of the eruption. Eruption information is spread to 100 km beyond point source to indicate areas that could be affected by volcanic emissions or ground shaking. The source of the data is worldwide historical volcanic eruptions occurring within the last 10,000 years (to 2002) from Siebert & Simkin (2002).⁶² The volcanic eruptions were rated using the Volcanic Explosivity Index (VEI), which is a simple 0-to-6 index of increasing explosivity, with each successive integer representing about an order of magnitude increase. For each district,

⁶¹ Available online at U.S. Geological Survey: <http://www.usgs.gov/>.

⁶² The data were digitalized by the Smithsonian Institution's Global Volcanism Program, <http://www.volcano.si.edu/index.cfm>.

the distance to volcanic eruption risk zones 2 or above is calculated. These zones are depicted by the orange areas in Figure A4.

Similar zone data for tsunamis do not exist. Instead, the tsunami measure is simply the distance from each district to the nearest tsunami ever recorded. The data on tsunami events is from the Global Historical Tsunami Database from the National Geophysical Data Center (NOAA). The events since 2000 BC were gathered from scientific and scholarly sources, regional and worldwide catalogues, tide gauge reports, individual event reports, and unpublished works. The tsunamis are depicted as the triangles in Figure A4.

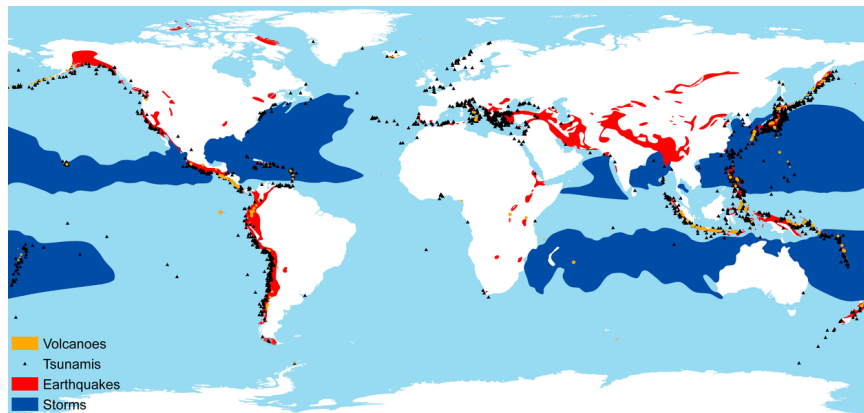
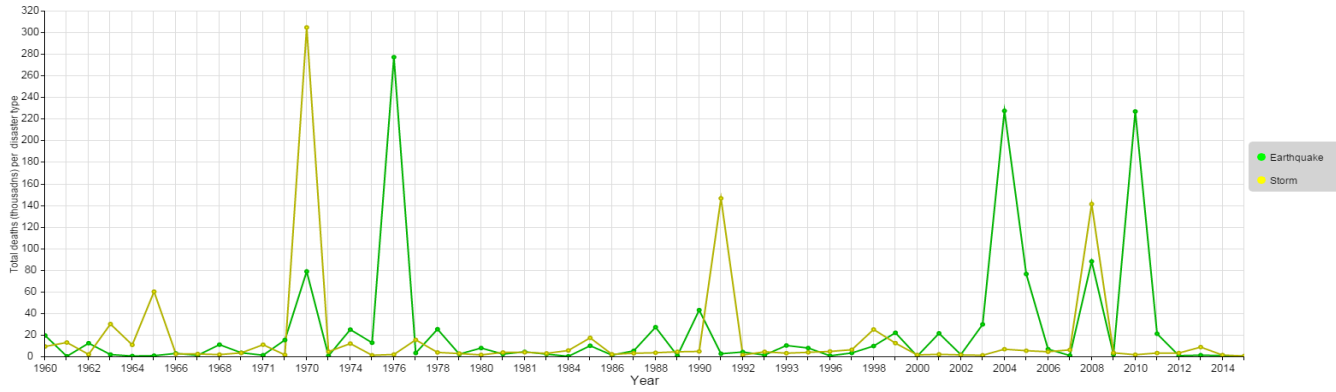
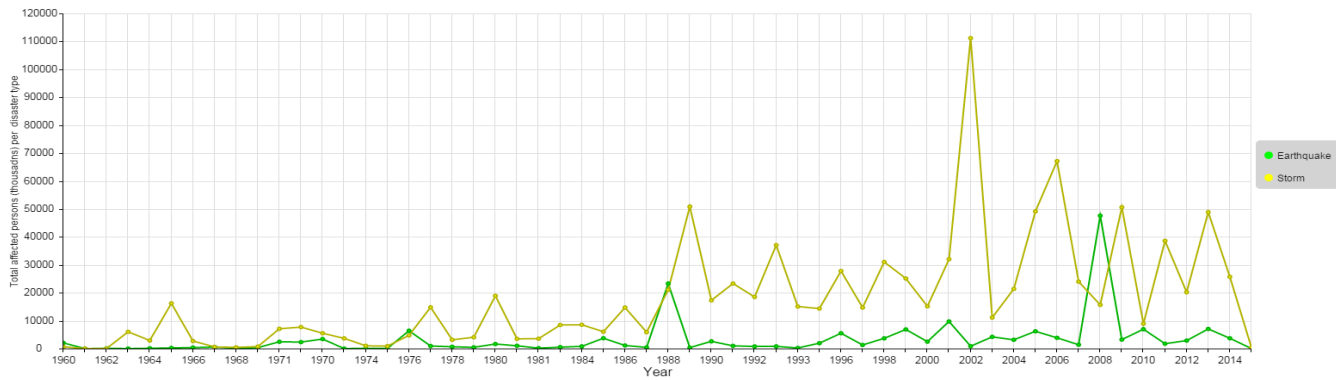


Figure A4. Disaster zones.

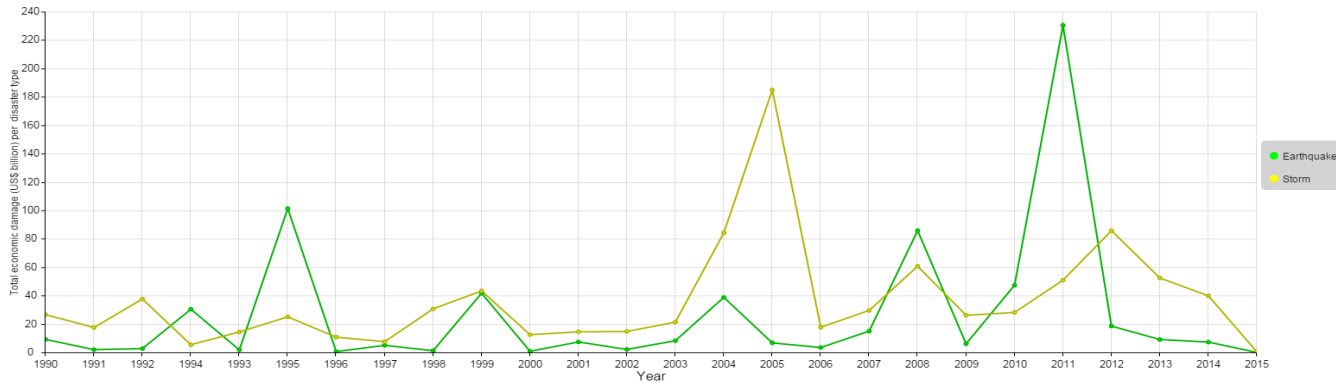
B.14 Severity of earthquakes vs storms



Panel A. Deaths from storms and earthquakes



Panel B. People affected by storms and earthquakes



Panel C. Economic damage by storms and earthquakes

Figure A5. Damage by storms and earthquakes

Notes: Yellow lines represent storms, green is earthquakes. Source: Data from Emdat (int.nat disaster database), 1960-2014.

B.15 Heterogeneity by development

Table A24 replicates column (8) of Panel A in Table 2, checking whether the effect of earthquake risk differs across individuals' level of income or education and whether the respondent works as an agricultural worker or is unemployed. The two latter variables are based on variables x036 and x028. Columns (1), (3), (5) and (7) add interactions between earthquake risk and individual income, education, status as agricultural worker, and employment status. Columns (2) and (4) add interactions with the individual deciles of the income measure and the different categories of education. The impact of earthquake risk does not vary systematically within different income or education levels.

Earthquake risk does increase religiosity significantly more for the unemployed (column 7), even controlling for the ten income fixed effects (column 8). The literature on religious coping finds both dampening effects of income (e.g., Gurin *et al.* (1960)) and no effects (e.g., Carl Pieper *et al.* (1992)). On the other hand, the literature on religious coping agrees that individuals with fewer coping alternatives in general should be more inclined to use religion for coping. One major alternative is social networks to turn to in times of need (e.g., Pargament (2001)). Thus, the finding that unemployed individuals respond more to earthquakes with increased believing, even conditioning on income, is consistent with the religious coping literature.

Table A25 aggregates the same development measures up to the district level and include the corresponding interactions with district-level development, controlling for individual level income in odd columns. Two additional measures that are only available at the district-level are added: Light density at night and population density. Columns (13) and (14) include an interaction between earthquake risk and the size of the district area that the individual was interviewed in. This is meant as a test of selection in the cross-section analysis; if the results were driven by atheists moving out of high-risk areas, this effect should be larger for smaller districts, where moving is more likely to mean moving out of the district. If anything, the opposite seems to be the case; earthquake risk increases religiosity slightly more for larger districts.

Table A24. Main results with interactions with individual level development

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dependent variable: Strength of Intrinsic Religiosity Scale								
Measure of development	Inc	Inc	Edu	Edu	Agri	Agri	Unempl	Unempl
Dist(earthq), 1000km	-0.048*** (0.017)		-0.061*** (0.018)		-0.053*** (0.014)	-0.046*** (0.014)	-0.059*** (0.016)	-0.048*** (0.015)
Dist(earthq) x development	-0.001 (0.002)		-0.001 (0.001)		-0.002 (0.011)	-0.002 (0.011)	-0.036*** (0.008)	-0.026*** (0.007)
Dist(earthq) x dev1		-0.053*** (0.016)		-0.053*** (0.018)				
Dist(earthq) x dev2		-0.042** (0.016)		-0.055*** (0.018)				
Dist(earthq) x dev3		-0.052*** (0.015)		-0.051*** (0.018)				
Dist(earthq) x dev4		-0.056*** (0.016)		-0.077*** (0.018)				
Dist(earthq) x dev5		-0.054*** (0.017)		-0.073*** (0.021)				
Dist(earthq) x dev6		-0.047*** (0.016)		-0.072*** (0.017)				
Dist(earthq) x dev7		-0.053*** (0.017)		-0.051*** (0.018)				
Dist(earthq) x dev8		-0.038** (0.016)		-0.068*** (0.018)				
Dist(earthq) x dev9		-0.071*** (0.022)						
Dist(earthq) x dev10		-0.059*** (0.023)						
Observations	71,376	71,376	98,278	98,278	76,464	67,589	101,045	68,569
R-squared	0.310	0.310	0.329	0.330	0.311	0.310	0.330	0.317
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y
Development	Inc	Inc	Edu	Edu	Agri	Agri	Unempl	Unempl
Income FE	N	N	N	N	N	Y	N	Y

Notes. The table replicates column (8) of Panel A of Table 2, allowing for interactions with development. dev1 refers to income decile 1 or educational level 1 (inadequately completed elementary education), dev2 refers to income decile 2 or educational level 2 (completed compulsory elementary education), dev3 refers to income decile 3 or educational level 3 (incomplete secondary school, technical), dev4 refers to income decile 4 or educational level 4 (complete secondary school, technical), dev5 refers to income decile 5 or educational level 5 (incomplete secondary school, university), dev6 refers to income decile 6 or educational level 6 (complete secondary school, university), dev7 refers to income decile 7 or educational level 7 (some university without degree), dev8 refers to income decile 8 or educational level 8 (university with degree), dev9 and dev10 are the last income deciles. Both variables in interaction terms are included separately.

Table A25. Main results with interactions with district level development

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Dependent variable: Strength of Intrinsic Religiosity Scale														
Dist(earthq), 1000km	-0.079*** (0.021)	-0.077*** (0.022)	0.008 (0.048)	-0.031 (0.042)	-0.059*** (0.015)	-0.053*** (0.015)	-0.049*** (0.018)	-0.041** (0.016)	-0.063*** (0.016)	-0.052*** (0.015)	-0.064*** (0.017)	-0.053*** (0.015)	-0.057*** (0.017)	-0.047*** (0.016)
Dist(earthq) x dev	0.006 (0.005)	0.006 (0.005)	-0.015 (0.009)	-0.005 (0.008)	0.051 (0.097)	0.058 (0.101)	-0.167** (0.083)	-0.113* (0.063)	-18.654 (51.768)	8.994 (47.705)	0.003 (0.003)	0.003 (0.003)	-0.029* (0.018)	-0.014 (0.017)
Observations	78,895	71,376	98,879	66,806	80,956	71,376	101,935	69,349	103,284	70,946	103,489	71,101	104,040	71,376
R-squared	0.309	0.310	0.328	0.308	0.311	0.310	0.331	0.318	0.325	0.310	0.325	0.310	0.326	0.310
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Development	Inc	Inc	Edu	Edu	Agri	Agri	Unempl	Unempl	Light	Light	Pdens	Pdens	Area	Area
Individual income FE	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y

Notes. The table replicates Table A24, where the development measures are aggregated to the district level, adding also two development measures that are only available at the district level. Columns (13) and (14) also add an interaction with district area.

B.16 Google searches on religion

An alternative measure of religiosity that is not based on surveys is Google searches for religious terms. Google trends provides data on the share of total Google searches on specified search terms for various geographic units. These data are comparable across societies where the entire population have access to the internet. This is close to being the case for current US states. Table A26 below shows the relation between earthquake risk, defined throughout Section 3, and the frequency of various searches on religious terms as a share of total Google searches per US state. The particular search terms are "God", "church", "Jesus", "Bible", and "pray". A simple search on some of these search terms includes searches that have nothing to do with religion. For instance "God of war" is a computer game, Justin Beaber has a song called "Pray", and "Eat, Pray, Love" is a romantic comedy. I remove these from the searches.

Table A26. OLS of google searches on religious terms on earthquake risk across US states

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Dep. var.: Google searches of religious terms as a share of total google searches									
Search term	god	god	god	god	god	church	bible	jesus	pray
Dist(earthq), 1000 km	-0.022 (0.073)	-0.217*** (0.068)	-0.218*** (0.068)	-0.215*** (0.068)	-0.180*** (0.060)	-0.104 (0.082)	-0.248*** (0.083)	-0.159*** (0.056)	-0.179** (0.065)
Dist(ocean), 1000 km			0.030 (0.029)	0.033 (0.033)	0.025 (0.033)	0.101** (0.041)	0.058 (0.050)	0.027 (0.025)	-0.040 (0.044)
Absolute latitude				-0.001 (0.002)	0.000 (0.003)	0.001 (0.002)	0.002 (0.003)	-0.002 (0.002)	-0.007 (0.006)
GSP per capita 2010					-0.003** (0.001)	-0.004** (0.002)	-0.005** (0.002)	-0.003** (0.001)	-0.005 (0.003)
Observations	50	50	50	50	50	50	50	50	34
R-squared	0.001	0.717	0.719	0.722	0.755	0.768	0.774	0.797	0.774
Region fixed effects	N	Y	Y	Y	Y	Y	Y	Y	Y

C Additional results for event study

This section investigates the robustness of the main results in Panel B of Table 4. Overall, intrinsic religiosity (importance of God and religious person) increases with earthquakes, while extrinsic religiosity (attendance at religious services) does not. This is consistent with the religious coping hypothesis, and inconsistent with a purely economic explanations, where individuals go to church for aid. Results using the share of religious persons are less robust to changes, while the average importance of God in a district is robust to most changes. This is not surprising, since whether or not individuals regard themselves as religious involves a much larger change than how important they rank God on a scale from zero to ten. Thus, the test using the share of religious persons is a more demanding one.

