Table 4: Main results: Link between SIA exposure and maternal health service uptake

Dependent variables: various indicators		Delivery	Antenatal care			
of maternal healthcare access (see right)	At home	At private facility	At public facility	No. of antenatal care visits	No. of tetanus injections	
EXP PREG	0.007	-0.065***	0.010	-0.025 <sup>*</sup>	0.001	
	[-0.013, 0.027]	[-0.093, -0.036]	[-0.009, 0.029]	[-0.054, 0.003]	[-0.008, 0.009]	
Level 1 Observations (child)	34713	34713	34713	35019	36585	
Level 2 Observations (LGA)	686	686	686	686	687	
Akaike Information Criterion	26422.845	17601.384	30318.818	193640.288	111227.001	
Prob. > $X^2$	<0.001	<0.001	<0.001	<0.001	<0.001	

95% confidence intervals in brackets

<sup>\*</sup> p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

Supplemental material

Main results  Polivory And					Year-Interaction models						Robustness checks: reporting (date approximation)					
Dependent variables: various indicators ————————————————————————————————————		Delivery			Antenatal care		Delivery		Antenatal care		Delivery				Antenatal care	
of maternal healthcare access (see right)	At home	At private facility	At public facility	No. of antenatal care visits	No. of tetanus injections	At home	At private facility	At public facility	No. of antenatal care visits	No. of tetanus injections	At home	At private facility	At public facility	No. of antenatal care visits	No. of tetanus injections	
EXP_PREG	0.007 [-0.013, 0.027]	-0.065*** [-0.093, -0.036]	0.010 [-0.009, 0.029]	-0.025 <sup>*</sup> [-0.054, 0.003]	0.001 [-0.008, 0.009]	0.102 [-0.086, 0.289]	-0.094 [-0.332, 0.144]	0.005 [-0.177, 0.187]	0.027 [-0.239, 0.292]	-0.040 [-0.107, 0.028]	-0.004 [-0.019, 0.012]	-0.060 <sup>***</sup> [-0.084, -0.036]	0.016 <sup>**</sup> [0.001, 0.031]	-0.013 [-0.033, 0.007]	0.001 [-0.005, 0.008]	
EXPxYR [yr = 2008] EXPxYR						-0.064 [-0.253, 0.126] -0.110	0.013 [-0.230, 0.256] 0.028	-0.027 [-0.212, 0.157] 0.023	-0.065 [-0.337, 0.208] -0.130	0.009 [-0.060, 0.077] 0.037						
[yr = 2013] EXPxYR						[-0.298, 0.078] -0.097	[-0.213, 0.268] 0.047	[-0.159, 0.206] 0.002	[-0.401, 0.141] 0.034	[-0.032, 0.106] 0.064*						
[yr = 2018]	***	***	***			[-0.286, 0.092]	[-0.195, 0.289]	[-0.181, 0.185]	[-0.237, 0.304]	[-0.005, 0.133]	***	***	***			
MOT_ANC	-0.137*** [-0.146, -0.129]	0.057*** [0.049, 0.065]	0.062*** [0.055, 0.068]	o o o = ***	0.004***	-0.137*** [-0.146, -0.129]		0.062*** [0.055, 0.068]	0 00 <del>**</del> *	***	-0.144*** [-0.151, -0.136]		0.063*** [0.057, 0.069]	0.005***	0.004***	
