

## Lu and Vogl - Intergenerational Persistence in Child Mortality - Online Appendix

Table A.1: Demographic and Health Surveys in the Sample

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Afghanistan: 2010, 2015	Lesotho: 2004, 2009, 2014
Bangladesh: 2001	Madagascar: 1992, 1997, 2004, 2009
Benin: 1996, 2008	Malawi: 1992, 2000, 2004, 2010, 2015
Bolivia: 1994, 2003, 2008	Mali: 1996, 2001, 2006, 2012
Burkina Faso: 1999, 2010	Morocco: 1992, 2003
Burundi: 2010, 2016	Mozambique: 1997, 2003, 2011
Cambodia: 2000, 2005, 2010, 2014	Namibia: 1992, 2000, 2013
Cameroon: 1998, 2004, 2011	Nepal: 1996, 2006, 2016
Central African Republic: 1994	Niger: 1992, 2006, 2012
Chad: 1997, 2004, 2015	Nigeria: 2008, 2013
Congo, Democratic Republic: 2007, 2013	Peru: 1991, 1996, 2000
Congo, Republic: 2005, 2011	Philippines: 1993, 1998
Côte d'Ivoire: 1994, 2012	Rwanda: 2000, 2005, 2010, 2015
Dominican Republic: 2002, 2007	São Tomé & Príncipe: 2008
Ethiopia: 2000, 2005, 2011, 2016	Senegal: 1993, 2005, 2011
Gabon: 2000, 2012	Sierra Leone: 2008, 2013
Ghana: 2007	South Africa: 1998, 2016
Guinea: 1999, 2005, 2012	Swaziland: 2006
Haiti: 2000, 2006, 2017	Tanzania: 1996, 2004, 2010, 2015
Indonesia: 1994, 1997, 2002, 2007, 2012	Togo: 1998, 2014
Jordan: 1997	Zambia: 1996, 2002, 2007, 2013
Kenya: 1998, 2003, 2009, 2014	Zimbabwe: 1994, 1999, 2005, 2010, 2015

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Table A.2: Partial Correlations of Sibling and Child Under-5 Mortality, Women Aged 45-49

	Any child death and any sibling death	# child deaths and # sibling deaths
	(1)	(2)
Within-survey correlation	0.077	0.074
Number of observations	131,518	131,518

Note: Partial correlations are computed after conditioning on survey indicators. Sampling weights are rescaled to reflect each survey's contribution to the sample.

Table A.3: Mothers' vs. Daughters' Reports of Any Under-5 Death

M's report	D's report (%)		
	0	1+	N
0	98.0	2.0	59,339
1+	14.4	85.6	35,552

Note: Sample includes coresident 15-19 year olds and their 30-49 year old mothers when both responded to the survey. Mothers and daughters are interviewed separately and privately. Sampling weights are rescaled to reflect each survey's contribution to the sample.

Table A.4: Mothers' vs. Daughters' Reports of Any Under-5 Death

M's report	D's report (%)							N
	0	1	2	3	4	5	6+	
0	98.0	1.6	0.3	0.1	0.0	0.0	0.0	59,339
1	17.3	80.4	1.9	0.2	0.1	0.0	0.0	21,114
2	11.2	6.5	79.9	2.1	0.3	0.0	0.0	9,172
3	8.3	3.1	7.8	77.7	2.8	0.4	0.0	3,761
4	7.7	2.6	3.1	7.6	77.0	1.5	0.4	1,505

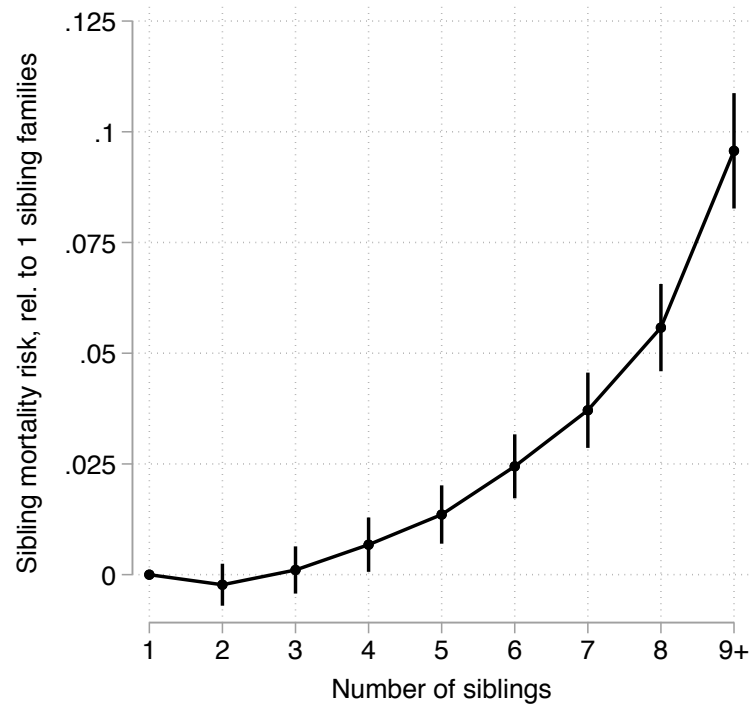
Note: Sample includes coresident 15-19 year olds and their 30-49 year old mothers when both responded to the survey. Mothers and daughters are interviewed separately and privately. Sampling weights are rescaled to reflect each survey's contribution to the sample.