C.1 Data on earthquake events

Downloadable from the Comprehensive Earthquake Catalogue: earthquake.usgs.gov/monitoring/anss/. The U.S. Geological Survey provides the best available estimate of an earthquake's magnitude. Each method to measure magnitudes works over a limited range of magnitudes. Some methods are based on body waves (which travel deep within the structure of the earth) and some are based on surface waves (which primarily travel along the uppermost layers). All of the methods are designed to agree well over the range of magnitudes where they are reliable. Earthquake magnitude is a logarithmic measure of earthquake size, which means that the shaking will be 10 times as large during a magnitude 6 earthquake as during a magnitude 5 earthquake. The total amount of energy released by the earthquake, however, goes up by a factor of 32.

The number of earthquakes of all magnitudes in the data increases up until 1973 and the number of earthquakes of magnitudes below 5 increases over the entire period. While the number of earthquakes has not increased in reality, the implication is that earthquake detection technology must have improved over time. There has been no trend in the number of earthquakes of magnitude 5 or above since 1973. On the USGS website it says: "We may not rapidly locate earthquakes smaller than 5.0 outside the US unless they have caused significant damage or are widely felt. Earthquakes this small rarely cause significant damage. At times, some other agency may report an earthquake with a larger magnitude than what we compute from our data, especially for non-US events near magnitude 5.0. If our magnitude for the event is less than magnitude 5.0, we may not issue a rapid report for it."

Years since the last earthquake is coded as 100 in districts that did not experience an

earthquake since 1973. The results do not depend on this threshold.

C.2 Varying cut-off levels

The main analysis defines a district as being hit by an earthquake if the earthquake hit within 100 km of the district borders. Panels A and B of Table A26 show that the results are robust to varying the cut-off level from 0 to 200 km in increments of 50 km when using importance of God as the measure of religiosity. Panel C shows that the results using the share of religious persons are less robust to choice of cut-off levels. Part of the sensitivity seems to be due to a few outliers (removed in Panel D). The finding that attendance rates are unaffected by earthquakes is robust to different cut-off levels (Panel E). But when excluding outliers, churchgoing seems to fall with earthquakes in districts otherwise rarely hit for earthquakes that hit within district borders (cut off zero).

The reason for the varying number of observations is that district-years are excluded if an earthquake hit in the year of the interview, discussed in the main text. Note that this restriction also happens to exclude all districts where an earthquake hit within district borders for all cut-off levels 50-200.

Table A27. Main results with varying cut-off levels for when an earthquake is defined to hit a district

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Cut-off	0	50	100	150	200	0	50	100	150	200
Earthquake measure:	Earthquake dummy					Number earthquakes				
Panel A. Dependent variable: D. Importance of God										
Earthquake measure	0.107*** (0.035)	0.089** (0.035)	0.093*** (0.028)	0.070*** (0.022)	0.067*** (0.018)	0.107*** (0.035)	0.074** (0.033)	0.058** (0.021)	0.044*** (0.009)	0.030*** (0.009)
Earthq x Frequent earthquakes	-0.094** (0.037)	-0.081** (0.035)	-0.073** (0.029)	-0.027 (0.024)	0.027 (0.080)	-0.103*** (0.033)	-0.083** (0.032)	-0.053*** (0.019)	-0.040*** (0.012)	-0.019 (0.014)
Observations	370	353	350	335	326	370	353	350	335	326
R-squared	0.341	0.336	0.338	0.319	0.317	0.340	0.334	0.333	0.316	0.310
District-years with earthquake	13	25	33	41	46	13	25	33	41	46
Panel B. Dependent variable: D. Importance of God (no outliers)										
Earthquake measure	0.092*** (0.030)	0.054*** (0.015)	0.066*** (0.015)	0.045* (0.026)	0.042* (0.024)	0.092*** (0.030)	0.046*** (0.013)	0.052*** (0.011)	0.033*** (0.010)	0.023*** (0.008)
Earthq x Frequent earthquakes	-0.080** (0.034)	-0.047** (0.018)	-0.039** (0.016)	-0.047** (0.018)	0.007 (0.006)	-0.089*** (0.029)	-0.058*** (0.014)	-0.047*** (0.011)	-0.029*** (0.009)	-0.021** (0.009)
Observations	352	337	334	319	306	352	335	331	320	307
R-squared	0.412	0.405	0.408	0.391	0.402	0.412	0.406	0.406	0.388	0.399
District-years with earthquake	13	24	31	40	44	13	24	29	40	44
Panel C. Dependent variable: D. Religious person										
Earthquake measure	-0.002 (0.036)	0.031 (0.033)	0.062** (0.027)	0.040 (0.054)	-0.002 (0.028)	-0.002 (0.036)	0.024 (0.021)	0.044*** (0.014)	0.028 (0.026)	0.011 (0.019)
Earthq x Frequent earthquakes	0.011 (0.041)	0.007 (0.038)	-0.058 (0.041)	-0.079 (0.067)	0.069+ (0.042)	0.007 (0.038)	-0.028 (0.024)	-0.046** (0.018)	-0.027 (0.029)	0.021 (0.022)
Observations	390	373	370	355	345	390	373	370	355	345
R-squared	0.414	0.416	0.417	0.411	0.397	0.414	0.415	0.417	0.410	0.400
District-years with earthquake	14	25	33	38	42	14	25	33	38	42
Panel D. Dependent variable: D. Religious person (no outliers)										
Earthquake measure	-0.023 (0.036)	0.026+ (0.016)	0.064*** (0.014)	0.083** (0.035)	0.028 (0.028)	-0.023 (0.036)	0.023* (0.012)	0.046*** (0.007)	0.053*** (0.010)	0.031** (0.013)
Earthq x Frequent earthquakes	0.031 (0.039)	0.014 (0.028)	-0.046 (0.034)	-0.089*** (0.031)	0.039 (0.059)	0.028 (0.037)	-0.030** (0.014)	-0.049*** (0.012)	-0.053*** (0.014)	0.015 (0.018)
Observations	374	356	351	337	329	374	354	351	338	326
R-squared	0.495	0.514	0.517	0.523	0.498	0.495	0.515	0.517	0.517	0.500
District-years with earthquake	14	25	32	36	41	14	25	32	37	39
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table A27 cont. Main results with varying cut-off levels for when an earthquake is defined to hit a district

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Cut-off	0	50	100	150	200	0	50	100	150	200
Earthquake measure:	Earthquake dummy					Number earthquakes				
Panel E. Dependent variable: D. attend religious services										
Earthquake measure	-0.061 (0.066)	-0.008 (0.031)	0.028 (0.046)	0.025 (0.055)	0.044 (0.035)	-0.063 (0.066)	-0.003 (0.020)	0.021 (0.023)	0.016 (0.028)	0.008 (0.017)
Earthq x Frequent earthquakes	0.129 (0.102)	0.052 (0.044)	0.012 (0.077)	0.053 (0.119)	0.286*** (0.068)	0.078 (0.074)	0.015 (0.023)	-0.020 (0.026)	-0.004 (0.039)	0.029 (0.036)
Observations	404	387	384	369	357	404	387	384	369	357
R-squared	0.517	0.509	0.516	0.509	0.531	0.515	0.508	0.515	0.507	0.517
District-years with earthquake	14	25	33	38	42	14	25	33	38	42
Panel F. Dependent variable: D. attend religious services (no outliers)										
Earthquake measure	-0.121*** (0.015)	-0.026 (0.019)	0.008 (0.012)	0.003 (0.033)	0.014 (0.010)	-0.121*** (0.015)	-0.010 (0.013)	0.006 (0.013)	0.008 (0.018)	0.006 (0.005)
Earthq x Frequent earthquakes	0.140*** (0.015)	0.056** (0.020)	-0.014 (0.019)	-0.008 (0.038)	0.070*** (0.015)	0.129*** (0.012)	0.022* (0.011)	-0.005 (0.010)	-0.020 (0.017)	0.093** (0.034)
Observations	386	370	367	351	341	386	370	368	350	339
R-squared	0.549	0.527	0.529	0.531	0.544	0.549	0.525	0.530	0.529	0.547
District-years with earthquake	12	22	29	34	40	12	22	30	33	37
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes. OLS estimates. The dependent variable is the change in the district average of importance of God in Panels A and B, district share of religious persons in Panels C and D, and average attendance at religious services in Panels E and F. Earthquakes are measured with the dummy variable in columns (1)-(5) and the number of earthquakes in columns (6)-(10). Outliers detected based on Cooks $D > 1$.

C.3 Simple figure

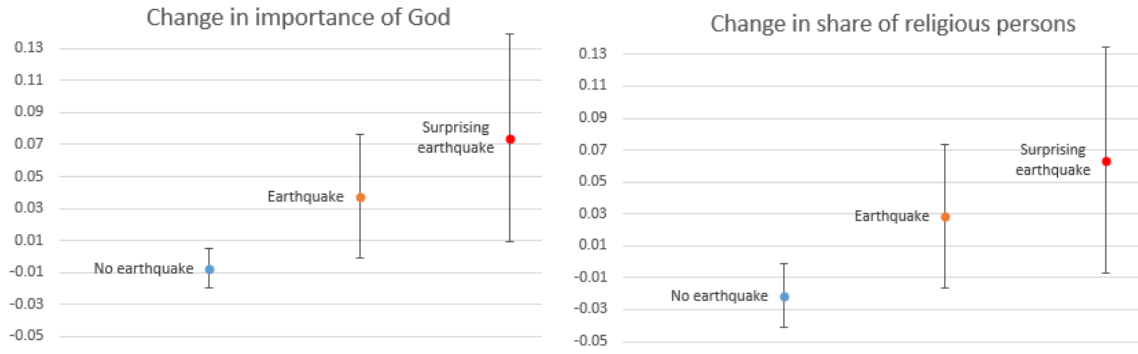


Figure A6 Change in religiosity by earthquake or not for window of 6 years or less

Notes. Lines show 90 pct confidence bounds. The sample is restricted to districts measured 6 years or less apart

C.4 Controls

C.4.1 Results with fewer controls

Table A28. Main results adding controls consecutively

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Avg	Diff	Diff	Diff	Diff	Diff	Diff	Diff	Diff	Diff
Panel A: Importance of God										
Earthquake dummy	0.17** (0.07)	0.04 (0.03)	0.08* (0.04)	0.07** (0.03)	0.09** (0.03)	0.08** (0.03)	0.09*** (0.03)	0.09*** (0.03)	0.09*** (0.03)	0.09*** (0.03)
Earthq x Frequent earthq	-0.27*** (0.08)	-0.07 (0.05)	-0.13** (0.06)	-0.11** (0.04)	-0.12*** (0.04)	-0.12*** (0.04)	-0.09** (0.03)	-0.09*** (0.03)	-0.07** (0.03)	-0.07** (0.03)
Observations	641	366	362	361	361	361	361	357	353	350
Districts	308	242	238	238	238	238	238	236	238	236
R-squared	0.04	0.01	0.16	0.26	0.26	0.27	0.32	0.32	0.34	0.34
Mean dep var	0.683	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.003	0.003
Panel B: Religious persons										
Earthquake dummy	0.12* (0.06)	0.01 (0.04)	0.03 (0.03)	0.04 (0.03)	0.05* (0.03)	0.05* (0.03)	0.06** (0.03)	0.06** (0.03)	0.06** (0.03)	0.06** (0.03)
Earthq x Frequent earthq	-0.19*** (0.07)	-0.02 (0.05)	-0.11*** (0.03)	-0.09** (0.04)	-0.10*** (0.03)	-0.10*** (0.03)	-0.09** (0.04)	-0.09** (0.04)	-0.06 (0.04)	-0.06 (0.04)
Observations	630	386	382	381	381	381	381	377	373	370
Districts	289	256	252	252	252	252	252	250	252	250
R-squared	0.02	0.00	0.37	0.39	0.39	0.39	0.41	0.41	0.42	0.42
Mean dep var	0.686	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
Panel C: Attendance at religious services										
Earthquake dummy	0.13*** (0.04)	-0.08*** (0.03)	0.00 (0.04)	0.01 (0.04)	0.02 (0.04)	0.02 (0.04)	0.03 (0.05)	0.03 (0.04)	0.02 (0.05)	0.02 (0.04)
Earthq x Frequent earthq	-0.21** (0.08)	0.09 (0.05)	-0.03 (0.08)	-0.02 (0.07)	-0.03 (0.08)	-0.03 (0.08)	-0.01 (0.08)	-0.01 (0.07)	0.01 (0.08)	0.01 (0.08)
Observations	668	399	396	395	395	395	395	391	387	384
Districts	296	269	266	266	266	266	266	264	266	264
R-squared	0.03	0.02	0.43	0.48	0.48	0.48	0.50	0.50	0.51	0.51
Mean dep var	0.437	0.003	0.003	0.003	0.003	0.003	0.003	0.003	0.005	0.004
Country fixed effects	N	N	Y	Y	Y	Y	Y	Y	Y	Y
Year fixed effects	N	N	N	Y	Y	Y	Y	Y	Y	Y
Years since last eq	N	N	N	N	Y	Y	Y	Y	Y	Y
Years between waves	N	N	N	N	N	Y	Y	Y	Y	Y
Country-specific trends	N	N	N	N	N	N	Y	N	Y	N
Country-by-year FE	N	N	N	N	N	N	N	Y	N	Y
Individual level controls	N	N	N	N	N	N	N	N	Y	Y

Notes. The dependent variable is based on the degree of importance of God in Panel A, religious persons in panel B, and the attendance at religious services in panel C. The dependent variable is in levels in column (1) and in changes in columns (2)-(10). Standard errors are clustered at the country level. Asterisks ***, **, *, and + indicate significance at the 1, 5, 10%, and 15% level, respectively.

C.4.2 Additional controls

Table A29 adds ten income fixed effects. The sample is restricted to the sample with information on individual income in uneven columns, while ten income fixed effects are added to the set of baseline controls in even columns. Table A30 adds the same additional measures of cultural values as added in Table A14. The results are unaltered.