MOT_EDM	-0.065*** [-0.079, -0.050] -0.030***	0.052*** [0.032, 0.073] 0.033***	0.057*** [0.043, 0.071] 0.035***	0.097*** [0.074, 0.120] 0.082***	0.031*** [0.024, 0.038] 0.023***	-0.065*** [-0.079, -0.050] -0.030***	0.052*** [0.032, 0.073] 0.033***	0.057*** [0.043, 0.071] 0.035***	0.097*** [0.074, 0.120] 0.082***	0.031*** [0.024, 0.038] 0.023***	-0.066*** [-0.078, -0.053] -0.028***	0.051*** [0.033, 0.069] 0.027***	0.061*** [0.049, 0.073] 0.038***	0.095*** [0.075, 0.115] 0.076***	0.031*** [0.025, 0.037] 0.025***	
MOT_EDF	[-0.045, -0.016] -0.913***	[0.012, 0.054] 0.284***	[0.020, 0.049] 0.978***	[0.063, 0.102] 1.946***	[0.017, 0.029] 0.643***	-0.030 [-0.045, -0.016] -0.911***		[0.020, 0.049] 0.977***	[0.063, 0.101] 1.928***	[0.017, 0.029] 0.637***	-0.028 [-0.040, -0.015] -0.903***	[0.007, 0.046] 0.282***	[0.026, 0.050] 0.957***	[0.059, 0.092] 1.905***	[0.020, 0.031] 0.646***	
MOT_AWE	[-0.988, -0.838] -0.002	[0.172, 0.397] 0.001	[0.901, 1.055] 0.002	[1.813, 2.078] 0.011***	[0.603, 0.683]	[-0.986, -0.835] -0.003	[0.169, 0.394] 0.001	[0.900, 1.054] 0.002	[1.796, 2.060] 0.011***	[0.596, 0.677] 0.001	[-0.968, -0.837] 0.000		[0.890, 1.023] 0.001	[1.791, 2.019] 0.007**	[0.611, 0.681] 0.000	
MOT_AGE	[-0.007, 0.003] 0.538***	[-0.005, 0.008] -0.374***	[-0.002, 0.007] -0.325***	[0.005, 0.017] -0.588***	[-0.001, 0.002] -0.156***	[-0.008, 0.002] 0.542***	[-0.005, 0.008] -0.376***	[-0.002, 0.007] -0.329***	[0.005, 0.017]	[-0.001, 0.002] -0.159***	[-0.005, 0.004] 0.487***	[-0.005, 0.007] -0.341***	[-0.003, 0.005] -0.300***	[0.001, 0.012]	[-0.002, 0.001] -0.160***	
HH_RUR  HH REL (ref: Catholic): Other Christian	[0.448, 0.628] 0.094		[-0.408, -0.241] 0.012	[-0.816, -0.360] -0.055	[-0.206, -0.105] -0.046*	[0.452, 0.632] 0.092	[-0.486, -0.266] -0.097	[-0.412, -0.245] 0.013		[-0.209, -0.108] -0.047 <sup>*</sup>	[0.407, 0.567] 0.103 <sup>*</sup>	[-0.441, -0.241] -0.150***	[-0.373, -0.226] 0.055	[-0.779, -0.380] -0.108	[-0.209, -0.112] -0.040	
HH REL (ref: Catholic): Other Christian	[-0.030, 0.217] 0.225***	[-0.219, 0.026] -0.242***	[-0.097, 0.121] -0.025	[-0.277, 0.167] -0.168	[-0.099, 0.006] -0.101***	[-0.031, 0.215] 0.225***	[-0.219, 0.026] -0.242***	[-0.096, 0.122] -0.026	[-0.283, 0.163] -0.170	[-0.100, 0.006] -0.100***	[-0.007, 0.213] 0.231***	[-0.259, -0.040] -0.289***	[-0.042, 0.152] 0.022	[-0.310, 0.094] -0.234 <sup>*</sup>	[-0.087, 0.008] -0.104***	