Table A.5: Pooled Birth-Level Logit Estimations by Gender

	Female	Male	Female	Male
	(1)	(2)	(3)	(4)
# sibling U5 deaths	1.09 [.0034]	1.09 [.0032]		
Sibs ever born	.98 [.0016]	.98 [.0015]		
# female sibling U5 death			1.11 [.0058]	1.09 [.0056]
Female sibs ever born			.99 [.0022]	.98 [.0021]
# male sibling U5 death			1.08 [.0051]	1.10 [.0048]
Male sibs ever born			.98 [.0022]	.98 [.0021]
AME(# sib. deaths)	.010	.010		
AME(# female sib. deaths)			.011	.010
AME(# male sib. deaths)			.009	.011
Observations	1,276,858	1,333,004	1,276,858	1,333,004

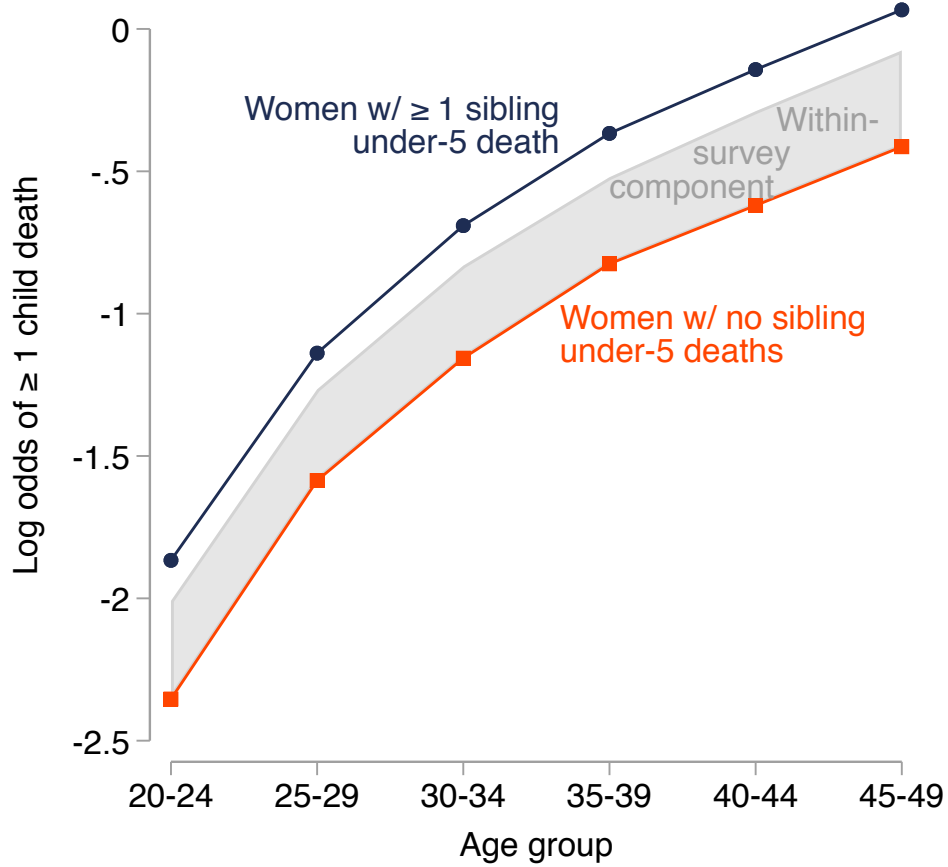
Note: The reported estimates are logit odds ratios. Brackets contain standard errors clustered at the survey cluster level. AME refers to the average marginal effect of the indicated measure of sibling death(s). All models include survey indicators. Sampling weights are rescaled to reflect each survey's contribution to the sample.

Figure A.1: Sibship Size and Sibling Mortality



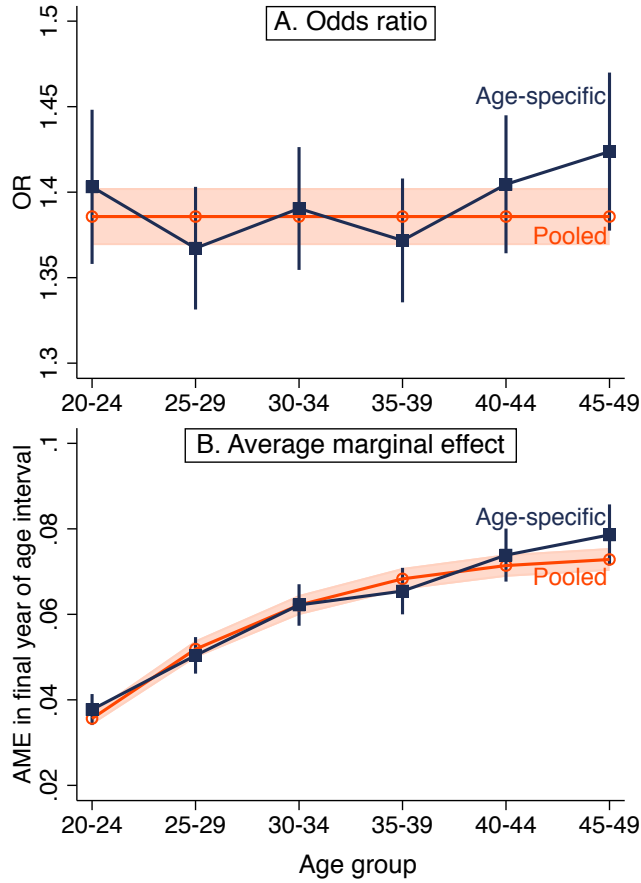
Note: This figure plots the relationship between sibship size and sibling mortality rates. The unit of observation is the survey-sibsize cell. We regress the sibling under-5 mortality rate on sibship size indicators and survey indicators. Mortality rates are scaled from 0 to 1. Cells are weighted by the number of women. Spikes are 95% confidence intervals based on standard errors clustered at the country level. Sampling weights are rescaled to reflect each survey's contribution to the cell.