Table A29. Main results with individual income fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Earthquakes measure:	Earthquake dummy	Earthquake dummy	Number earthquakes	Earthquake dummy	Earthquake dummy	Number earthquakes	Earthquake dummy	Earthquake dummy	Number earthquakes	Earthquake dummy	Earthquake dummy	Number earthquakes
Dependent variable:	D.Importance of God				D.Religious person				D.Attend services			
Earthquake measure	0.087*** (0.029)	0.084*** (0.026)	0.054** (0.020)	0.053*** (0.018)	0.065** (0.027)	0.054* (0.027)	0.045*** (0.013)	0.039*** (0.012)	0.016 (0.045)	0.010 (0.045)	0.014 (0.022)	0.011 (0.022)
Earthq x Frequent earthq	-0.068** (0.029)	-0.074** (0.027)	-0.049** (0.018)	-0.052*** (0.017)	-0.061 (0.041)	-0.078* (0.039)	-0.047** (0.018)	-0.048** (0.018)	0.022 (0.076)	0.022 (0.070)	-0.014 (0.024)	-0.013 (0.023)
Observations	276	276	276	276	296	296	296	296	310	310	310	310
R-squared	0.349	0.282	0.344	0.278	0.435	0.388	0.435	0.389	0.527	0.442	0.526	0.442
Income FE	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table A30. Main results with controls for various alternative values

Alternative value:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Manners	Independe	Work	Responsibil	Imaginatio	Respect	Thrft	Persevere	Faith	Unselfish	Obedience
Panel A. Dependent variable: D.importance of God												
Earthquake dummy	0.093*** (0.028)	0.140* (0.071)	0.090*** (0.030)	0.091*** (0.029)	0.089*** (0.025)	0.096*** (0.028)	0.093*** (0.028)	0.092*** (0.030)	0.084*** (0.028)	0.096*** (0.032)	0.090*** (0.029)	0.092*** (0.032)
Earthq x Frequent earthq	-0.073** (0.029)	-0.093 (0.075)	-0.069** (0.032)	-0.072** (0.030)	-0.070** (0.030)	-0.064** (0.031)	-0.074** (0.030)	-0.074** (0.031)	-0.065** (0.030)	-0.089** (0.033)	-0.069** (0.030)	-0.060 (0.036)
R-squared	0.338	0.397	0.348	0.336	0.343	0.339	0.344	0.339	0.352	0.265	0.340	0.312
Difference p-value		0.527	0.924	0.941	0.886	0.919	0.999	0.982	0.763	0.916	0.921	0.984
Number earthquakes	0.058** (0.021)	0.140* (0.072)	0.057** (0.023)	0.056** (0.022)	0.056*** (0.020)	0.061*** (0.022)	0.058** (0.022)	0.057** (0.023)	0.052** (0.021)	0.064*** (0.023)	0.055** (0.023)	0.055** (0.025)
Earthq x Frequent earthq	-0.053*** (0.019)	-0.236*** (0.072)	-0.048** (0.022)	-0.052** (0.020)	-0.052*** (0.019)	-0.055** (0.020)	-0.053*** (0.019)	-0.053** (0.021)	-0.047** (0.019)	-0.057*** (0.021)	-0.050** (0.020)	-0.047* (0.023)
R-squared	0.333	0.404	0.344	0.331	0.338	0.334	0.339	0.333	0.348	0.262	0.334	0.305
Difference p-value		0.283	0.972	0.937	0.933	0.870	0.977	0.984	0.799	0.776	0.911	0.923
Observations	350	65	350	334	350	331	350	350	331	350	331	350
Panel B. Dependent variable: D.Religious person												
Earthquake dummy	0.062** (0.027)	0.184** (0.080)	0.061** (0.026)	0.052* (0.028)	0.059** (0.024)	0.054** (0.026)	0.060** (0.027)	0.060** (0.028)	0.046 (0.029)	0.053* (0.030)	0.052* (0.027)	0.059** (0.027)
Earthq x Frequent earthq	-0.058 (0.041)	0.071* (0.034)	-0.055 (0.039)	-0.052 (0.043)	-0.056 (0.036)	-0.043 (0.040)	-0.057 (0.041)	-0.058 (0.041)	-0.042 (0.043)	-0.046 (0.049)	-0.048 (0.042)	-0.048 (0.039)
R-squared	0.417	0.631	0.421	0.282	0.419	0.292	0.414	0.415	0.285	0.405	0.284	0.421
Difference p-value		0.162	0.981	0.732	0.902	0.776	0.949	0.946	0.602	0.790	0.744	0.913
Number earthquakes	0.044*** (0.014)	0.184** (0.081)	0.044*** (0.014)	0.037** (0.014)	0.042*** (0.013)	0.041*** (0.013)	0.043*** (0.014)	0.043*** (0.015)	0.035** (0.014)	0.043*** (0.015)	0.038** (0.014)	0.040*** (0.015)
Earthq x Frequent earthq	-0.046** (0.018)	-0.272*** (0.080)	-0.042** (0.018)	-0.040** (0.019)	-0.044** (0.017)	-0.042** (0.018)	-0.045** (0.018)	-0.044** (0.018)	-0.035* (0.018)	-0.035** (0.017)	-0.039** (0.018)	-0.041** (0.018)
R-squared	0.417	0.632	0.421	0.282	0.419	0.292	0.414	0.415	0.286	0.406	0.284	0.420
Difference p-value		0.117	0.965	0.653	0.924	0.844	0.971	0.945	0.564	0.981	0.673	0.827
Observations	370	76	370	354	370	354	370	370	351	351	354	370
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table A30 cont. Main results with controls for various alternative values

Alternative value:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
		Manners	Independence	Work	Responsibility	Imagination	Respect	Thrift	Perseverance	Faith	Unselfish	Obedience
Panel C. Dependent variable: D.attend religious services												
Earthquake dummy	0.024 (0.044)	-0.022 (0.033)	0.024 (0.046)	0.018 (0.043)	0.020 (0.049)	0.019 (0.044)	0.024 (0.044)	0.023 (0.044)	0.012 (0.042)	0.033 (0.042)	0.017 (0.044)	0.023 (0.045)
Earthq x Frequent earthq	0.014 (0.077)	0.054 (0.041)	0.013 (0.078)	0.018 (0.075)	0.017 (0.085)	0.025 (0.078)	0.013 (0.076)	0.013 (0.077)	0.026 (0.074)	0.005 (0.068)	0.020 (0.076)	0.023 (0.082)
R-squared	0.513	0.270	0.503	0.527	0.503	0.517	0.511	0.514	0.542	0.388	0.525	0.504
Difference p-value		0.201	0.997	0.895	0.941	0.917	0.997	0.991	0.790	0.831	0.888	0.981
Number earthq	0.017 (0.022)	-0.022 (0.033)	0.018 (0.023)	0.014 (0.022)	0.015 (0.024)	0.016 (0.022)	0.018 (0.022)	0.017 (0.022)	0.011 (0.021)	0.026 (0.022)	0.013 (0.022)	0.015 (0.023)
Earthq x Frequent earthq	-0.018 (0.025)	-0.031 (0.033)	-0.016 (0.026)	-0.014 (0.024)	-0.016 (0.027)	-0.016 (0.024)	-0.018 (0.024)	-0.017 (0.025)	-0.010 (0.023)	-0.018 (0.025)	-0.013 (0.024)	-0.014 (0.026)
R-squared	0.513	0.271	0.502	0.526	0.502	0.517	0.510	0.514	0.541	0.388	0.524	0.503
Difference p-value		0.267	0.997	0.862	0.935	0.942	0.985	0.972	0.742	0.695	0.835	0.906
Observations	384	76	384	368	384	368	384	384	365	365	368	384
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes. OLS estimates. The table replicates Panel B of Table 4 adding various additional values as controls. All are described by Table A14. "Difference p-value" indicates the p-value of the test that the estimate on earthquakes in low risk districts equals the estimate in column (1).

Table A31 includes ethnicity fixed effects (variable x051).

Table A31. Main results with ethnicity fixed effects						
Dep. var.:	(1)	(2)	(3)	(4)	(5)	(6)
	D.impgod		D.relpers			D.service
Panel A. Earthquake dummy						
Earthquake dummy	0.067** (0.029)	0.055** (0.024)	0.064 (0.060)	0.077 (0.071)	0.129 (0.076)	0.054 (0.074)
R-squared	0.371	0.320	0.534	0.485	0.439	0.450
Panel B. Number earthquakes						
Number earthquakes	0.017* (0.010)	0.015** (0.007)	0.032* (0.017)	0.031 (0.022)	0.028 (0.025)	0.016 (0.021)
R-squared	0.367	0.317	0.535	0.484	0.425	0.447
Observations	145	145	143	143	143	143
Baseline controls	Y	Y	Y	Y	Y	Y
Ethnicity fixed effects	Y	N	Y	N	Y	N

Notes. OLS estimates. The table replicates Panel B of Table 4 adding ethnicity fixed effects in odd columns. Even columns exclude ethnic fixed effects on the sample restricted to that with information on ethnicity.

C.5 Comparison of the estimate sizes

C.5.1 Standardized beta coefficients

Table A32. Main results with standardized coefficients

Dep. var.	(1)	(2)	(3)	(4)	(5)	(6)
	D.impgod	D.rel_pers	D.service	D.impgod	D.rel_pers	D.service
Panel A. Baseline results						
Earthquake dummy	0.226*** (0.069)	0.109** (0.044)	0.089 (0.078)	0.229*** (0.073)	0.100** (0.045)	0.116 (0.087)
R-squared	0.335	0.414	0.509	0.335	0.424	0.398
P-value beta=.229				1	0.00723	0.204
Panel B. Allowing for differential effect depending on how frequent the district is hit						
Earthquake dummy	0.276*** (0.082)	0.127** (0.055)	0.061 (0.115)	0.282*** (0.089)	0.113** (0.055)	0.093 (0.123)
Earthquake dummy x Frequent earthq	-0.172** (0.068)	-0.097 (0.068)	0.029 (0.159)	-0.177** (0.074)	-0.065 (0.063)	0.039 (0.179)
R-squared	0.338	0.417	0.513	0.338	0.427	0.408
P-value beta=.282				1	0.00444	0.135
Observations	350	370	384	338	338	338
Baseline controls	Y	Y	Y	Y	Y	Y
Sample	full	full	full	same	same	same

C.5.2 Same sample

Table A33 replicates Table 4 to the sample across columns.

Table A33. Main results restricted to the same sample across columns

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Earthquake measure:	D.impgod		D.relpers		D.service		D.impgod		D.relpers		D.service	
	Earthquake dummy				Number earthquakes							
Panel A. Linear effects of earthquakes												
Earthquake measure	0.077*** (0.025)	0.074*** (0.023)	0.049** (0.022)	0.042** (0.020)	0.043 (0.032)	0.039 (0.040)	0.077*** (0.025)	0.074*** (0.023)	0.049** (0.022)	0.042** (0.020)	0.043 (0.032)	0.039 (0.040)
R-squared	0.335	0.305	0.424	0.425	0.398	0.417	0.335	0.305	0.424	0.425	0.398	0.417
Panel B. Allowing for differential effects depending on how frequent the district is hit												
Earthquake measure	0.095*** (0.030)	0.088*** (0.026)	0.056** (0.027)	0.053** (0.023)	0.034 (0.045)	0.030 (0.053)	0.095*** (0.030)	0.088*** (0.026)	0.056** (0.027)	0.053** (0.023)	0.034 (0.045)	0.030 (0.053)
Earthq x Frequent earthq	-0.075** (0.031)	-0.062* (0.033)	-0.041 (0.039)	-0.043+ (0.029)	0.018 (0.083)	0.058 (0.095)	-0.075** (0.031)	-0.062* (0.033)	-0.041 (0.039)	-0.043+ (0.029)	0.018 (0.083)	0.058 (0.095)
R-squared	0.338	0.307	0.427	0.428	0.408	0.430	0.338	0.307	0.427	0.428	0.408	0.430
Panel C. Placebo regressions												
Earthquake measure w+1	-0.026 (0.021)	-0.016 (0.026)	0.027 (0.043)	0.027 (0.049)	-0.054 (0.049)	-0.052 (0.047)	-0.025 (0.018)	-0.016 (0.021)	0.018 (0.037)	0.018 (0.042)	-0.047 (0.044)	-0.042 (0.041)
Earthq w+1 x Frequent earthq	-0.016 (0.021)	-0.032 (0.028)	-0.004 (0.048)	-0.012 (0.055)	0.113+ (0.067)	0.129** (0.058)	0.016 (0.017)	0.009 (0.021)	-0.018 (0.034)	-0.016 (0.040)	0.034 (0.043)	0.033 (0.042)
R-squared	0.319	0.290	0.425	0.426	0.410	0.431	0.319	0.290	0.425	0.425	0.409	0.428
Observations	338	312	338	312	338	312	338	312	338	312	338	312
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Education dummies	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y
Districts	236	230	250	240	264	254	236	230	250	240	264	254
Countries	31	30	31	30	32	31	31	30	31	30	32	31
Number Fixed effects	46	50	47	49	48	50	46	50	47	49	48	50

Notes. The table replicates Table 4 on the restricted sample where all three religiosity measures are available.

C.6 Different measures of frequent earthquakes

In the main analysis, a district is defined as having been hit frequently by earthquakes if the district lies in the top 95th percentile in terms of the number of earthquakes that hit during the period for which there is comparable data on earthquake instances, 1973-2014. This turns out to equal seven earthquakes or more. Columns (1)-(3), (5)-(7), and (9)-(11) of Table A34 show that the results do not depend on the exact choice of percentile, particularly when measuring religiosity along the intensive margin (importance of God and attendance rates). Again the extensive margin (share of religious persons) is somewhat less robust. The results are also robust to using instead a dummy equal to one if the district is located within the earthquake zone 3 or 4 as defined in the cross-district analysis (columns 4, 8, and 12).

Table A34. Main results with different high-frequency measures

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	D.importance of God				D.religious person				D.Attend services			
Panel A. Earthquake dummy												
Earthquake dummy	0.131*** (0.046)	0.093*** (0.028)	0.078*** (0.024)	0.098** (0.037)	0.062 (0.050)	0.062** (0.027)	0.052** (0.022)	0.071*** (0.025)	0.022 (0.091)	0.024 (0.044)	0.033 (0.031)	0.030 (0.047)
Earthq x Frequent earthq	-0.093+ (0.058)	-0.073** (0.029)	-0.045* (0.024)	-0.048 (0.042)	-0.031 (0.050)	-0.058 (0.041)	0.008 (0.022)	-0.041 (0.030)	0.016 (0.100)	0.014 (0.077)	0.038 (0.031)	0.011 (0.064)
R-squared	0.342	0.338	0.335	0.338	0.416	0.417	0.414	0.415	0.509	0.513	0.509	0.509
Panel B. Number earthquakes												
Number earthquakes	0.100** (0.043)	0.058** (0.021)	0.030** (0.012)	0.058* (0.030)	0.050+ (0.033)	0.044*** (0.014)	0.023*** (0.007)	0.029* (0.016)	-0.003 (0.066)	0.017 (0.022)	0.014 (0.010)	0.006 (0.018)
Earthq x Frequent earthq	-0.088* (0.047)	-0.053*** (0.019)	-0.024* (0.012)	-0.044+ (0.030)	-0.038 (0.033)	-0.046** (0.018)	-0.006 (0.007)	-0.012 (0.016)	0.018 (0.071)	-0.018 (0.025)	0.004 (0.010)	0.015 (0.020)
R-squared	0.337	0.333	0.326	0.331	0.416	0.417	0.413	0.414	0.509	0.513	0.508	0.509
Observations	350	350	350	350	370	370	370	370	384	384	384	384
High risk measure	>=90 pct	>=95 pct	>=99 pct	zone	>=90 pct	>=95 pct	>=99 pct	zone	>=90 pct	>=95 pct	>=99 pct	zone
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes. OLS estimates. The dependent variable is the change in the district aggregate of importance of God in columns (1)-(4), the change in the share of religious persons in columns (5)-(8), and the change in average attendance rates in columns (9)-(12). Panel A measures earthquakes with a dummy equal to one if the district was hit by one or more earthquakes. In Panel B, the earthquake measure is the actual number of earthquakes. Baseline controls are the same as those in Table 4.

C.7 Dynamics and period lengths

The main regressions exclude district-years measured more than 10 years apart. Figure A7 shows the distribution of years between interviews in the samples where the three different religiosity measures are non-missing.