HH REL (ref: Catholic): Traditionalist	[0.076, 0.375] 1.004***	[-0.403, -0.081] -0.911***	[-0.159, 0.110] -0.475**	[-0.467, 0.130] -0.653***	[-0.174, -0.028] -0.350***	[0.075, 0.374] 1.004***	[-0.403, -0.081] -0.913***	[-0.161, 0.108] -0.474**	[-0.469, 0.130] -0.665***	[-0.173, -0.027] -0.354***	[0.098, 0.365] 0.900***	[-0.435, -0.144] -0.866***	[-0.098, 0.142] -0.406**	[-0.501, 0.034] -0.619***	[-0.171, -0.036] -0.282***	
HH_REL (ref: Catholic): Other	[0.646, 1.362]	0.019	[-0.838, -0.111] 0.387	[-1.130, -0.176] -0.084	[-0.480, -0.219] -0.142	[0.646, 1.362]	[-1.382, -0.444] 0.028	[-0.837, -0.111] 0.388	0.020	[-0.485, -0.223] -0.115	[0.569, 1.231]	[-1.301, -0.430] 0.115	[-0.741, -0.070] 0.286	[-1.087, -0.151] -0.783	-0.287	
HH_ETH (ref: Ekoi): Fulani	[-1.016, 0.503] 0.672*** [0.239, 1.104]	[-1.254, 1.292] -0.084 [-0.988, 0.821]	[-0.373, 1.148] -0.765*** [-1.190, -0.340]	[-1.535, 1.366] -0.741 [-2.013, 0.531]	[-0.681, 0.397] -0.349*** [-0.591, -0.107]	[-1.024, 0.495] 0.639*** [0.206, 1.072]	[-1.246, 1.302] -0.080 [-0.985, 0.825]	[-0.373, 1.149] -0.731*** [-1.156, -0.306]	[-1.431, 1.471] -0.813 [-2.103, 0.477]	[-0.655, 0.424] -0.324*** [-0.566, -0.081]	[-0.779, 0.401] 0.710*** [0.314, 1.106]	[-0.877, 1.107] -0.065 [-0.816, 0.687]	[-0.301, 0.874] -0.808*** [-1.192, -0.425]	[-1.829, 0.262] -0.646 [-1.867, 0.576]	[-0.662, 0.087] -0.331*** [-0.565, -0.097]	
HH_ETH (ref: Ekoi): Hausa	0.941*** [0.521, 1.360]	-0.596 [-1.459, 0.266]	-0.820**** [-1.231, -0.408]	-0.436 [-1.703, 0.830]	-0.254** [-0.493, -0.015]	0.908*** [0.488, 1.328]	-0.591 [-1.453, 0.271]	-0.787*** [-1.199, -0.374]	-0.506	-0.228 <sup>*</sup> [-0.468, 0.012]	0.971*** [0.584, 1.358]	-0.811** [-1.537, -0.086]	-0.843*** [-1.216, -0.469]	-0.319	-0.228 <sup>*</sup> [-0.459, 0.003]	
HH_ETH (ref: Ekoi): Ibibio	0.378 [-0.094, 0.850]	0.562 [-0.336, 1.459]	-0.310 [-0.771, 0.151]	-0.197 [-1.463, 1.070]	-0.102 [-0.385, 0.182]	0.350 [-0.122, 0.823]	0.565 [-0.332, 1.463]	-0.281 [-0.742, 0.180]	-0.254 [-1.535, 1.027]	-0.081 [-0.366, 0.204]	0.538 <sup>**</sup> [0.099, 0.977]	0.290 [-0.478, 1.058]	-0.449** [-0.871, -0.027]	-0.011 [-1.219, 1.196]	-0.113 [-0.385, 0.160]	
HH_ETH (ref: Ekoi): Igala	-0.510 <sup>*</sup> [-1.034, 0.015]	1.297*** [0.404, 2.190]	0.034 [-0.454, 0.522]	0.013 [-1.304, 1.329]	0.277 <sup>*</sup> [-0.017, 0.571]	-0.545 <sup>**</sup> [-1.070, -0.020]	1.301***	0.069 [-0.419, 0.557]	-0.066 [-1.400, 1.268]	0.301 <sup>**</sup> [0.006, 0.595]	-0.417 <sup>*</sup> [-0.895, 0.061]	0.951** [0.195, 1.707]	0.037 [-0.405, 0.478]	0.266 [-1.004, 1.535]	0.297 <sup>**</sup> [0.002, 0.591]	