Figure A.2: Log Odds of Any Child Death, by Any Sibling Death



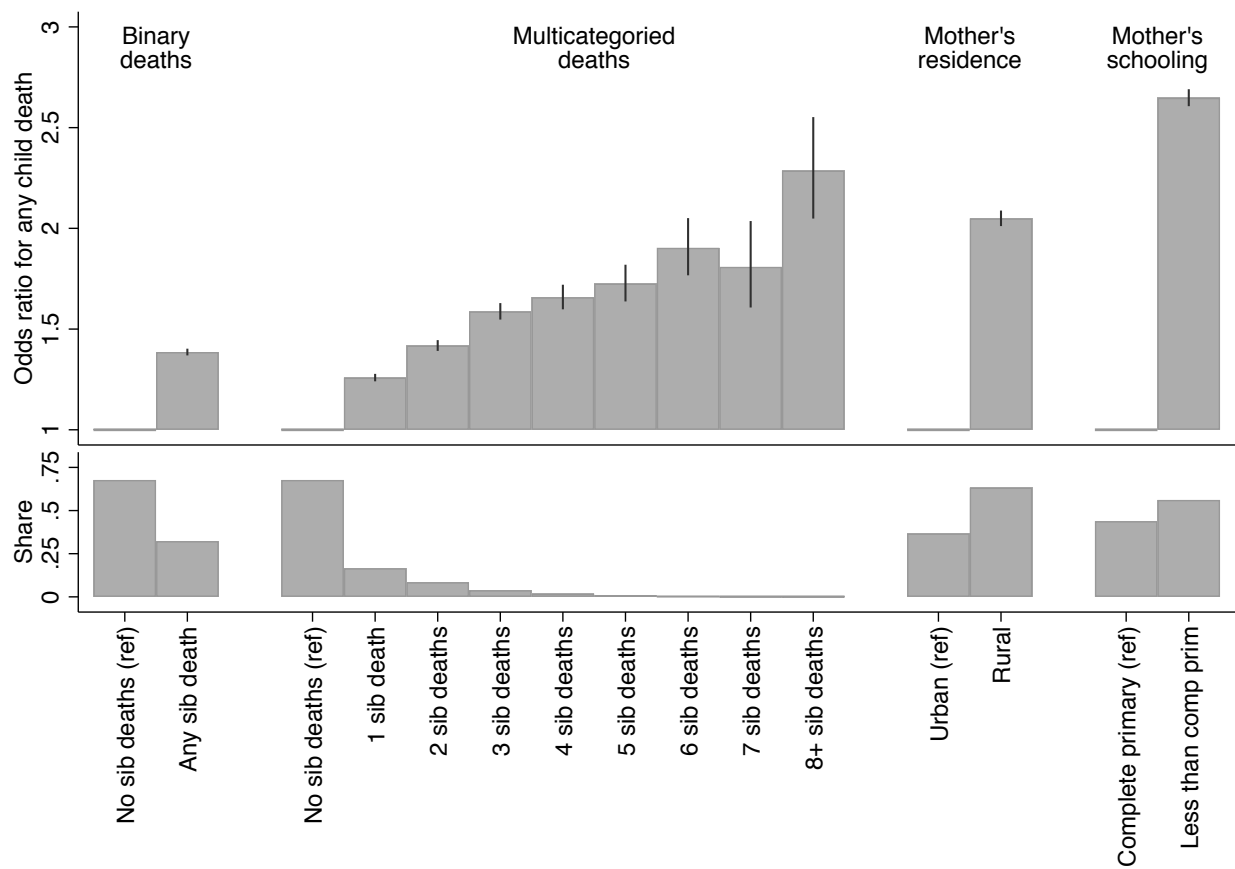
Note: For each five-year age group, we plot the log odds of any under-5 child death separately for women with and without deceased siblings. The within-survey component is calculated in log odds using the within-survey component and share of women with no sibling deaths in Figure ???. Sampling weights are rescaled to reflect each survey's contribution to the sample.