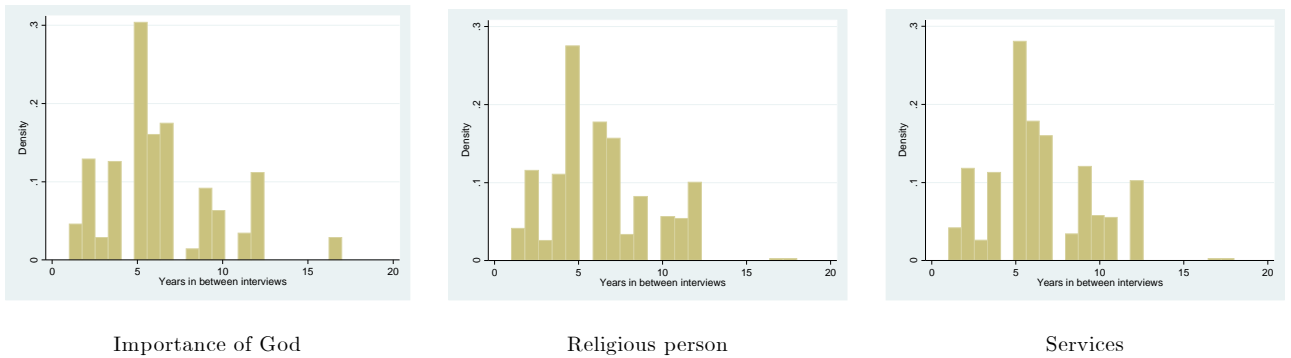


Figure A7. Distribution of the number of years between interviews

Table A35. Main results with same window lengths

	(1)	(2)	(3)	(4)
Panel A. Dep var: Changes in importance of God				
Earthquake dummy	0.19** (0.09)	0.16* (0.08)	0.22** (0.09)	0.22** (0.08)
Earthq x Frequent earthq	-0.18** (0.09)	-0.05 (0.10)	-0.07 (0.10)	-0.07** (0.02)
Observations	92	90	88	88
Districts	61	59	58	58
R-squared	0.07	0.36	0.40	0.40
Panel B. Dep var: Changes in religious person				
Earthquake dummy	-0.05 (0.08)	-0.00 (0.12)	0.04 (0.13)	0.04 (0.07)
Earthq x Frequent earthq	0.15* (0.08)	0.02 (0.14)	0.01 (0.14)	0.01 (0.02)
Observations	93	91	89	89
Districts	61	59	58	58
R-squared	0.03	0.09	0.10	0.10
Panel C. Dep var: Changes in attendance rates				
Earthquake dummy	-0.07 (0.07)	-0.09 (0.08)	-0.09 (0.09)	-0.09*** (0.02)
Earthq x Frequent earthq	0.12* (0.07)	0.01 (0.10)	0.02 (0.10)	0.02* (0.01)
Observations	93	91	89	89
Districts	61	59	58	58
R-squared	0.02 (0.05)	0.10	0.08	0.08
Country and year FE	N	Y	Y	Y
Country-by-year FE	N	N	Y	Y
Clustered se at country level	N	N	N	Y

Notes. The dependent variable is changes in average importance of God in Panel A, religious persons in panel B, and the attendance at religious services in panel C. Years since last earthquake is included throughout. Robust standard errors in columns (1)-(3). Standard errors are clustered at the country level in columns (4). Asterisks ***, **, *, and + indicate significance at the 1, 5, 10%, and 15% level, respectively.

Table A36 exploits the difference in period lengths in order to investigate the short-term dynamics of the effect of earthquakes. The main analysis excludes districts with more than 10 years in between interviews. Column (1) shows that the results are robust to using the full sample of period lengths. Columns (2)-(9) narrows the window of observation more as we move to the right in the table from 12 years or below to 5 years or below. The reason for not reducing the window of observation further is that the interaction with "Frequent earthquakes" cannot be estimated in this sample. The impact of earthquakes on intrinsic religiosity increases when narrowing the window of observation, consistent with the idea that the impact falls over time. Table A37 shows that this is not because the period length depends on characteristics such as earthquakes, district-level average income, education, age of the respondents, fraction males, or fraction married. The finding that attendance rates are unaffected by earthquakes is robust to different period lengths (Panel C).

Table A36. Main results restricted by different window of observation lengths

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Periodlength	All	<=12	<=11	<=10	<=9	<=8	<=7	<=6	<=5
Panel A. Dependent variable: D.Importance of God									
Avg period length	6.327	6.111	5.540	5.369	5.058	4.747	4.692	4.172	3.701
Earthquake dummy = 1	0.087*** (0.026)	0.084*** (0.026)	0.091*** (0.027)	0.093*** (0.028)	0.097*** (0.030)	0.097*** (0.030)	0.097*** (0.030)	0.133** (0.052)	0.200** (0.077)
Earthq x Frequent earthquakes	-0.049 (0.030)	-0.047 (0.030)	-0.071** (0.028)	-0.073** (0.029)	-0.078** (0.032)	-0.078** (0.032)	-0.078** (0.032)	-0.089** (0.041)	-0.142* (0.068)
R-squared	0.456	0.407	0.348	0.338	0.327	0.320	0.321	0.326	0.384
Number earthquakes	0.056*** (0.019)	0.054*** (0.018)	0.057** (0.021)	0.058** (0.021)	0.059** (0.023)	0.059** (0.023)	0.059** (0.023)	0.138** (0.052)	0.220*** (0.061)
Earthq x Frequent earthquakes	-0.045*** (0.016)	-0.043*** (0.016)	-0.052*** (0.019)	-0.053*** (0.019)	-0.054** (0.021)	-0.054** (0.021)	-0.054** (0.021)	-0.120** (0.047)	-0.188*** (0.058)
R-squared	0.453	0.405	0.343	0.333	0.320	0.313	0.314	0.327	0.388
Observations	404	396	361	350	328	304	299	244	194
Panel B. Dependent variable: D.Religious person									
Avg period length	6.261	6.233	5.715	5.443	5.155	4.870	4.740	4.254	3.708
Earthquake dummy = 1	0.049* (0.028)	0.049* (0.028)	0.052* (0.028)	0.062** (0.027)	0.059* (0.029)	0.059* (0.029)	0.059* (0.029)	0.049 (0.065)	0.098+ (0.057)
Earthq x Frequent earthquakes	-0.066 (0.046)	-0.066 (0.046)	-0.075+ (0.049)	-0.058 (0.041)	-0.056 (0.043)	-0.056 (0.043)	-0.056 (0.043)	0.023 (0.059)	0.024 (0.061)
R-squared	0.465	0.465	0.429	0.417	0.417	0.415	0.414	0.418	0.453
Number earthquakes	0.027 (0.020)	0.027 (0.020)	0.039** (0.014)	0.044*** (0.014)	0.042*** (0.014)	0.042*** (0.014)	0.042*** (0.014)	0.048 (0.066)	0.110** (0.050)
Earthq x Frequent earthquakes	-0.048* (0.026)	-0.048* (0.026)	-0.062** (0.024)	-0.046** (0.018)	-0.044** (0.018)	-0.044** (0.018)	-0.044** (0.018)	-0.041 (0.063)	-0.079+ (0.048)
R-squared	0.466	0.466	0.431	0.417	0.417	0.415	0.414	0.418	0.452
Observations	425	424	389	370	348	324	311	256	195
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table A36 cont. Main results restricted by different window of observation lengths

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Periodlength	All	<=12	<=11	<=10	<=9	<=8	<=7	<=6	<=5
Panel C. Dependent variable: D.Attend religious services									
Avg period length	6.349	6.322	5.829	5.573	5.304	4.870	4.740	4.254	3.708
Earthquake dummy	0.024 (0.043)	0.024 (0.043)	0.019 (0.045)	0.024 (0.044)	0.025 (0.048)	0.025 (0.048)	0.025 (0.048)	0.068 (0.095)	-0.051 (0.041)
Earthq x Frequent earthq	-0.010 (0.065)	-0.010 (0.065)	0.004 (0.075)	0.014 (0.077)	0.013 (0.080)	0.013 (0.080)	0.013 (0.080)	-0.058 (0.086)	0.033 (0.067)
R-squared	0.512	0.512	0.513	0.513	0.502	0.486	0.486	0.488	0.214
Number earthquakes	0.019 (0.021)	0.019 (0.021)	0.015 (0.022)	0.017 (0.022)	0.018 (0.023)	0.018 (0.023)	0.018 (0.024)	0.070 (0.097)	-0.055 (0.040)
Earthq x Frequent earthq	-0.031 (0.022)	-0.031 (0.022)	-0.026 (0.024)	-0.018 (0.025)	-0.018 (0.026)	-0.018 (0.026)	-0.018 (0.026)	-0.065 (0.089)	0.048 (0.038)
R-squared	0.513	0.513	0.513	0.513	0.501	0.485	0.485	0.488	0.214
Observations	439	438	403	384	362	324	311	256	195
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes. OLS estimates. The dependent variables are changes in district average importance of God in Panel A, the share of religious persons in Panel B, and average attendance at religious services in Panel C. Each panel includes two types of regressions using the earthquake dummy and the number of earthquakes.

Table A37. OLS estimates of period lengths on the main variables

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Earthquake measure:			Earthquake dummy				Number earthquakes					
Dependent variable: Period length												
Earthquake measure	-0.001 (0.018)	-0.019 (0.049)	0.033 (0.072)	-0.007 (0.056)	0.000 (0.064)	-0.006 (0.055)	0.006 (0.010)	0.012 (0.041)	0.049 (0.059)	0.022 (0.043)	0.027 (0.052)	0.022 (0.046)
Earthq x Frequent earthquakes	0.106 (0.090)	0.316 (0.248)	0.230 (0.198)	0.233 (0.199)	0.251 (0.204)	0.236 (0.184)	0.021 (0.030)	0.025 (0.037)	-0.015 (0.048)	0.010 (0.047)	0.005 (0.050)	0.009 (0.045)
Years since an earthquake hit	-0.000 (0.001)	-0.002 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.000 (0.001)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)
Average education		0.098 (0.109)						0.095 (0.106)				
Average income			0.119 (0.088)						0.118 (0.086)			
Share males				0.297 (0.455)						0.306 (0.449)		
Average age					0.001 (0.014)						0.001 (0.013)	
Share married							-0.000 (0.837)					-0.005 (0.832)
Observations	2,159	717	669	785	775	788	2,159	717	669	785	775	788
R-squared	0.879	0.882	0.856	0.883	0.883	0.883	0.880	0.882	0.857	0.884	0.884	0.884

Notes. OLS estimates. The dependent variable is period length measured by the number of years between interviews. The measure of earthquakes is the earthquake dummy in columns (1)-(6) and the number of earthquakes in columns (7)-(12).

An alternative way to test the dynamics is to estimate the district aggregate of equation (1) with district fixed effects and adding lags of earthquakes. This is done in Table A38 on the full sample. Past earthquakes are aggregated into groups of three years, since there is too much noise and too few earthquakes in the year-intervals of 1 or 2 years. "Earthquakes t-1 - t-3" measures whether earthquakes hit the district within the past three years, measuring earthquakes by the earthquake dummy in columns (1)-(3) and the number of earthquakes in columns (4)-(6). "Earthquakes t-4 - t-6" measures whether earthquakes hit between four and six years ago, "Earthquakes t-7 - t-9" between seven and nine years ago, and "Earthquakes t10-12" between ten and twelve years ago. All columns include district fixed effects, country-by-year fixed effects, and the remaining baseline controls. Panel A estimates the simple linear effect, while Panel B includes the interaction with the "Frequent earthquakes" dummy.

Earthquakes that hit within the last nine years increase intrinsic religiosity significantly more than earthquakes that hit longer time ago. The result is again stronger on the intensive margin; average importance of God is affected more than the share of religious persons. Again, churchgoing is not affected. There is, however, a negative effect from earthquakes 10-12 years ago, which seems odd and is neither consistent with religious coping nor a pure economic effect.

Title A38. OLS estimates of religiosity on different lags of earthquakes

	(1)	(2)	(3)	(4)	(5)	(6)
Earthquake measure	Earthquake dummy			Number earthquakes		
Dependent variable	impgod	rel_pers	service	impgod	rel_pers	service
Panel A. Baseline regressions						
Earthquakes t-1 - t-3	0.063*** (0.016)	0.036** (0.016)	-0.035 (0.023)	0.021* (0.011)	0.012* (0.007)	-0.009 (0.006)
Earthquakes t-4 - t-6	0.010 (0.019)	-0.018 (0.023)	0.038 (0.037)	0.005 (0.006)	-0.013 (0.010)	0.009 (0.013)
Earthquakes t-7 - t-9	0.032 (0.020)	0.027 (0.023)	-0.012 (0.024)	0.015 (0.012)	0.015 (0.014)	-0.001 (0.017)
Earthquakes t-10 - t-12	0.011 (0.011)	0.034* (0.020)	-0.055*** (0.011)	0.003 (0.006)	0.011 (0.011)	-0.027*** (0.007)
R-squared	0.950	0.926	0.920	0.949	0.926	0.919
Panel B. Interactions with high earthquake frequency						
Earthquakes t-1 - t-3	0.087*** (0.017)	0.045** (0.017)	-0.041 (0.025)	0.061*** (0.014)	0.023 (0.016)	-0.020 (0.017)
x High frequency	-0.073*** (0.020)	-0.023 (0.025)	0.038 (0.031)	-0.059*** (0.015)	-0.016 (0.017)	0.007 (0.015)
Earthquakes t-4 - t-6	0.052** (0.022)	-0.006 (0.034)	0.061 (0.047)	0.034** (0.014)	-0.006 (0.022)	0.049 (0.032)
x High frequency	-0.114*** (0.031)	-0.048 (0.039)	-0.082* (0.041)	-0.048*** (0.017)	-0.019 (0.028)	-0.071** (0.033)
Earthquakes t-7 - t-9	0.061** (0.023)	0.019 (0.026)	-0.026 (0.023)	0.040** (0.019)	0.008 (0.017)	-0.016 (0.018)
x High frequency	-0.055* (0.027)	0.036 (0.033)	0.061 (0.044)	-0.031 (0.019)	0.022 (0.017)	0.050** (0.021)
Earthquakes t-10 - t-12	0.018 (0.011)	0.027 (0.022)	-0.054*** (0.013)	0.014 (0.010)	0.018 (0.017)	-0.033*** (0.012)
x High frequency	-0.039** (0.018)	0.020 (0.028)	-0.034* (0.020)	-0.024** (0.009)	-0.016 (0.017)	-0.005 (0.013)
R-squared	0.951	0.926	0.921	0.950	0.926	0.921
Observations	687	716	744	687	716	744
District FE	Y	Y	Y	Y	Y	Y
Country-by-year FE	Y	Y	Y	Y	Y	Y
Remaining baseline controls	N	Y	N	Y	N	Y

Notes. OLS estimates. The unit of analysis is a district at time t . The dependent variable is average importance of God in columns (1)-(2) and (5)-(6) and the share of religious persons in columns (3)-(4) and (7-8). The earthquake measure is the earthquake dummy in columns (1)-(4) and the number of earthquakes in columns (5)-(8). Panel A estimates the simple linear effect, while Panel B includes the interaction between the earthquake measure and the dummy variable equal to one if the district was hit by 7 earthquakes or more over the period 1973-2014. All columns include a constant. Standard errors (in parenthesis) are clustered at the country level. Asterisks ***, **, *, and + indicate significance at the 1, 5, 10, and 15% level, respectively.

C.8 Sample restricted to districts with earthquakes

Table A39 restricts the sample to districts that had at least one earthquake in between survey rounds. The table shows that religiosity increased more in districts with more earthquakes in districts that were otherwise rarely hit, compared to districts that were frequently hit by earthquakes.

Table A39. Main results restricted to districts with at least one earthquake

Dep. var.	(1)	(2)	(3)	(4)	(5)	(6)
	D.impgod		D.rel_pers		D.service	
Number earthquakes	0.023*** (0.004)	0.019** (0.007)	0.061*** (0.002)	0.062*** (0.001)	0.052** (0.018)	0.064*** (0.009)
Earthq x frequent earthq	-0.042** (0.013)	-0.033* (0.014)	-0.079*** (0.007)	-0.073*** (0.003)	-0.121* (0.049)	-0.159*** (0.023)
Observations	26	24	26	24	26	24
R-squared	0.861	0.770	0.543	0.484	0.628	0.761
Baseline controls	Y	Y	Y	Y	Y	Y
Inc and edu dummies	N	Y	N	Y	N	Y
Districts	24	24	24	24	24	24
Countries	6	6	6	6	6	6

C.9 Future earthquakes

To construct future earthquakes in years after the latest measure of the religiosity measure, I choose five-year period lengths, as this is the most common period length (Section C.7).

Instead of the placebo test in Panel C of Table 4, one could also do a horse race between future and current earthquakes.⁶³ Panel A of Table A40 confirms that earthquakes in between survey rounds increase religiosity, while future earthquakes do not. This is despite the high correlation between current and future earthquakes ($\rho = 0.47$). Panel B allows the impact of the earthquakes to differ with the frequency with which the district is otherwise hit. Current earthquakes still increase religiosity. Future earthquakes do not, except in columns (1) and (2), where future earthquakes reduce religiosity in districts that are frequently hit. This result should be interpreted with caution, though, as the correlation between the interaction terms with the frequently hit dummy is 0.85. The variance inflation factor of the interaction term between frequent and future earthquakes in col (1) of Panel B is 16.55, and the results potentially suffer from multicollinearity.

⁶³Thanks to an anonymous referee for suggesting this.

Table A40. Main results including future earthquakes

Dep. var.:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	D.impgod		D.relpers		D.service		D.impgod		D.relpers		D.service	
Earthq measure:	Earthquake dummy						Number earthquakes					
Panel A. Simple horserace												
Earthquake t	0.076***	0.073***	0.052**	0.048**	0.035	0.031	0.032***	0.028***	0.019***	0.017***	0.016*	0.015
	(0.023)	(0.022)	(0.021)	(0.020)	(0.030)	(0.038)	(0.011)	(0.009)	(0.005)	(0.005)	(0.009)	(0.009)
Earthquake t+1	-0.012	-0.007	0.040	0.039	-0.009	-0.003	-0.012	-0.012	0.008	0.008	-0.004	-0.002
	(0.015)	(0.019)	(0.024)	(0.028)	(0.049)	(0.048)	(0.008)	(0.008)	(0.010)	(0.009)	(0.014)	(0.015)
Observations	350	324	370	333	384	347	350	324	370	333	384	347
R-squared	0.335	0.314	0.416	0.415	0.509	0.507	0.327	0.306	0.413	0.412	0.508	0.506
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Inc and edu dummies	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y
Districts	236	236	236	236	236	236	236	230	250	240	264	254
Countries	31	30	31	30	32	31	31	30	31	30	32	31
Panel B. Horserace including interaction with frequently hit districts												
Earthquake t	0.092***	0.087***	0.068**	0.066**	0.012	0.008	0.057**	0.052**	0.045***	0.045***	0.013	0.012
	(0.030)	(0.026)	(0.031)	(0.028)	(0.051)	(0.058)	(0.022)	(0.022)	(0.016)	(0.015)	(0.025)	(0.028)
Earthq t x Frequent	-0.050+	-0.036	-0.064	-0.070*	0.008	0.041	-0.048**	-0.043*	-0.046**	-0.046***	-0.011	-0.011
	(0.033)	(0.044)	(0.051)	(0.040)	(0.073)	(0.088)	(0.022)	(0.023)	(0.020)	(0.016)	(0.026)	(0.030)
Earthquake t+1	-0.007	-0.000	0.034	0.038	-0.061	-0.055	-0.014	-0.006	0.013	0.018	-0.048	-0.038
	(0.027)	(0.031)	(0.043)	(0.049)	(0.052)	(0.050)	(0.021)	(0.024)	(0.032)	(0.035)	(0.037)	(0.035)
Earthq t+1 x Frequent	-0.064**	-0.076*	-0.023	-0.028	0.093	0.088	0.001	-0.003	-0.014	-0.015	0.034	0.030
	(0.029)	(0.038)	(0.068)	(0.067)	(0.057)	(0.052)	(0.023)	(0.027)	(0.032)	(0.036)	(0.038)	(0.035)
Observations	350	324	370	333	384	347	350	324	370	333	384	347
R-squared	0.340	0.318	0.418	0.416	0.518	0.517	0.334	0.311	0.417	0.416	0.517	0.515
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Inc and edu dummies	N	Y	N	Y	N	Y	N	Y	N	Y	N	Y
Districts	236	236	236	236	236	236	236	230	250	240	264	254
Countries	31	30	31	30	32	31	31	30	31	30	32	31

C.10 Different magnitudes

The main results are based on earthquakes of magnitude 6 or above. Table A41 uses different magnitude cut-offs, ranging from 5 or above in columns (1) and (7) to 6.5 or above in columns (6) and (12). The magnitude scale is logarithmic, so the shaking felt at magnitude 6 is ten times larger than the magnitude felt at magnitude 5. The reason for showing both results for earthquakes of magnitudes 5 and above and results for earthquakes of above 5 in magnitude is that many earthquake cluster around the even numbers, due to rounding errors.

The impact of earthquakes on intrinsic religiosity increases with most magnitude increases. Further, it takes larger earthquakes to influence the extensive margin (religious person) compared to the intensive margin (importance of God). Attending religious services is not influenced throughout, except when restricting the earthquake measure to include only earthquakes of magnitudes greater than 6.5. Oddly enough, here earthquakes reduce attendance rates in low-risk districts, which is neither consistent with religious coping nor a pure economic effect. This result, though, may be influenced by outliers, as there are only 16 districts in the sample with earthquakes of magnitudes above 6.5. Excluding outliers removes the negative effect on religious services (not shown), but in this sample, the interaction with frequent earthquakes is not estimated, and the two estimations are not directly comparable.

The reason for the change in the number of observations is that the analysis - in line with the main analysis - excludes district-years with earthquakes in the same year as the interview.

Table A41. Main results for different earthquake magnitudes

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Earthquake measure:	Earthquake dummy						Number earthquakes					
Panel A. Dependent variable: D. importance of God												
Earthquake measure	0.012 (0.016)	0.044 (0.031)	0.052** (0.020)	0.093*** (0.028)	0.088*** (0.031)	0.088*** (0.029)	0.009 (0.009)	0.018 (0.015)	0.034*** (0.012)	0.058** (0.021)	0.054** (0.021)	0.088*** (0.029)
Earthquake x Frequent earthq			0.023 (0.019)	-0.073** (0.029)	-0.087** (0.038)	-0.080*** (0.028)			-0.030** (0.012)	-0.053*** (0.019)	-0.052** (0.020)	-0.088*** (0.028)
Observations	278	282	318	350	350	365	278	282	318	350	350	365
R-squared	0.297	0.297	0.314	0.338	0.335	0.332	0.300	0.295	0.312	0.333	0.330	0.331
No. districts w earthq	57	48	32	29	26	15	57	48	32	29	26	15
Panel B. Dependent variable: D. religious person												
Earthquake measure	-0.054 (0.041)	-0.006 (0.024)	-0.010 (0.039)	0.062** (0.027)	0.070*** (0.023)	0.066*** (0.017)	-0.001 (0.005)	0.010* (0.006)	-0.014 (0.018)	0.044*** (0.014)	0.047*** (0.013)	0.065*** (0.016)
Earthquake x Frequent earthq			-0.009 (0.040)	-0.058 (0.041)	-0.056 (0.048)	-0.003 (0.037)			0.027 (0.018)	-0.046** (0.018)	-0.050** (0.021)	-0.044* (0.026)
Observations	298	302	338	370	370	386	298	302	338	370	370	386
R-squared	0.393	0.379	0.401	0.417	0.418	0.419	0.383	0.380	0.401	0.417	0.417	0.417
No. districts w earthq	61	52	33	29	26	16	61	52	33	29	26	16
Panel C. Dependent variable: D. attend religious services												
Earthquake measure	-0.015 (0.018)	-0.007 (0.017)	-0.007 (0.035)	0.024 (0.044)	-0.021 (0.027)	-0.045** (0.017)	-0.010 (0.007)	-0.009 (0.011)	-0.015 (0.018)	0.017 (0.022)	0.001 (0.015)	-0.045** (0.017)
Earthquake x Frequent earthq			0.145*** (0.028)	0.014 (0.077)	0.019 (0.038)	0.076*** (0.021)			0.072*** (0.018)	-0.018 (0.025)	-0.009 (0.017)	0.067*** (0.017)
Observations	312	316	352	384	384	400	312	316	352	384	384	400
R-squared	0.515	0.528	0.521	0.513	0.516	0.513	0.518	0.529	0.528	0.513	0.516	0.513
No. districts w earthq	63	54	33	29	26	16	63	54	33	29	26	16
Magnitude	>=5	>5	>=5.5	>=6	>6	>=6.5	>=5	>5	>=5.5	>=6	>6	>=6.5
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes. OLS estimates. The dependent variable is the change in the district aggregate of importance of God in your life in Panel A, the share of religious persons in Panel B, and average attendance at religious services in Panel C. Earthquakes are measured using the dummy in columns (1)-(6) and the number of earthquakes in columns (7)-(12). Only earthquakes above magnitude x are included in the analysis, where x ranges from magnitude 5 in columns (1) and (7) to magnitude 6.5 in columns (6) and (12). Baseline controls are the same as those in Table 4.

C.11 Alternative religiosity measures

The main analysis includes only the three measures of religiosity with the most observations. Table A42 shows the results for the remaining measures of religiosity. Earthquakes do not increase believing when measured by the three individual measures; whether or not a person finds comfort in religion, believes in God, or believes in an Afterlife. Whether this is evidence of the tendency that conversion rates are harder to influence or whether this is simply due to the reduced sample size is not possible to say. The two composite measures Strength of Religiosity Scale and Strength of Intrinsic Religiosity Scale are significantly affected by earthquakes (columns 7-10).

Table A42. Main results with the religiosity measures available for smaller samples

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	D.comfort		D.believe		D.after		D.reli		D.rel	
Panel A. Earthquake dummy										
Earthquake dummy	-0.001 (0.018)	-0.010 (0.016)	-0.001 (0.013)	0.001 (0.011)	0.062 (0.071)	0.072 (0.074)	0.048** (0.018)	0.048** (0.019)	0.045** (0.020)	0.043* (0.021)
Earthq x Frequent earthq	-0.023 (0.027)	0.041 (0.029)	-0.013 (0.010)	-0.008 (0.011)	-0.070 (0.073)	-0.079 (0.082)	-0.071** (0.026)	-0.034+ (0.022)	-0.052 (0.036)	-0.021 (0.032)
R-squared	0.240	0.240	0.355	0.355	0.382	0.401	0.456	0.487	0.430	0.451
Panel B. Number earthquakes										
Number earthquakes	0.000 (0.010)	-0.007 (0.009)	-0.001 (0.006)	-0.002 (0.006)	0.022 (0.042)	0.022 (0.044)	0.026* (0.013)	0.024+ (0.014)	0.024* (0.013)	0.021+ (0.014)
Earthq x Frequent earthq	-0.029 (0.026)	0.008 (0.010)	-0.012 (0.009)	-0.005 (0.008)	-0.032 (0.044)	-0.022 (0.043)	-0.049* (0.024)	-0.024+ (0.015)	-0.036* (0.019)	-0.018 (0.017)
R-squared	0.245	0.239	0.358	0.356	0.377	0.393	0.457	0.482	0.428	0.445
Observations	181	174	181	174	181	174	180	173	180	173
Baseline controls	N	Y	N	Y	N	Y	N	Y	N	Y
Districts	125	125	125	125	125	125	125	125	125	125
Countries	16	16	16	16	16	16	16	16	16	16

Notes. OLS estimates. The dependent variable in columns (1)-(2) is the change in the district aggregate of answers to "Do you find comfort in God?", "Do you believe in God?" in columns (3-4), "Do you believe in Afterlife?" in columns (5-6), the Strength of Intrinsic Religiosity Scale in columns (7-8) and the Strength of Religiosity Scale in columns (9-10). All columns include a constant. Standard errors (in parenthesis) are clustered at the country level. Asterisks ***, **, *, and + indicate significance at the 1, 5, 10, and 15% level, respectively.

Table A43 shows that insignificance is not due to the smaller sample size.

Table A43. Main results restricted to the sample of the remaining religiosity measures

	(1)	(2)	(3)	(4)	(5)	(6)
Earthquake measure	Dummy			Number		
Dependent variable:	D.impgod	D.rel_pers	D.service	D.impgod	D.rel_pers	D.service
Earthquake dummy	0.092*** (0.031)	0.097** (0.041)	0.039 (0.052)	0.052** (0.021)	0.062** (0.023)	0.026 (0.025)
inst_high	-0.072* (0.034)	-0.074 (0.051)	0.042 (0.098)	-0.051** (0.021)	-0.057** (0.023)	0.002 (0.030)
Observations	173	174	174	173	174	174
R-squared	0.300	0.534	0.353	0.289	0.533	0.350
Baseline controls	Y	Y	Y	Y	Y	Y

C.11.1 Different categorizations of the religiosity measures

This section investigates the results viz-a-viz different categorizations of the two religiosity measures that are not dummy variables. The different categorizations are described in Section B.11. Again the importance of God measure is robust to different categorizations and the impact of earthquake risk is stemming exclusively from the intensive margin. Attendance at religious services is unaffected by earthquake risk throughout.

Table A44. Main results with different categorizations of the measure of churchgoing

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent variable: Attendance at religious services						
Earthquake dummy	0.035 (0.029)	0.034 (0.030)	0.037 (0.043)	0.058 (0.053)	0.001 (0.018)	0.011 (0.049)
Observations	384	384	384	384	384	383
R-squared	0.500	0.509	0.437	0.350	0.691	0.309
Baseline controls	Y	Y	Y	Y	Y	Y
Attendance measure	org	base	frequent1	frequent2	extensive	intensive

Table A45. Main results with different categorizations of the importance of God measure

	(1)	(2)	(3)	(4)	(5)
Dependent variable: Importance of God					
Earthquake dummy	0.076*** (0.023)	0.117** (0.044)	0.130*** (0.034)	0.019* (0.011)	0.070** (0.028)
Observations	350	350	350	350	350
R-squared	0.335	0.430	0.630	0.353	0.225
Baseline controls	Y	Y	Y	Y	Y
Importance of God measure	base	important1	important2	extensive	intensive

C.12 Heterogeneity by religion and continents

C.12.1 Heterogeneity by initial religiosity

Columns (1), (4), and (7) of Table A46 replicate the corresponding columns in Panel B of Table 4. The remaining columns add initial religiosity and its interaction with earthquakes. The impact of earthquakes on religiosity does not depend on the initial level of religiosity. The main results are unchanged.

Table A46. Main results including initial religiosity

Dependent variable:	(1) D.impgod	(2)	(3)	(4) D.relpers	(5)	(6)	(7) D.service	(8)	(9)
Panel A. Earthquake dummy									
Earthquake dummy	0.093*** (0.028)	0.072*** (0.017)	0.072** (0.030)	0.062** (0.027)	0.052*** (0.016)	0.045** (0.020)	0.024 (0.044)	0.024 (0.040)	0.005 (0.024)
Earthq x Frequent earthq	-0.073** (0.029)	-0.063*** (0.017)	-0.063*** (0.017)	-0.058 (0.041)	-0.055** (0.023)	-0.048** (0.022)	0.014 (0.077)	0.032 (0.069)	0.047 (0.062)
Initial religiosity		-0.616*** (0.137)	-0.615*** (0.137)		-0.577*** (0.091)	-0.580*** (0.092)		-0.610*** (0.084)	-0.612*** (0.084)
Earthq x initial rel			-0.008 (0.125)			0.068 (0.065)			0.145 (0.164)
R-squared	0.338	0.540	0.540	0.417	0.584	0.584	0.513	0.627	0.628
Panel B. Number earthquakes									
Number earthquakes	0.058** (0.021)	0.045*** (0.012)	0.051*** (0.018)	0.044*** (0.014)	0.038*** (0.009)	0.033*** (0.011)	0.017 (0.022)	0.021 (0.020)	0.011 (0.015)
Earthq x Frequent earthq	-0.053*** (0.019)	-0.048*** (0.012)	-0.056** (0.021)	-0.046** (0.018)	-0.045*** (0.012)	-0.033** (0.014)	-0.018 (0.025)	-0.017 (0.023)	-0.002 (0.018)
Initial religiosity		-0.620*** (0.138)	-0.617*** (0.138)		-0.578*** (0.091)	-0.579*** (0.091)		-0.609*** (0.084)	-0.609*** (0.084)
Earthq x initial rel			-0.038 (0.049)			0.030 (0.019)			0.080 (0.051)
R-squared	0.333	0.538	0.538	0.417	0.584	0.584	0.513	0.626	0.628
Observations	350	350	350	370	370	370	384	384	384
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes. OLS estimates. The dependent variables are changes in district average of importance of God in columns (1)-(3), the share of religious persons in columns (4)-(6), and average attendance at religious services in columns (7)-(9). Panel A measures earthquakes with a dummy equal to one if the district was hit by one or more earthquakes. In Panel B, the earthquake measure is the actual number of earthquakes. Baseline controls are the same as those in Table 4.