Figure A.3: Mother-Level Logit Results by Age



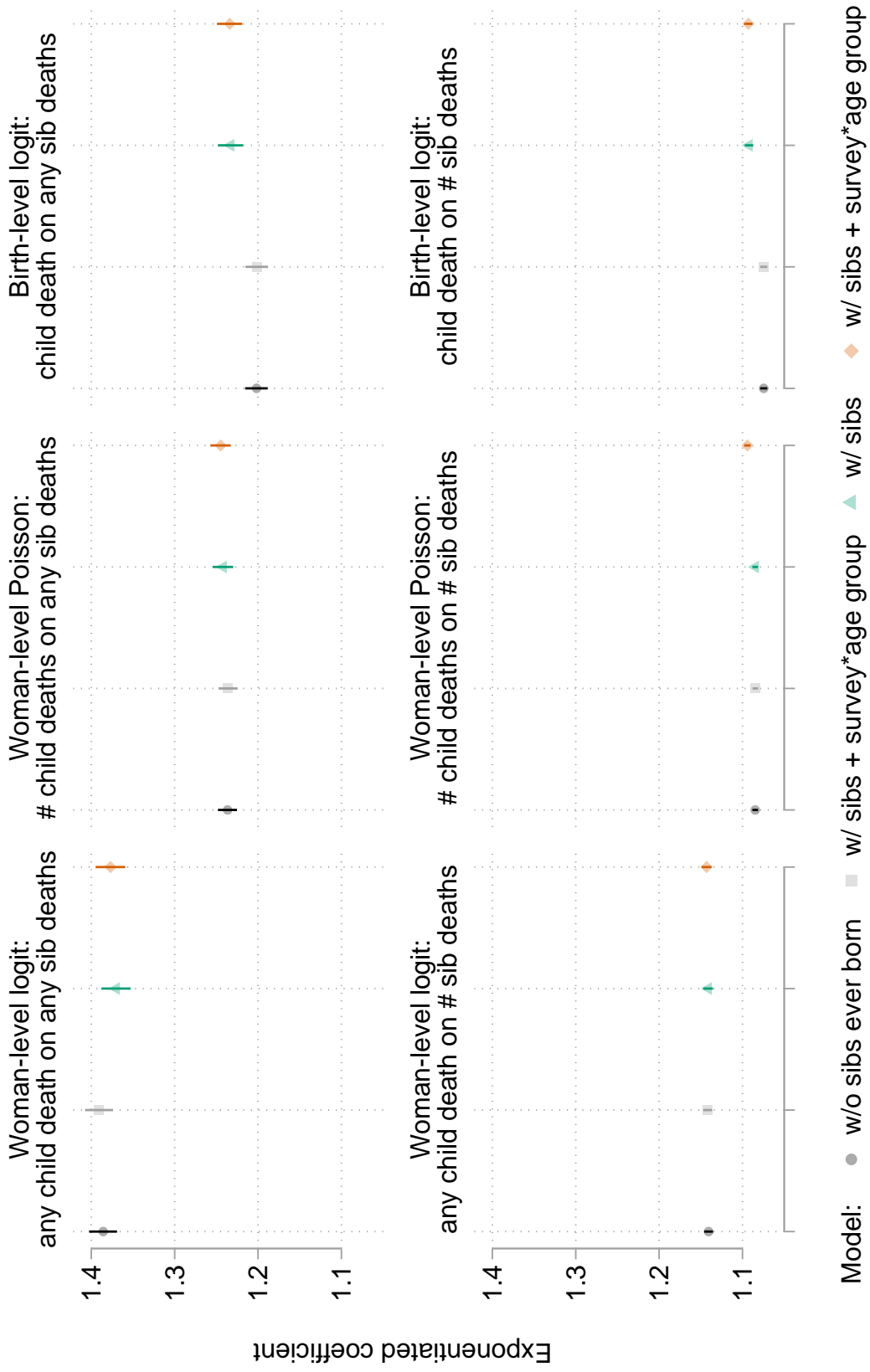
Note: This figure demonstrates the robustness of the woman-level logit estimates to age specific estimations. Point estimates and 95% confidence intervals based on women-level logit regressions of any under-5 child death on any under-5 sibling death. All regressions include survey indicators and single-year age indicators. Pooled estimations include women of all ages; age-specific estimations are separate for each five-year age group. Average marginal effects are computed for the final age in each age interval; confidence intervals are based on standard errors computed using the delta method. Sampling weights are rescaled to reflect each survey’s contribution to the sample.

Figure A.4: Comparison with Other Under-5 Mortality Differentials



Note: The top panel presents point estimates and 95% confidence intervals of odds ratios from four woman-level logit regressions of any under-5 child death on the indicated categorical variables in the figure. All regressions include survey indicators and single-year age indicators. The bottom panel presents histograms of the categorical variables. Sampling weights are rescaled to reflect each survey's contribution to the sample.