C.12.2 Heterogeneity by denominations

District-level religiosity is calculated for Christians, Muslims, etc. in Table A47. Like the corresponding tables in Section B.12, average religiosity is calculated for each denomination separately and thereafter aggregated to the district level. Earthquakes increase intrinsic religiosity for all denominations, while churchgoing is unaffected across all denominations.

Table A47. Main results restricted to different religious denominations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Religious denomination	All	Christian	Catholic	Protestant	Muslim	Buddhist	Hindu	Other
Panel A. Dependent variable: D.importance of God								
Earthquake dummy	0.093*** (0.028)	0.093*** (0.027)	0.092*** (0.028)	0.097*** (0.027)	0.092*** (0.028)	0.089*** (0.028)	0.084*** (0.029)	0.094*** (0.027)
Earthq x Frequent earthq	-0.073** (0.029)	-0.074** (0.028)	-0.074** (0.028)	-0.075** (0.028)	-0.075** (0.028)	-0.074** (0.028)	-0.069** (0.030)	-0.075** (0.028)
Observations	350	350	350	350	350	350	350	350
R-squared	0.338	0.330	0.326	0.339	0.327	0.323	0.339	0.327
Number earthquakes	0.058** (0.021)	0.059*** (0.021)	0.059*** (0.021)	0.059*** (0.021)	0.059*** (0.020)	0.059*** (0.020)	0.055** (0.021)	0.059*** (0.021)
Earthq x Frequent earthq	-0.053*** (0.019)	-0.055*** (0.019)	-0.055*** (0.019)	-0.054*** (0.019)	-0.056*** (0.018)	-0.055*** (0.018)	-0.051** (0.019)	-0.055*** (0.019)
Observations	350	350	350	350	350	350	350	350
R-squared	0.333	0.325	0.322	0.332	0.323	0.320	0.336	0.322
Panel B. Dependent variable: D.religious person								
Earthquake dummy	0.062** (0.027)	0.060** (0.027)	0.059** (0.027)	0.064** (0.026)	0.059** (0.026)	0.065** (0.027)	0.060** (0.026)	0.063** (0.028)
Earthq x Frequent earthq	-0.058 (0.041)	-0.058 (0.041)	-0.058 (0.041)	-0.060 (0.040)	-0.058 (0.041)	-0.062 (0.041)	-0.058 (0.040)	-0.063 (0.042)
Observations	370	370	370	370	370	370	370	370
R-squared	0.417	0.418	0.417	0.420	0.417	0.418	0.421	0.416
Number earthquakes	0.044*** (0.014)	0.044*** (0.013)	0.044*** (0.013)	0.044*** (0.013)	0.044*** (0.013)	0.045*** (0.013)	0.043*** (0.013)	0.045*** (0.014)
Earthq x Frequent earthq	-0.046** (0.018)	-0.046** (0.018)	-0.046** (0.018)	-0.046** (0.018)	-0.047** (0.018)	-0.049** (0.018)	-0.046** (0.017)	-0.049** (0.018)
Observations	370	370	370	370	370	370	370	370
R-squared	0.417	0.418	0.417	0.420	0.417	0.417	0.421	0.416
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y

Table A47 cont. Main results restricted to different religious denominations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Religious denomination	All	Christian	Catholic	Protestant	Muslim	Buddhist	Hindu	Other
Panel C. Dependent variable: D.attend religious services								
Earthquake dummy	0.024 (0.044)	0.025 (0.044)	0.023 (0.044)	0.030 (0.045)	0.026 (0.044)	0.020 (0.044)	0.021 (0.045)	0.026 (0.044)
Earthq x Frequent earthq	0.014 (0.077)	0.012 (0.077)	0.013 (0.076)	0.010 (0.079)	0.014 (0.074)	0.016 (0.076)	0.015 (0.077)	0.010 (0.077)
Observations	384	384	384	384	384	384	384	384
R-squared	0.513	0.511	0.506	0.523	0.508	0.508	0.510	0.505
Number earthquakes	0.017 (0.022)	0.017 (0.022)	0.017 (0.022)	0.017 (0.023)	0.024 (0.022)	0.017 (0.022)	0.016 (0.022)	0.018 (0.022)
Earthq x Frequent earthq	-0.018 (0.025)	-0.018 (0.025)	-0.018 (0.024)	-0.018 (0.026)	-0.023 (0.024)	-0.018 (0.024)	-0.017 (0.024)	-0.019 (0.024)
Observations	384	384	384	384	384	384	384	384
R-squared	0.513	0.510	0.506	0.522	0.508	0.507	0.510	0.504
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y

Notes. The dependent variable is the district level change in the average importance of God in Panel A, the change in the share of religious persons in Panel B, and the change in the district average attendance at religious services in Panel C. Each panel contains a set of regressions, where earthquakes is measured as a dummy and a set where earthquakes is measured as the actual number of earthquakes. The district level average in column (1) is calculated as in Table 4, while the average in column (2) is only based on Christians, Catholics in column (3), Protestants in column (4), etc.

Table A48. Main results including denomination fixed effects

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var.:	D.impgod		D.relpers		D.service	
Panel A. Earthquake measure based on earthquake dummy						
Earthquake dummy	0.098*** (0.030)	0.096*** (0.029)	0.065** (0.026)	0.064** (0.027)	0.008 (0.047)	0.005 (0.047)
Earthq x Frequent	-0.092** (0.038)	-0.081** (0.034)	-0.066* (0.034)	-0.050 (0.036)	-0.014 (0.075)	0.001 (0.077)
R-squared	0.343	0.315	0.399	0.397	0.281	0.268
Panel A. Earthquake measure based on number of earthquakes						
Number earthquakes	0.060** (0.023)	0.058** (0.022)	0.047*** (0.013)	0.046*** (0.014)	0.008 (0.025)	0.006 (0.025)
Earthq x Frequent	-0.061*** (0.021)	-0.058*** (0.021)	-0.050*** (0.015)	-0.046*** (0.016)	-0.025 (0.023)	-0.022 (0.023)
R-squared	0.338	0.310	0.399	0.397	0.282	0.269
Observations	338	338	367	367	381	381
Baseline controls	Y	Y	Y	Y	Y	Y
59 denominations FE	Y	N	Y	N	Y	N
6 major denominations FE	N	Y	N	Y	N	Y
Districts	227	227	227	227	227	227
Countries	30	30	31	31	32	32

C.12.3 Heterogeneity by continents

As continents are measured at the district-level, this part of the analysis is done like the cross-districts analysis. Corroborating the finding of the cross-districts analysis, earthquakes increase religiosity across all continents. While there were no differences between continents in the cross-districts study, Table A49 shows that earthquakes in Europe increase religiosity more than other places, but mainly on the intensive margin (importance of God and churchgoing). Earthquakes in Oceania only seem to have an impact on the share of religious persons. The latter only covers 9 districts, though. Churchgoing is unaffected across all continents, except Europe, where earthquakes tend to increase churchgoing. The latter is consistent with both religious coping and a pure economic effect.

Table A49. Main results interacted with different continents

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Earthquake measure:	Earthquake dummy				Number earthquakes							
Panel A. Dependent variable: D.Importance of God												
Earthquake measure	0.093*** (0.028)	0.095*** (0.030)	0.095*** (0.028)	0.068** (0.025)	0.098*** (0.030)	0.089*** (0.028)	0.058** (0.021)	0.058** (0.022)	0.058** (0.022)	0.052*** (0.018)	0.060** (0.023)	0.055** (0.020)
Earthq x Frequent earthq	-0.073** (0.029)	-0.075** (0.032)	-0.059** (0.022)	-0.067*** (0.024)	-0.079** (0.032)	-0.069** (0.029)	-0.053*** (0.019)	-0.054** (0.020)	-0.053*** (0.018)	-0.053*** (0.018)	-0.054** (0.020)	-0.051*** (0.018)
Earthquake x Africa		-0.032 (0.038)						-0.001 (0.032)				
Earthquake x America			-0.037 (0.025)						-0.005 (0.009)			
Earthquake x Asia				0.033 (0.038)						0.007 (0.017)		
Earthquake x Oceania					-0.075** (0.035)						-0.063** (0.027)	
Earthquake x Europe						0.086*** (0.029)						0.119*** (0.022)
Observations	350	350	350	350	350	350	350	350	350	350	350	350
R-squared	0.338	0.338	0.338	0.339	0.339	0.339	0.333	0.333	0.333	0.333	0.334	0.334
Panel B. Dependent variable: D.Religious person												
Earthquake measure	0.062** (0.027)	0.062** (0.027)	0.059** (0.028)	0.106*** (0.033)	0.058* (0.029)	0.061** (0.028)	0.044*** (0.014)	0.044*** (0.014)	0.043*** (0.014)	0.067*** (0.021)	0.043*** (0.014)	0.043*** (0.014)
Earthq x Frequent earthq	-0.058 (0.041)	-0.058 (0.041)	-0.080** (0.037)	-0.069* (0.034)	-0.055 (0.043)	-0.058 (0.042)	-0.046** (0.018)	-0.046** (0.018)	-0.050** (0.019)	-0.048** (0.019)	-0.046** (0.018)	-0.045** (0.018)
Earthquake x America			0.066 (0.055)						0.029 (0.019)			
Earthquake x Asia				-0.054 (0.040)						-0.026 (0.017)		
Earthquake x Oceania					0.040 (0.036)						0.003 (0.049)	
Earthquake x Europe						0.013 (0.028)						0.031* (0.015)
Observations	370	370	370	370	370	370	370	370	370	370	370	370
R-squared	0.417	0.417	0.418	0.418	0.417	0.417	0.417	0.417	0.418	0.418	0.417	0.417
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table A49 cont. Main results interacted with different continents

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
Earthquake measure:			Earthquake dummy							Number earthquakes			
Panel C. Dependent variable: D.Importance of God													
Earthquake measure	0.024 (0.044)	0.024 (0.044)	0.027 (0.045)	0.006 (0.062)	0.025 (0.048)	0.016 (0.045)	0.017 (0.022)	0.017 (0.022)	0.018 (0.022)	0.021 (0.029)	0.018 (0.023)	0.014 (0.022)	
Earthq x Frequent earthq	0.014 (0.077)	0.014 (0.077)	0.041 (0.091)	0.018 (0.080)	0.013 (0.080)	0.022 (0.076)	-0.018 (0.025)	-0.018 (0.025)	-0.018 (0.026)	-0.018 (0.025)	-0.018 (0.025)	-0.014 (0.024)	
Earthquake x America			-0.081 (0.083)						-0.003 (0.025)				
Earthquake x Asia				0.021 (0.059)						-0.004 (0.021)			
Earthquake x Oceania					-0.011 (0.045)						-0.022 (0.021)		
Earthquake x Europe						0.152*** (0.044)						0.155*** (0.021)	
Observations	384	384	384	384	384	384	384	384	384	384	384	384	
R-squared	0.513	0.513	0.514	0.513	0.513	0.515	0.513	0.513	0.513	0.513	0.513	0.514	
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	

Notes. The dependent variable is the change in average importance of God in Panel A, the change in the share of religious persons in Panel B, and the change in the average attendance at religious services in Panel C. The measure of earthquakes is the earthquake dummy in columns (1)-(6) and the number of earthquakes in columns (7)-(12).

C.13 Heterogeneity by development

As the variables in the event study are aggregated to the district level, the interactions with individual characteristics, such as income levels, is done in a slightly different manner than in the cross-district study. The complication arises as individual-level controls are added at the individual level throughout, and thereafter residuals are aggregated.

The baseline result is reproduced in column (1) of Table A49 on the full sample of individuals of any income deciles. In column (2), average religiosity is calculated only among individuals with incomes in the lowest decile. Column (3) restricts the sample to individuals with income among the second decile, and so on until average religiosity is calculated in column (11) for individuals with the highest incomes only. Earthquakes influence religiosity similarly across all income deciles with no tendency for higher or lower incomes groups to respond more or less to earthquakes. Earthquakes do not affect churchgoing regardless of which income decile, the individual belongs to. The same results hold for all education groups and unemployed or not (Tables A50 and A51).

The same question is investigated in a slightly different manner in Table A52 with a focus on *district* level development. Religiosity is calculated based on the full sample of individuals and earthquakes are instead interacted with district level income, light intensity, education, and unemployment rates. The impact of earthquakes on intrinsic religiosity is larger in districts with lower levels of average income or education, but the impact does not differ with light intensity or unemployment levels. Churchgoing is again unaffected by earthquakes, and this is the case across income or education groups, except that churchgoing does seem to be slightly more affected for those living in districts with higher average unemployment rates. This latter finding is both consistent with religious coping and a pure economic effect.