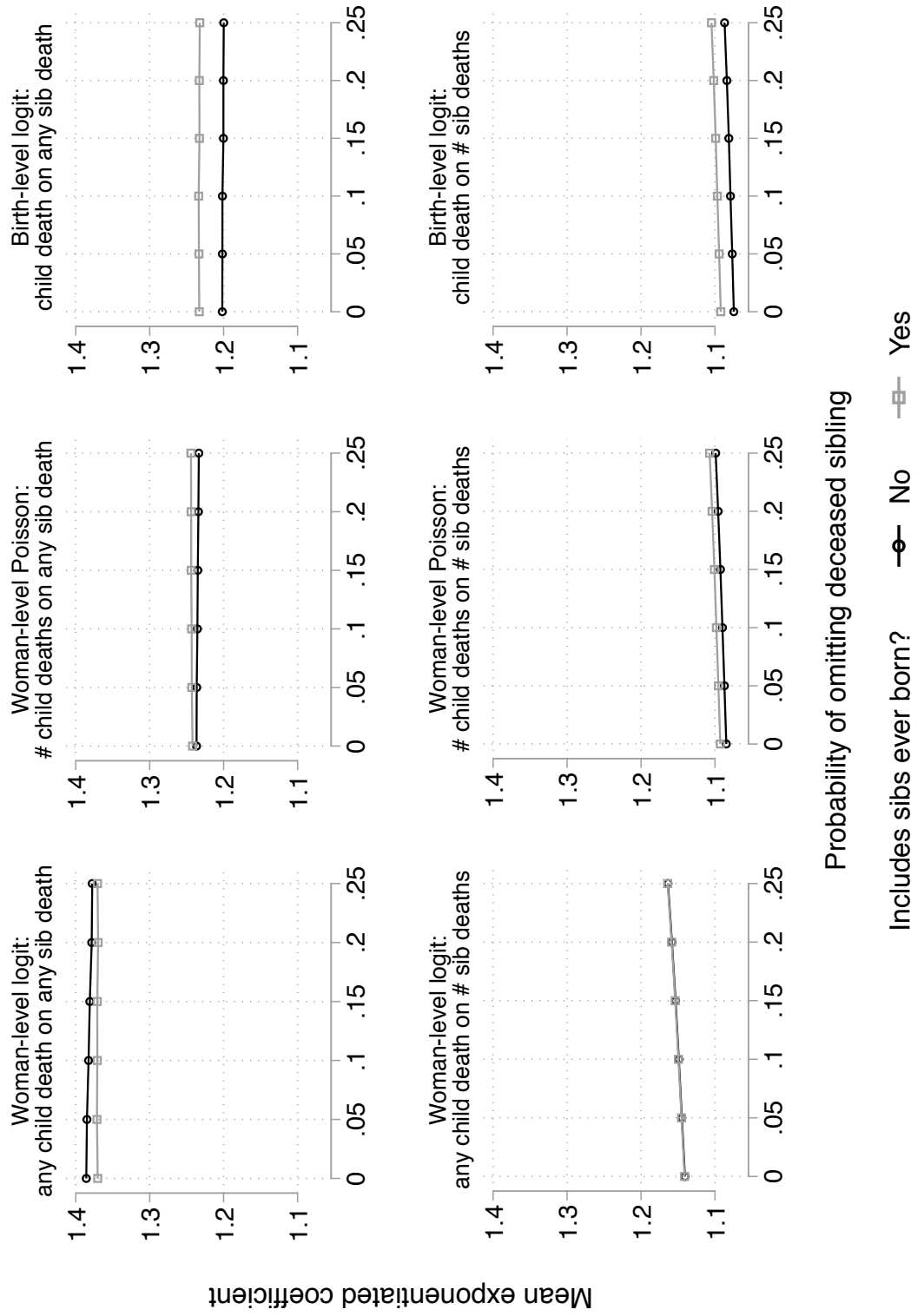
Figure A.5: Robustness to Survey-by-Age Group Effects



Note: We add survey-by-age group indicators to each regression from Table ???. We report the new estimates alongside the original estimates from Table ??. Spikes represent 95% confidence intervals