Table A50. Main results restricted to different income deciles

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Income decile	All	1	2	3	4	5	6	7	8	9	10
Panel A. Dependent variable: D.importance of God											
Earthquake dummy	0.093*** (0.028)	0.090*** (0.028)	0.094*** (0.027)	0.094*** (0.027)	0.095*** (0.027)	0.096*** (0.027)	0.095*** (0.027)	0.095*** (0.027)	0.096*** (0.027)	0.094*** (0.028)	0.094*** (0.028)
Earthq dummy x Frequent earthq	-0.073** (0.029)	-0.073** (0.029)	-0.075** (0.028)	-0.074** (0.029)	-0.075** (0.028)	-0.075** (0.028)	-0.074** (0.028)	-0.075** (0.028)	-0.075** (0.028)	-0.073** (0.029)	-0.074** (0.028)
Observations	350	350	350	350	350	350	350	350	350	350	350
R-squared	0.338	0.339	0.337	0.339	0.339	0.338	0.335	0.335	0.331	0.332	0.315
Difference p-value		0.924	0.977	0.966	0.935	0.919	0.953	0.939	0.925	0.974	0.982
Number earthquakes	0.058** (0.021)	0.057** (0.021)	0.058*** (0.021)	0.058** (0.021)	0.059*** (0.021)	0.059*** (0.021)	0.059*** (0.021)	0.059*** (0.021)	0.059*** (0.021)	0.059*** (0.021)	0.060*** (0.020)
Number earthq x Frequent earthq	-0.053*** (0.019)	-0.053*** (0.019)	-0.055*** (0.019)	-0.054*** (0.019)	-0.055*** (0.019)	-0.055*** (0.019)	-0.055*** (0.019)	-0.055*** (0.019)	-0.055*** (0.019)	-0.054*** (0.019)	-0.056*** (0.019)
Observations	350	350	350	350	350	350	350	350	350	350	350
R-squared	0.333	0.335	0.332	0.333	0.334	0.332	0.329	0.329	0.325	0.327	0.311
Difference p-value		0.969	0.976	0.980	0.967	0.949	0.955	0.957	0.938	0.965	0.903
Panel B. Dependent variable: D.Religious person											
Earthquake dummy	0.062** (0.027)	0.060** (0.026)	0.060** (0.026)	0.061** (0.027)	0.063** (0.026)	0.064** (0.027)	0.065** (0.027)	0.065** (0.027)	0.066** (0.027)	0.065** (0.027)	0.064** (0.028)
Earthq dummy x Frequent earthq	-0.058 (0.041)	-0.057 (0.040)	-0.059 (0.041)	-0.059 (0.041)	-0.059 (0.040)	-0.061 (0.041)	-0.061 (0.041)	-0.062 (0.041)	-0.061 (0.041)	-0.061 (0.041)	-0.061 (0.042)
Observations	370	370	370	370	370	370	370	370	370	370	370
R-squared	0.417	0.420	0.420	0.419	0.419	0.419	0.417	0.421	0.414	0.418	0.413
Difference p-value		0.946	0.949	0.989	0.958	0.915	0.900	0.911	0.882	0.887	0.940
Number earthquakes	0.044*** (0.014)	0.043*** (0.013)	0.043*** (0.013)	0.044*** (0.013)	0.044*** (0.013)	0.045*** (0.013)	0.045*** (0.013)	0.044*** (0.013)	0.045*** (0.014)	0.045*** (0.014)	0.045*** (0.014)
Number earthq x Frequent earthq	-0.046** (0.018)	-0.045** (0.018)	-0.046** (0.018)	-0.046** (0.018)	-0.047** (0.018)	-0.048** (0.018)	-0.047** (0.018)	-0.047** (0.018)	-0.047** (0.018)	-0.047** (0.018)	-0.048** (0.018)
Observations	370	370	370	370	370	370	370	370	370	370	370
R-squared	0.417	0.420	0.420	0.419	0.419	0.419	0.417	0.420	0.413	0.418	0.413
Difference p-value		0.948	0.975	0.995	0.959	0.914	0.919	0.957	0.911	0.921	0.922
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table A50 cont. Main results restricted to different income deciles

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Income decile	All	1	2	3	4	5	6	7	8	9	10
Panel C. Dependent variable: D.attend religious services											
Earthquake dummy	0.024 (0.044)	0.021 (0.045)	0.023 (0.045)	0.024 (0.045)	0.024 (0.045)	0.027 (0.044)	0.026 (0.044)	0.025 (0.044)	0.026 (0.043)	0.025 (0.044)	0.024 (0.043)
Earthq x Frequent earthq	0.014 (0.077)	0.016 (0.077)	0.014 (0.077)	0.014 (0.077)	0.014 (0.077)	0.012 (0.076)	0.012 (0.076)	0.012 (0.076)	0.012 (0.075)	0.014 (0.076)	0.013 (0.075)
Observations	384	384	384	384	384	384	384	384	384	384	384
R-squared	0.513	0.518	0.516	0.516	0.514	0.512	0.509	0.508	0.502	0.506	0.503
Difference p-value		0.960	0.992	0.996	0.995	0.947	0.952	0.978	0.960	0.983	0.993
Number earthquakes	0.017 (0.022)	0.017 (0.023)	0.018 (0.023)	0.018 (0.023)	0.018 (0.022)	0.019 (0.022)	0.019 (0.022)	0.018 (0.022)	0.019 (0.022)	0.018 (0.022)	0.018 (0.022)
Earthq x Frequent earthq	-0.018 (0.025)	-0.017 (0.025)	-0.018 (0.025)	-0.018 (0.025)	-0.018 (0.025)	-0.020 (0.025)	-0.020 (0.024)	-0.019 (0.024)	-0.020 (0.024)	-0.018 (0.024)	-0.019 (0.024)
Observations	384	384	384	384	384	384	384	384	384	384	384
R-squared	0.513	0.517	0.515	0.516	0.514	0.512	0.508	0.507	0.502	0.506	0.502
Difference p-value		0.979	0.993	0.987	0.978	0.934	0.935	0.972	0.947	0.980	0.971
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes. The table replicates Panel B of Table 4, where religiosity is instead measured only across individuals from the particular income decile. "Difference p-value" indicates the p-value of the test that the estimate on the earthquake measure equals the estimate in column (1).

Table A51. Main results restricted to different education categories

Education category	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	All	1	2	3	4	5	6	7	8
Panel A. Dependent variable: D.importance of God									
Earthquake dummy	0.093*** (0.028)	0.093*** (0.027)	0.095*** (0.027)	0.093*** (0.028)	0.095*** (0.028)	0.095*** (0.027)	0.094*** (0.027)	0.098*** (0.027)	0.095*** (0.027)
Earthq x Frequent earthq	-0.073** (0.029)	-0.075** (0.028)	-0.075** (0.028)	-0.072** (0.029)	-0.073** (0.029)	-0.074** (0.029)	-0.074** (0.029)	-0.075** (0.029)	-0.075** (0.029)
Observations	350	350	350	350	350	350	350	350	350
R-squared	0.338	0.335	0.338	0.349	0.338	0.351	0.342	0.353	0.346
Difference p-value		0.988	0.927	0.995	0.956	0.933	0.970	0.850	0.948
Number earthquakes	0.058** (0.021)	0.059*** (0.021)	0.059*** (0.021)	0.056** (0.022)	0.058** (0.022)	0.057** (0.022)	0.058** (0.021)	0.058** (0.022)	0.058** (0.022)
Earthq x Frequent earthq	-0.053*** (0.019)	-0.055*** (0.019)	-0.055*** (0.019)	-0.052** (0.020)	-0.054*** (0.019)	-0.053** (0.020)	-0.054*** (0.019)	-0.054** (0.020)	-0.054*** (0.019)
Observations	350	350	350	350	350	350	350	350	350
R-squared	0.333	0.330	0.332	0.343	0.333	0.344	0.336	0.346	0.340
Difference p-value		0.959	0.966	0.952	0.984	0.979	0.993	0.983	0.991
Panel B. Dependent variable: D.Religious person									
Earthquake dummy	0.062** (0.027)	0.063** (0.026)	0.061** (0.027)	0.059** (0.026)	0.062** (0.027)	0.062** (0.026)	0.064** (0.026)	0.063** (0.026)	0.064** (0.026)
Earthq x Frequent earthq	-0.058 (0.041)	-0.060 (0.040)	-0.059 (0.041)	-0.054 (0.040)	-0.059 (0.041)	-0.057 (0.040)	-0.061 (0.040)	-0.058 (0.040)	-0.060 (0.039)
Observations	370	370	370	370	370	370	370	370	370
R-squared	0.417	0.420	0.418	0.416	0.417	0.420	0.421	0.420	0.423
Difference p-value		0.969	0.976	0.933	0.989	0.997	0.935	0.952	0.916
Number earthquakes	0.044*** (0.014)	0.045*** (0.013)	0.044*** (0.014)	0.042*** (0.014)	0.044*** (0.014)	0.043*** (0.014)	0.044*** (0.013)	0.043*** (0.014)	0.044*** (0.013)
Earthq x Frequent earthq	-0.046** (0.018)	-0.047** (0.017)	-0.046** (0.018)	-0.043** (0.018)	-0.046** (0.018)	-0.044** (0.018)	-0.047** (0.018)	-0.045** (0.018)	-0.046** (0.017)
Observations	370	370	370	370	370	370	370	370	370
R-squared	0.417	0.420	0.418	0.416	0.417	0.420	0.421	0.420	0.423
Difference p-value		0.940	0.996	0.917	0.989	0.955	0.960	0.980	0.989
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y

Table A51 cont. Main results restricted to different education categories

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Education category	All	1	2	3	4	5	6	7	8
Panel C. Dependent variable: D.attend religious services									
Earthquake dummy	0.024 (0.044)	0.024 (0.045)	0.023 (0.045)	0.025 (0.045)	0.026 (0.044)	0.026 (0.045)	0.024 (0.045)	0.028 (0.045)	0.026 (0.045)
Earthq dummy x Frequent earthq	0.014 (0.077)	0.014 (0.077)	0.014 (0.077)	0.014 (0.078)	0.012 (0.077)	0.013 (0.078)	0.013 (0.077)	0.013 (0.077)	0.013 (0.077)
Observations	384	384	384	384	384	384	384	384	384
R-squared	0.513	0.517	0.513	0.520	0.512	0.521	0.514	0.521	0.520
Difference p-value		0.996	0.984	0.971	0.956	0.962	0.992	0.933	0.963
Number earthquakes	0.017 (0.022)	0.019 (0.023)	0.017 (0.022)	0.016 (0.023)	0.018 (0.022)	0.017 (0.023)	0.018 (0.022)	0.018 (0.023)	0.018 (0.023)
Earthq x Frequent earthq	-0.018 (0.025)	-0.020 (0.025)	-0.018 (0.025)	-0.016 (0.025)	-0.018 (0.025)	-0.017 (0.025)	-0.018 (0.025)	-0.018 (0.025)	-0.018 (0.025)
Observations	384	384	384	384	384	384	384	384	384
R-squared	0.513	0.516	0.512	0.519	0.512	0.521	0.514	0.521	0.520
Difference p-value		0.939	0.997	0.952	0.983	0.967	0.989	0.994	0.973
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y

Notes. The table replicates Panel B of Table 4, where religiosity is instead measured only across individuals from the particular education category. "Difference p-value" indicates the p-value of the test that the estimate on the earthquake measure equals the estimate in column (1).

Table A52. Main results restricted to different employment status

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Earthquake measure	Earthquake dummy					Number earthquakes				
Sample	All	Unemployed		Employed		All	Unemployed		Employed	
Panel A. Dependent variable: D.importance of God										
Earthquake measure	0.093*** (0.028)	0.094*** (0.028)	0.088*** (0.028)	0.092*** (0.028)	0.083*** (0.026)	0.058** (0.021)	0.059*** (0.021)	0.056*** (0.018)	0.057** (0.021)	0.053*** (0.018)
Earthq x Frequent earthq	-0.073** (0.029)	-0.073** (0.029)	-0.070** (0.028)	-0.073** (0.029)	-0.073** (0.027)	-0.053*** (0.019)	-0.055*** (0.019)	-0.054*** (0.017)	-0.053*** (0.019)	-0.052*** (0.017)
Observations	350	350	276	350	276	350	350	276	350	276
R-squared	0.338	0.335	0.293	0.338	0.284	0.333	0.330	0.290	0.333	0.281
Difference p-value		0.979	0.848	0.976	0.720		0.952	0.930	0.988	0.780
Panel B. Dependent variable: D.religious person										
Earthquake measure	0.062** (0.027)	0.061** (0.026)	0.058** (0.026)	0.061** (0.027)	0.054* (0.027)	0.044*** (0.014)	0.043*** (0.014)	0.040*** (0.013)	0.043*** (0.014)	0.039*** (0.013)
Earthq x Frequent earthq	-0.058 (0.041)	-0.056 (0.040)	-0.074* (0.037)	-0.058 (0.041)	-0.078* (0.039)	-0.046** (0.018)	-0.044** (0.017)	-0.047** (0.017)	-0.046** (0.018)	-0.048** (0.018)
Observations	370	370	296	370	296	370	370	296	370	296
R-squared	0.417	0.420	0.391	0.417	0.388	0.417	0.420	0.391	0.417	0.388
Difference p-value		0.984	0.895	0.981	0.767		0.947	0.796	0.993	0.738
Panel C. Dependent variable: D.attend religious services										
Earthquake measure	0.024 (0.044)	0.024 (0.044)	0.017 (0.044)	0.023 (0.045)	0.009 (0.045)	0.017 (0.022)	0.018 (0.022)	0.015 (0.021)	0.017 (0.022)	0.011 (0.022)
Earthq x Frequent earthq	0.014 (0.077)	0.015 (0.076)	0.028 (0.072)	0.014 (0.077)	0.022 (0.070)	-0.018 (0.025)	-0.017 (0.024)	-0.013 (0.023)	-0.018 (0.025)	-0.013 (0.022)
Observations	384	384	310	384	310	384	384	310	384	310
R-squared	0.513	0.510	0.483	0.513	0.442	0.513	0.510	0.482	0.512	0.441
Difference p-value		0.993	0.884	0.989	0.755		0.990	0.917	0.997	0.777
Baseline controls	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Income FE	N	N	Y	N	Y	N	N	Y	N	Y

Notes. The table replicates Panel B of Table 4, where religiosity is instead measured only across either employed or unemployed individuals.

Difference p-value indicates the p-value of the test that the estimate equals the estimate in columns (1) and (6).

Table A53. Main results interacted with district development

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Panel A. Dependent variable: D.Importance of God							
Earthquake dummy	0.510*** (0.104)	0.099*** (0.031)	0.251*** (0.090)	0.108** (0.045)	0.069*** (0.012)	0.102*** (0.031)	0.099*** (0.030)
Earthq x Frequent earthq	-0.037 (0.027)	-0.084** (0.036)	-0.085*** (0.030)	-0.078** (0.031)	-0.061*** (0.022)	-0.083** (0.032)	-0.074** (0.032)
Earthq x development	-0.094*** (0.023)	-0.002 (0.002)	-0.037** (0.016)	-0.102 (0.139)	0.307 (0.402)	-0.032 (0.023)	-0.014* (0.008)
Observations	276	350	348	348	276	350	350
R-squared	0.373	0.339	0.347	0.340	0.357	0.339	0.339
Panel B. Dependent variable: D.Religious person							
Earthquake dummy	0.322** (0.132)	0.068** (0.028)	0.308*** (0.095)	0.065 (0.048)	0.070*** (0.025)	0.090*** (0.024)	0.061** (0.029)
Earthq x Frequent earthq	-0.039 (0.050)	-0.069 (0.043)	-0.090* (0.053)	-0.061 (0.044)	-0.051 (0.039)	-0.088** (0.037)	-0.065* (0.038)
Earthq x development	-0.059** (0.027)	-0.002 (0.002)	-0.056*** (0.017)	-0.020 (0.170)	-0.154* (0.077)	-0.095*** (0.020)	0.010 (0.016)
Observations	296	370	368	368	296	370	370
R-squared	0.444	0.418	0.426	0.418	0.437	0.419	0.417
Panel C. Dependent variable: D.Attend religious services							
Earthquake dummy	0.204 (0.326)	0.012 (0.053)	0.208 (0.179)	0.036 (0.064)	0.031 (0.042)	-0.017 (0.027)	0.034 (0.047)
Earthq x Frequent earthq	0.030 (0.078)	0.032 (0.091)	0.013 (0.081)	0.009 (0.077)	0.021 (0.085)	0.059 (0.052)	0.025 (0.079)
Earthq x development	-0.042 (0.068)	0.005 (0.005)	-0.045 (0.032)	-0.079 (0.175)	-0.145 (0.143)	0.137** (0.063)	-0.040 (0.024)
Observations	310	384	382	382	310	384	384
R-squared	0.529	0.516	0.521	0.514	0.541	0.518	0.515
Development	Inc	Light	Edu	Unempl	Agri	Pdens	Area
Baseline controls	Y	Y	Y	Y	Y	Y	Y

D Additional results for the epidemiological approach

Additional respondent level controls are included in Table A54: Religious denomination FE (variable `rlgdnm`) and whether or not the respondent classifies him or herself as belonging to the ethnic minority group in the current country of residence (variable `blgetmg`).⁶⁴

Table A54. Main results including additional respondent level controls

Dep. var.:	(1) pray	(2) pray	(3) relpers	(4) relpers	(5) service	(6) service
Dist(earthquakes), 1000 km	-0.022** (0.009)	-0.040*** (0.011)	-0.021*** (0.007)	-0.040*** (0.013)	-0.012 (0.007)	-0.028** (0.010)
Ethnic minority		0.106*** (0.019)		0.089*** (0.013)		0.065*** (0.019)
Observations	9,965	16,395	10,035	16,498	10,073	16,563
R-squared	0.134	0.167	0.124	0.117	0.103	0.123
Country-year FE	Y	Y	Y	Y	Y	Y
Geo controls	Y	Y	Y	Y	Y	Y
Incl controls	Y	Y	Y	Y	Y	Y
Denomination FE	Y	N	Y	N	Y	N

Tables A55, A56, and A57 include additional controls at the country of origin level: Pct adherents to the major religious denominations, real GDP per capita in 2010, the polity IV measure from 2010, and a measure of property rights institutions from the Heritage Foundation (downloaded from the Quality of Government Institute).