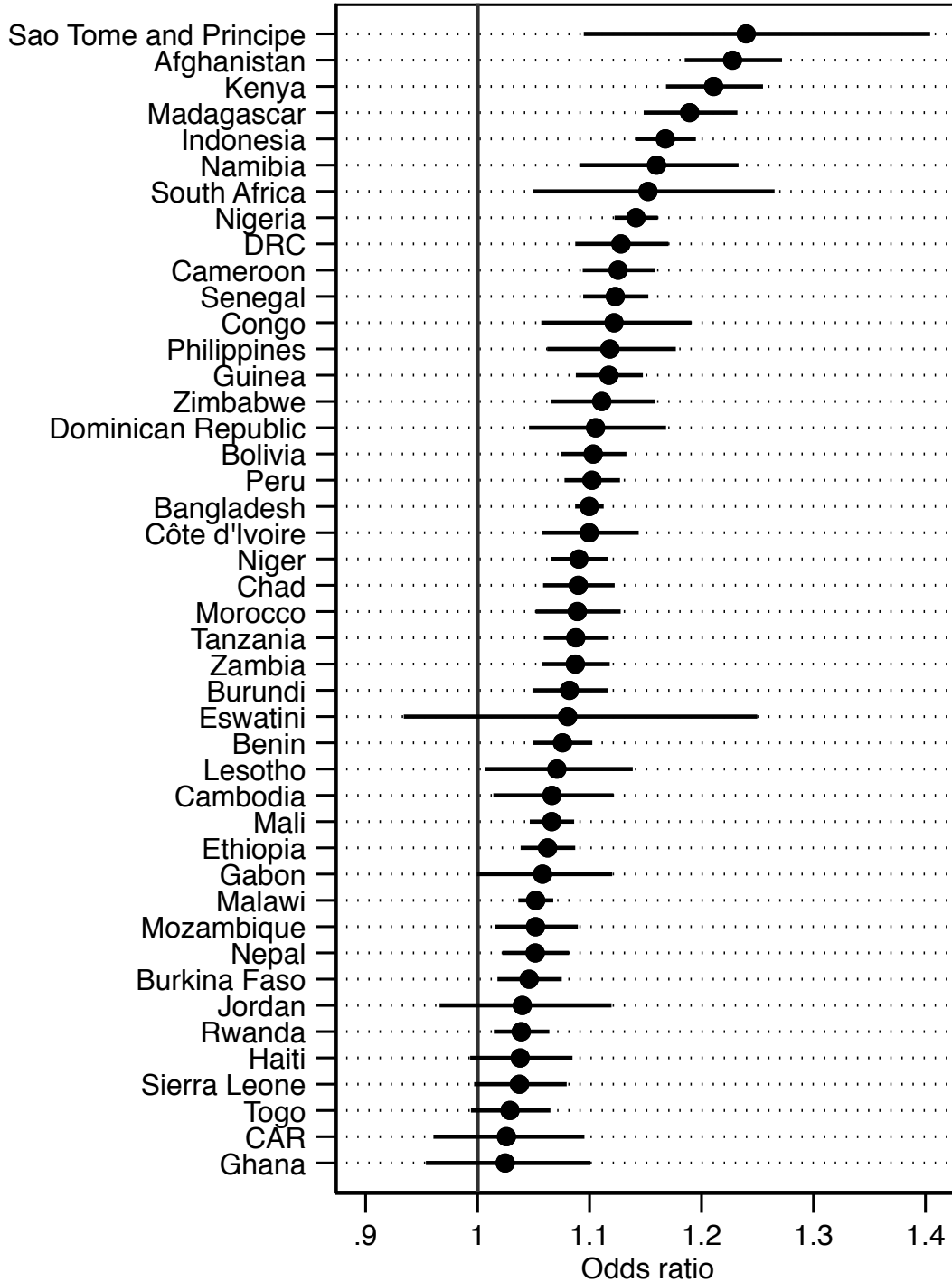


Figure A.6: Monte Carlo Simulations of Measurement Error



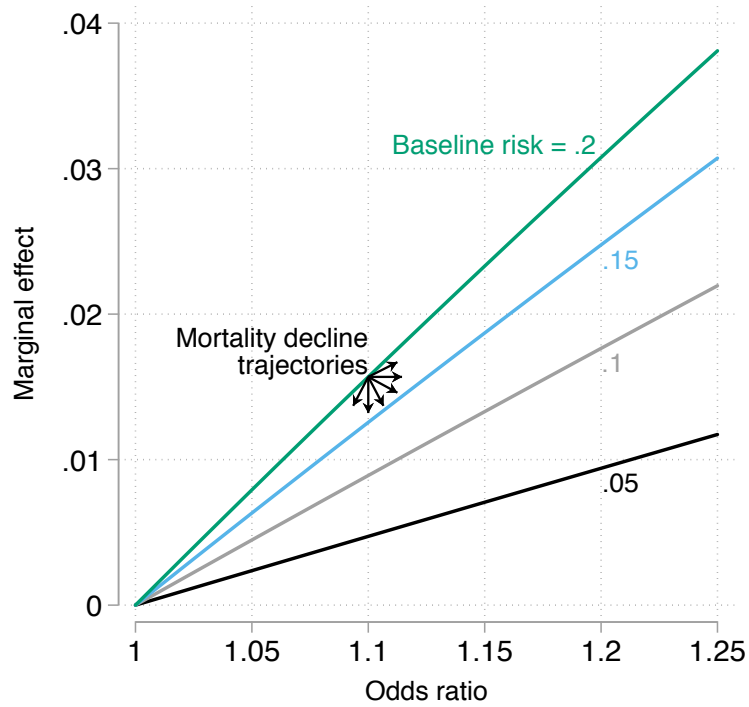
Note: This figure reports the impact of simulated measurement error on our mortality persistence estimates. We simulate the omission of reported deceased siblings for different probabilities of omission. For each positive probability, we draw the number of omitted deceased siblings from a binomial distribution 50 times. We estimate each regression from Table ?? in each simulated dataset. We plot the mean exponentiated coefficient (odds ratio or incidence rate ratio) across the 50 draws. At  $p = 0$ , we plot the result from Table ??, with no simulated measurement error.

Figure A.7: Mortality Persistence by Country



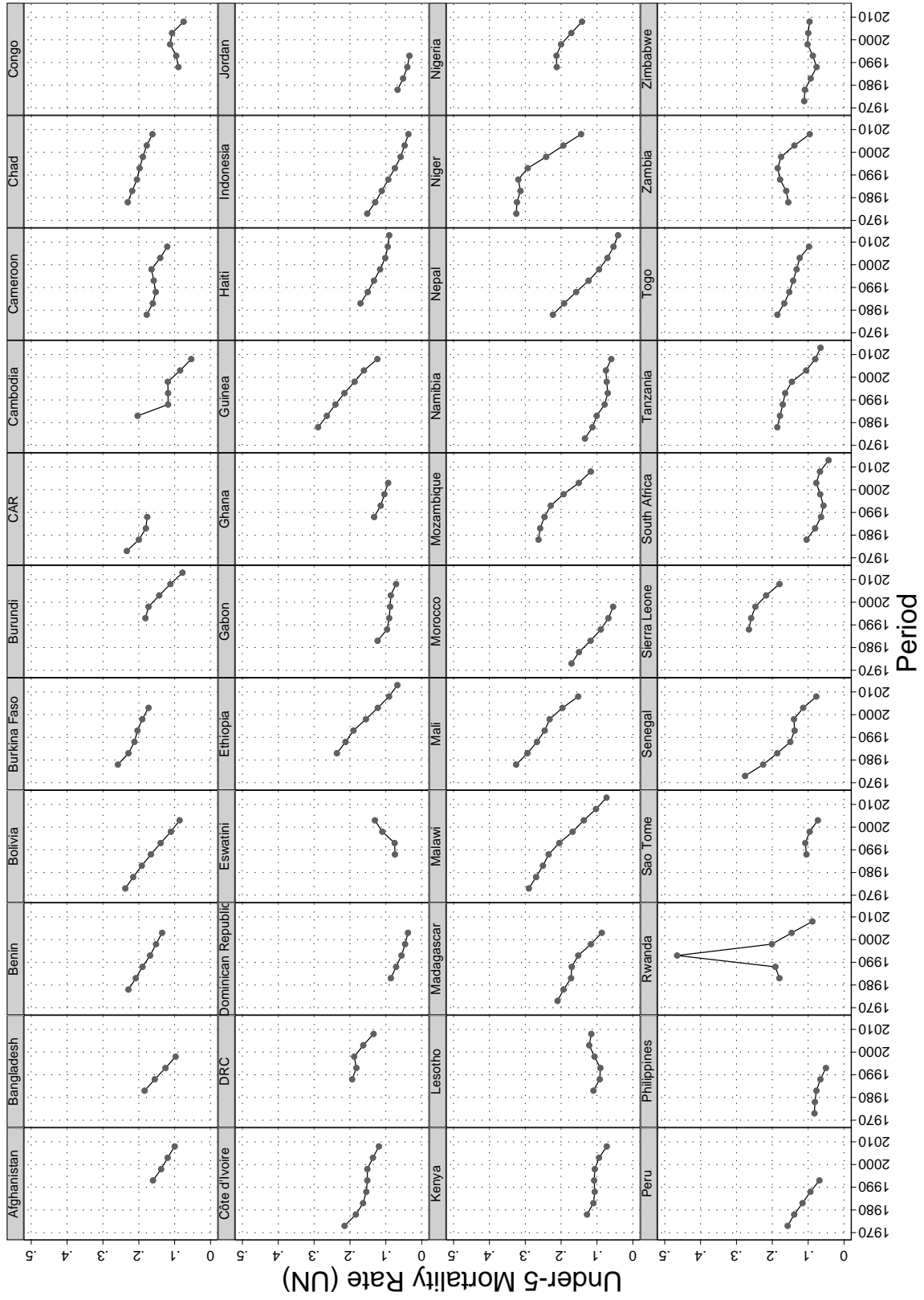
Note: This figure reports mortality persistence estimates for each country in our sample. The plotted estimates are odds ratios from birth-level logit regressions of under-5 death on the mother's number of under-5 sibling deaths. All regressions include the mother's number of siblings ever born and survey indicators. Spikes represent 95% confidence intervals based on standard errors clustered at the survey cluster level. Sampling weights are rescaled to reflect each survey's contribution to each country sample.

Figure A.8: Absolute Versus Proportional Mortality Persistence for a Binary Risk Factor



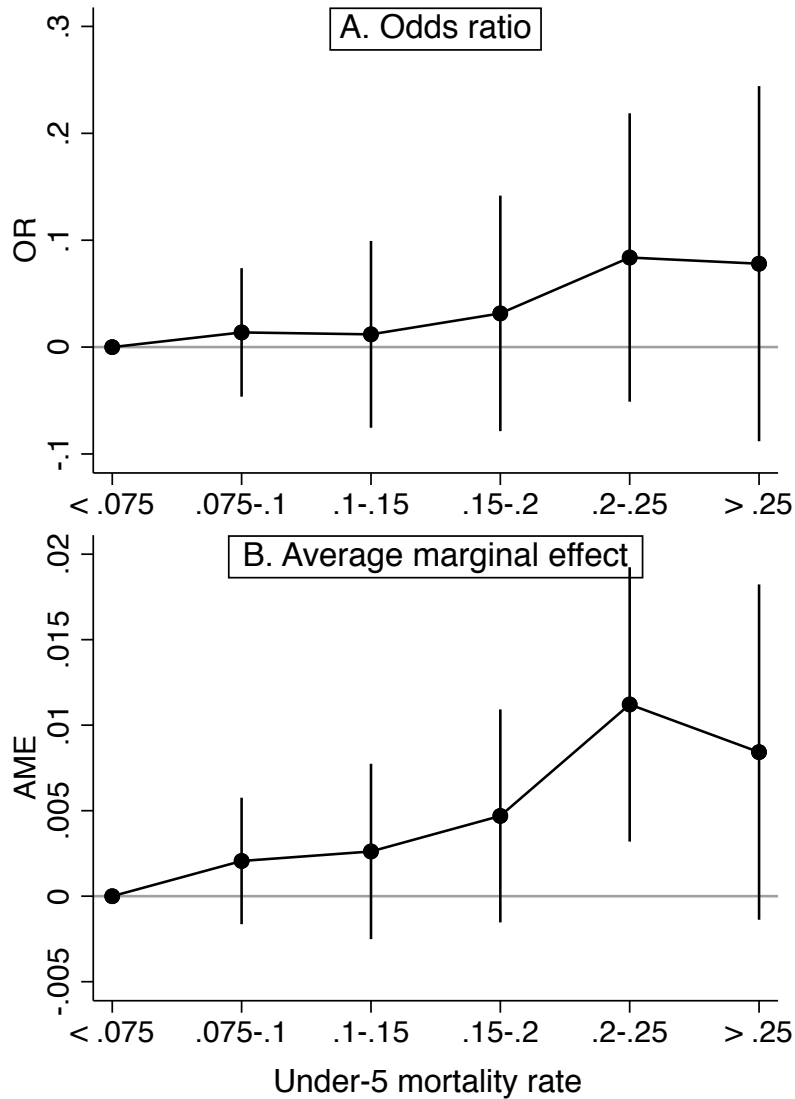
Note: Each ray from the origin specifies the relationship between the marginal effect and the odds ratio for a binary risk factor (e.g., any sibling death) at a given level of baseline mortality risk. At higher baseline mortality risk, a given odds ratio translates to a larger marginal effect. The mortality decline trajectories demonstrate possible paths for the odds ratio and marginal effect as mortality falls.