⁶⁴The denominations include Roman Catholic, Protestant, Eastern Orthodox, Other Christian denomination, Jewish, Islamic, Eastern religions, and Other non-Christian religions.

Table A55. Main results with additional country of origin controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var.: Prayer outside religious services								
Dist(earthquakes), 1000 km	-0.032** (0.013)	-0.041*** (0.013)	-0.043*** (0.013)	-0.041*** (0.013)	-0.043*** (0.013)	-0.043*** (0.013)	-0.043*** (0.013)	-0.040*** (0.013)
Percent Muslims	0.094*** (0.034)							
Percent Christians		-0.025 (0.036)						
Percent Jews			-0.008 (0.051)					
Percent Buddhists				-0.152* (0.080)				
Percent Hindus					-0.024 (0.038)			
Real GDP per capita 2010						0.001 (0.005)		
Polity IV 2010							-0.002 (0.001)	
Property Rights								-0.000 (0.000)
Observations	16,499	16,499	16,499	16,499	16,499	16,499	16,565	16,937
R-squared	0.163	0.162	0.162	0.162	0.162	0.162	0.159	0.159
Country-year FE	Y	Y	Y	Y	Y	Y	Y	Y
Geo controls	Y	Y	Y	Y	Y	Y	Y	Y
Incl controls	Y	Y	Y	Y	Y	Y	Y	Y

Table A56. Main results with additional country of origin controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var.: Religious person								
Dist(earthquakes), 1000 km	-0.030*	-0.038**	-0.042**	-0.041**	-0.042***	-0.042**	-0.042**	-0.043***
	(0.016)	(0.016)	(0.016)	(0.016)	(0.015)	(0.016)	(0.015)	(0.013)
Percent Muslims	0.102***							
	(0.023)							
Percent Christians		-0.045						
		(0.033)						
Percent Jews			-0.076					
			(0.065)					
Percent Buddhists				-0.105				
				(0.064)				
Percent Hindus					-0.039			
					(0.038)			
Real GDP per capita 2010						0.004***		
						(0.001)		
Polity IV 2010							-0.003*	
							(0.002)	
Property Rights								-0.000
								(0.000)
Observations	16,609	16,609	16,609	16,609	16,609	16,609	16,674	17,050
R-squared	0.113	0.111	0.111	0.111	0.111	0.111	0.110	0.109
Country-year FE	Y	Y	Y	Y	Y	Y	Y	Y
Geo controls	Y	Y	Y	Y	Y	Y	Y	Y
Indl controls	Y	Y	Y	Y	Y	Y	Y	Y

Table A57. Main results with additional country of origin controls

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Dep. var.: Attendance at religious services								
Dist(earthquakes), 1000 km	-0.021*	-0.027*	-0.029**	-0.028**	-0.029**	-0.029**	-0.029**	-0.032***
	(0.012)	(0.013)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.011)
Percent Muslims	0.068***							
	(0.020)							
Percent Christians		-0.033						
		(0.027)						
Percent Jews			-0.083**					
			(0.038)					
Percent Buddhists				-0.075*				
				(0.040)				
Percent Hindus					0.052**			
					(0.024)			
Real GDP per capita 2010						0.001		
						(0.005)		
Polity IV 2010							-0.002	
							(0.002)	
Property Rights								0.000
								(0.000)
Observations	16,674	16,674	16,674	16,674	16,674	16,674	16,734	17,114
R-squared	0.120	0.119	0.119	0.119	0.119	0.119	0.119	0.118
Country-year FE	Y	Y	Y	Y	Y	Y	Y	Y
Geo controls	Y	Y	Y	Y	Y	Y	Y	Y
Indl controls	Y	Y	Y	Y	Y	Y	Y	Y

Tables A58, A59, and A60 show different categorizations of the measures of frequency of prayer outside religious services, degree of religiosity, and frequency of attendance at religious services apart from special occasions. The categorizations follow the same structure as done in Section B.11 and C.11.1. Only prayer is robust to transforming the variable into a dummy variable equal to one for the top one or two categories, zero otherwise. Analogous to the analysis in Section B.11 and C.11.1, *intensive1* sets the lowest category of the measures to missing. This exercise is stricter than above, as the variables measuring frequency of prayer and religious services already capture the intensive margin to some extent (prayer outside religious services and attendance at religious services apart from special occasions). Earthquake risk does not affect prayer and churchgoing in this restricted sample. As an alternative measure of the intensive margin, *intensive2*, I exclude instead observations where the respondent has answered that he or she is not at all a religious person. In this sample, earthquake risk increases all three measures of religiosity.

Table A58. Main results with different categorizations of prayer

	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var.: Prayer outside religious services						
Dist(earthquakes), 1000 km	-0.044*** (0.012)	-0.022* (0.012)	-0.039*** (0.013)	-0.060*** (0.014)	-0.017 (0.012)	-0.038*** (0.013)
Observations	16,991	16,991	16,991	16,991	10,234	14,099
R-squared	0.159	0.110	0.123	0.105	0.124	0.152
Country-year FE	Y	Y	Y	Y	Y	Y
Geo controls	Y	Y	Y	Y	Y	Y
Indl controls	Y	Y	Y	Y	Y	Y
Pray measure	base	frequent1	frequent2	extensive	intensive1	intensive2

Table A59. Main results with different categorizations of religious person

	(1)	(2)	(3)	(4)	(5)
Dep. var.: Religious person					
Dist(earthquakes), 1000 km	-0.044*** (0.014)	-0.018 (0.011)	-0.022 (0.014)	-0.035*** (0.012)	-0.031** (0.014)
Observations	17,104	17,104	17,104	17,104	14,315
R-squared	0.109	0.037	0.058	0.054	0.101
Country-year FE	Y	Y	Y	Y	Y
Geo controls	Y	Y	Y	Y	Y
Indl controls	Y	Y	Y	Y	Y
Religiosity measure	base	very1	very2	extensive	intensive

The frequency of attending religious services was originally a variable running from 1="Never" to 7="Every day". Due to few observations in the latter category, I merged 7 and 6="More than once a week". The results using the original variable is shown in column (1) of Table A60. The baseline result is shown in column (2).

Table A60. Main results with different categorizations of churchgoing

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Dep. var.: Attendance at religious services							
Dist(earthquakes), 1000 km	-0.024** (0.010)	-0.029** (0.011)	-0.006 (0.009)	-0.014 (0.013)	-0.054*** (0.016)	-0.009 (0.011)	-0.024* (0.013)
Observations	17,168	17,168	17,168	17,168	17,168	10,954	14,245
R-squared	0.116	0.117	0.052	0.093	0.089	0.129	0.115
Country-year FE	Y	Y	Y	Y	Y	Y	Y
Geo controls	Y	Y	Y	Y	Y	Y	Y
Indl controls	Y	Y	Y	Y	Y	Y	Y
Service measure	org	base	frequent1	frequent2	extensive	intensive1	intensive2

The country of origin in Table 5 was the mother's country of origin unless the country of origin was missing, where the father's country of origin was used. Instead, Table A56 uses the father's country of origin at the outset, but uses the mother's country of origin

when information for the father is missing. The same results emerge.

Table A61. Main results with focus on the father's country of origin

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		pray			religious			service	
Panel A. The simple linear effect									
Dist(earthquakes), 1000 km	-0.049*** (0.015)	-0.036*** (0.012)	-0.026* (0.014)	-0.055*** (0.019)	-0.041*** (0.013)	-0.029** (0.014)	-0.040*** (0.014)	-0.025** (0.011)	-0.018 (0.011)
Observations	17,078	16,983	14,138	17,190	17,095	14,231	17,251	17,155	14,284
R-squared	0.122	0.130	0.174	0.074	0.087	0.130	0.101	0.111	0.127
Org countries	170	165	154	170	165	154	170	165	154
Panel B. Adding a squared term of disaster distance									
Dist(earthquakes), 1000 km	-0.129*** (0.022)	-0.075** (0.033)	-0.068** (0.032)	-0.119*** (0.028)	-0.056* (0.032)	-0.047 (0.032)	-0.084*** (0.028)	-0.033 (0.022)	-0.025 (0.023)
Dist(earthq) squared	0.049*** (0.010)	0.023 (0.017)	0.025 (0.019)	0.039*** (0.013)	0.009 (0.017)	0.010 (0.020)	0.027** (0.013)	0.005 (0.012)	0.004 (8.135)
Observations	17,078	16,983	14,138	17,190	17,095	14,231	17,251	17,155	14,284
R-squared	0.123	0.130	0.175	0.075	0.087	0.130	0.101	0.111	0.127
Impact at 500 km	-0.104	-0.0637	-0.0558	-0.0996	-0.0512	-0.0419	-0.0706	-0.0308	-0.0232
Panel C. Excluding countries of origin in high-risk zones									
Dist(earthquakes), 1000 km	-0.041*** (0.015)	-0.036*** (0.012)	-0.023* (0.013)	-0.047** (0.018)	-0.040*** (0.012)	-0.028* (0.014)	-0.034** (0.013)	-0.025** (0.010)	-0.018* (0.010)
Observations	15,717	15,714	9,347	15,820	15,817	9,389	15,881	15,878	9,415
R-squared	0.105	0.112	0.159	0.062	0.073	0.122	0.093	0.102	0.126
Org countries	138	135	120	138	135	119	138	135	120
Country-year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Geo controls	N	Y	Y	N	Y	Y	N	Y	Y
Incl controls	N	N	Y	N	N	Y	N	N	Y

Table A62. Main results including individual income fixed effects

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)
	pray		religious		service	
Dist(earthquakes), 1000 km	-0.038** (0.014)	-0.037** (0.014)	-0.041** (0.016)	-0.041** (0.016)	-0.025** (0.012)	-0.025** (0.011)
Observations	12,030	12,030	12,076	12,076	12,116	12,116
R-squared	0.161	0.166	0.115	0.119	0.128	0.129
Country-year FE	Y	Y	Y	Y	Y	Y
Geo controls	Y	Y	Y	Y	Y	Y
Incl controls	Y	Y	Y	Y	Y	Y
Incl income fixed effects	N	Y	N	Y	N	Y
Org countries	161	161	161	161	161	161

Notes. Columns (1), (3), and (5) replicate the corresponding columns in Panel A of Table 5, but restricted to the sample with information on individual income. Columns (2), (4), and (6) include individual income fixed effects.

The measure of prayer measures the degree of prayer outside religious services. Table A61 shows that results hold to controlling for attendance at religious services and also when allowing the impact of earthquake risk to vary with the degree of churchgoing.

Table A63. Main result for prayer outside religious services interacted with churchgoing

Dependent variable: Prayer outside religious services	(1)	(2)	(3)	(4)	(5)
Dist(earthquakes), 1000 km	-0.050*** (0.014)	-0.017*** (0.005)	-0.028*** (0.009)	-0.029*** (0.008)	-0.028*** (0.008)
Attendance at religious services		0.803*** (0.014)	0.783*** (0.020)	0.773*** (0.020)	0.775*** (0.022)
Dist(earthquakes) x attendance			0.040 (0.026)	0.049* (0.026)	0.025 (0.026)
Observations	17,155	17,107	17,107	17,010	16,945
R-squared	0.122	0.444	0.445	0.445	0.464
Country-year FE	Y	Y	Y	Y	Y
Geo controls	N	N	N	Y	Y
Parent and respondent controls	N	N	N	N	Y

The estimates of Table A62 show the level of religiosity of the child of immigrants regressed on the level of religiosity in his/her parents' home country, where the latter is calculated as the country average across all waves of the WVS-EVS in Panel A, while the measure of religiosity in Panel B is calculated in 1990 or before. The precision of estimation increases in the latter case, which is consistent with the idea that most immigrants had probably left their home country by 1990. Thus measuring religiosity in the home country after 1990 might bias the results.

Table A64. OLS estimates of respondent religiosity on average religiosity in parents' home country

Dependent variable:	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		pray			religious			service	
Panel A. Full sample									
Intrinsic Religiosity Scale	0.150*** (0.034)	0.115*** (0.036)	0.080** (0.032)	0.130*** (0.035)	0.085** (0.035)	0.055 (0.034)	0.109*** (0.039)	0.062* (0.031)	0.046 (0.030)
Observations	15,072	14,975	12,517	15,175	15,078	12,602	15,236	15,138	12,653
R-squared	0.137	0.142	0.194	0.078	0.085	0.129	0.112	0.120	0.138
Org countries	78	74	73	78	74	73	78	74	73
Panel B. Religiosity before 1990									
Intrinsic Religiosity Scale	0.170*** (0.044)	0.137*** (0.048)	0.103** (0.048)	0.165*** (0.040)	0.121*** (0.025)	0.108*** (0.035)	0.182*** (0.036)	0.100*** (0.016)	0.067** (0.025)
Observations	8,453	8,453	7,097	8,533	8,533	7,161	8,562	8,562	7,183
R-squared	0.123	0.124	0.192	0.056	0.058	0.107	0.120	0.123	0.151
Org countries	24	24	24	24	24	24	24	24	24
Country-year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Geo controls	N	Y	Y	N	Y	Y	N	Y	Y
Parent and indl controls	N	N	Y	N	N	Y	N	N	Y

Notes. The table replicates panel A of Table 5, using the Strength of Intrinsic Religiosity Scale in the parents' home country instead of earthquake frequency. Both panels include controls for WVS-EVS respondents' sex, age, age squared, marital status, and year of interview. Panel A calculates the Strength of Intrinsic Religiosity Scale across all waves of the WVS-EVS, while Panel B restricts the sample to the countries measured in 1990 or before.

The earthquake risk measure in Table 5 aggregates within-country variation in earthquake risk. This potential bias is likely to be larger the larger the country of origin, since the likelihood that parents migrate from different areas in a country is larger. Therefore, the size of the bias can be estimated by investigating whether the effect of earthquake risk depends on the size of the country. This does not seem to be driving the results: Restricting the sample to the 75 or 90% smallest countries produces similar results.

Table A65. Main results excluding the smallest countries of origin

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
		pray			religious			service	
Panel A. Full sample excluding areas > 90th percentile									
Dist(earthq), 1000 km	-0.046*** (0.015)	-0.040*** (0.011)	-0.034*** (0.011)	-0.054*** (0.018)	-0.045*** (0.013)	-0.038*** (0.013)	-0.036** (0.016)	-0.029** (0.012)	-0.024** (0.011)
Observations	13,692	13,595	11,245	13,753	13,656	11,294	13,811	13,713	11,344
R-squared	0.120	0.130	0.179	0.082	0.097	0.143	0.105	0.118	0.137
Org countries	159	154	143	159	154	143	159	154	143
Panel B. Full sample excluding areas > 75th percentile									
Dist(earthq), 1000 km	-0.043*** (0.013)	-0.044*** (0.012)	-0.040** (0.015)	-0.049*** (0.014)	-0.047*** (0.012)	-0.042*** (0.013)	-0.027** (0.013)	-0.030** (0.013)	-0.029** (0.012)
Observations	12,230	12,133	10,014	12,280	12,183	10,055	12,340	12,242	10,105
R-squared	0.106	0.116	0.166	0.074	0.087	0.130	0.098	0.110	0.126
Org countries	136	131	122	136	131	122	136	131	122
Country-year FE	Y	Y	Y	Y	Y	Y	Y	Y	Y
Geo controls	N	Y	Y	N	Y	Y	N	Y	Y
Parent and indl controls	N	N	Y	N	N	Y	N	N	Y

Notes. The table replicates panel A of Table 5, excluding countries of origin with areas larger than the 90th percentile in Panel A and the 75th percentile in Panel B.