Figure A.9: Under-5 Mortality Rate over Time, by Country



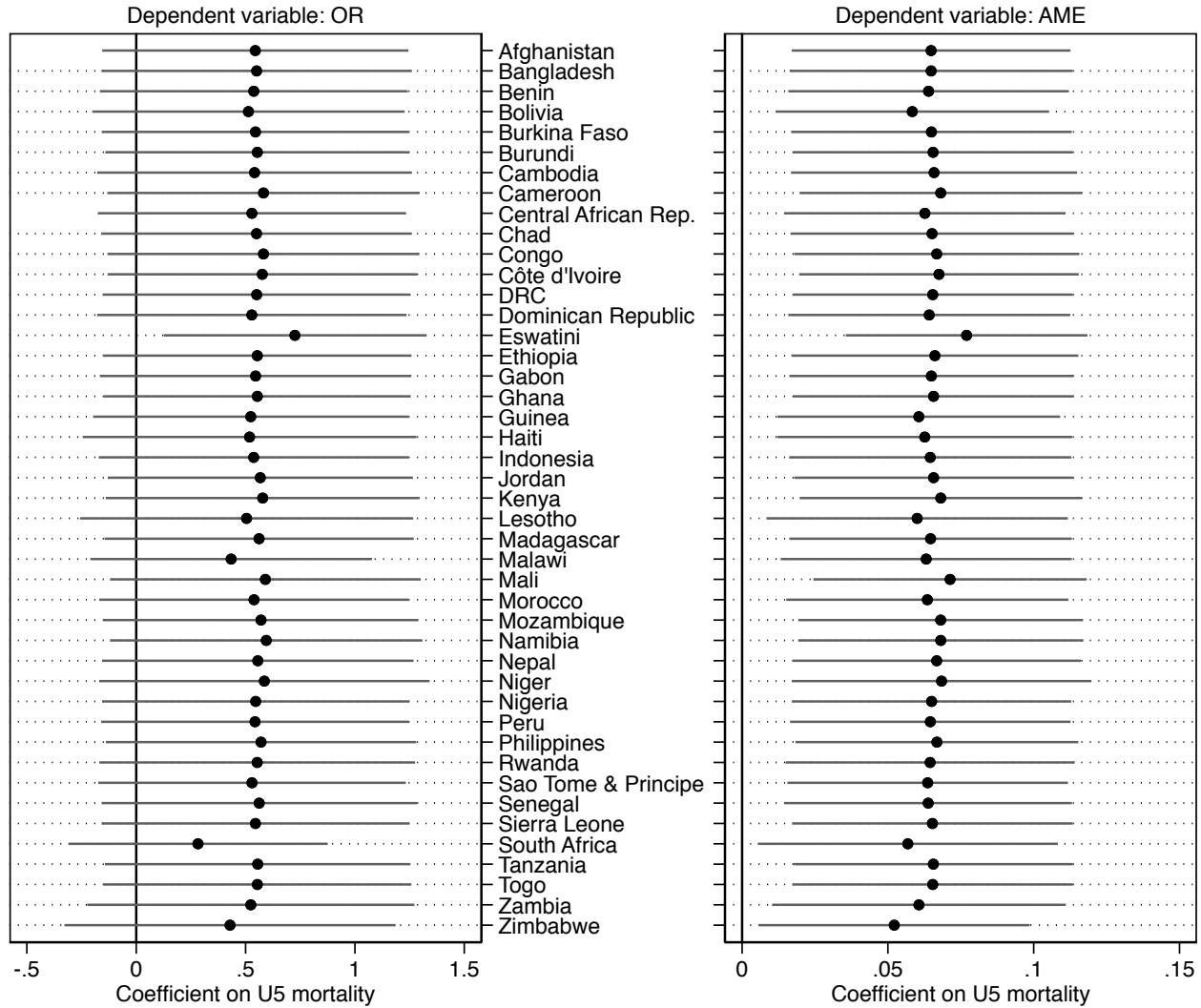
Note: Rates are scaled from 0 to 1.

Figure A.10: Semi-Parametric Panel Analyses



Note: The figure replicates Table ??, columns (1) and (5), but with under-5 mortality separated into 6 bins. The point estimates are the coefficients for 5 bin indicators, leaving out the lowest as the reference category. Spikes are 95% confidence intervals based on standard errors clustered at the country level. OR is the odds ratio. AME is the average marginal effect. Each panel represents a separate cell-level regression including country and period fixed effects. Panel A corresponds to Table ??, column (1), while the Panel B corresponds to Table ??, column (3).

Figure A.11: Leave-One-Out Panel Analyses



Note: This figure replicates Table ??, columns (1) and (5), leaving out one country at a time. The point estimates report the cell-level association of the under-5 mortality rate with the intergenerational persistence of under-5 mortality, net of country fixed effects and period fixed effects. Spikes are 95% confidence intervals based on standard errors clustered at the country level. OR is the odds ratio. AME is the average marginal effect. The left-hand panel corresponds to Table ??, column (1), while the right-hand panel corresponds to Table ??, column (3).