HH_ETH (ref: Ekoi): Igbo	-0.788*** [-1.203, -0.372]	1.877*** [1.046, 2.708]	-0.575*** [-0.979, -0.171]	1.258 <sup>*</sup> [-0.025, 2.540]	0.120 [-0.113, 0.353]	-0.813*** [-1.229, -0.397]	1.881 <sup>***</sup> [1.050, 2.712]	-0.547*** [-0.952, -0.143]	1.201 <sup>*</sup> [-0.099, 2.501]	0.141 [-0.092, 0.374]	-0.742*** [-1.129, -0.354]	1.545*** [0.846, 2.244]	-0.556*** [-0.925, -0.186]	1.273 <sup>**</sup> [0.037, 2.509]	0.122 [-0.104, 0.348]	
HH_ETH (ref: Ekoi): ljaw / lzon	0.887*** [0.401, 1.372]	0.122 [-0.804, 1.047]	-0.812*** [-1.287, -0.337]	-0.683 [-2.054, 0.688]	-0.133 [-0.397, 0.131]	0.863*** [0.377, 1.348]	0.122 [-0.803, 1.048]	-0.786*** [-1.261, -0.311]	-0.749 [-2.134, 0.636]	-0.120 [-0.383, 0.143]	0.841*** [0.395, 1.287]	-0.004 [-0.791, 0.783]	-0.828*** [-1.258, -0.397]	-0.583 [-1.910, 0.743]	-0.122 [-0.377, 0.133]	
HH_ETH (ref: Ekoi): Kanuri / Beriberi	0.996 <sup>***</sup> [0.506, 1.487]	-0.539 [-1.680, 0.602]	-0.949*** [-1.430, -0.469]	-0.503 [-1.794, 0.787]	-0.239 <sup>*</sup> [-0.504, 0.026]	0.961*** [0.469, 1.453]	-0.533 [-1.674, 0.609]	-0.912*** [-1.393, -0.430]		-0.211 [-0.477, 0.054]	0.869*** [0.427, 1.312]	-0.450 [-1.377, 0.477]	-0.859*** [-1.288, -0.430]	-0.396 [-1.636, 0.843]	-0.241 <sup>*</sup> [-0.492, 0.010]	
HH_ETH (ref: Ekoi): Tiv	-0.776 [-1.248, -0.304]	1.720	0.133 [-0.333, 0.600]	-0.896 [-2.238, 0.445]	-0.344 <sup>**</sup> [-0.612, -0.075]		1.722 [0.841, 2.604]	0.164 [-0.303, 0.631]	-0.968 [-2.326, 0.389]	-0.321 [-0.588, -0.054]	-0.651	1.405 [0.657, 2.152]	0.111 [-0.313, 0.535]	-0.698 [-1.982, 0.586]	-0.290 <sup>11</sup> [-0.541, -0.038]	
HH_ETH (ref: Ekoi): Yoruba	-0.160 [-0.582, 0.261]	1.295*** [0.459, 2.132]	-0.418 [-0.827, -0.009]	2.233*** [0.948, 3.518]	0.060 [-0.175, 0.295]	-0.189 [-0.611, 0.233]	1.300 <sup>***</sup> [0.463, 2.136]	-0.388 <sup>*</sup> [-0.797, 0.022]	2.177*** [0.874, 3.480]	0.078 [-0.157, 0.313]	-0.116 [-0.508, 0.276]	0.960 (0.256, 1.664)	-0.374 <sup>**</sup> [-0.748, -0.000]	2.208 <sup>***</sup> [0.976, 3.439]	0.052 [-0.177, 0.281]	
HH_ETH (ref: Ekoi): Other	0.206 [-0.196, 0.607] 0.032***	0.905 <sup>**</sup> [0.076, 1.734] -0.017 <sup>**</sup>	-0.350° [-0.744, 0.044] -0.020***	0.035 [-1.215, 1.284] -0.043***	-0.018 [-0.251, 0.214] -0.006***	0.174 [-0.229, 0.576] 0.033***	0.909 <sup>**</sup> [0.080, 1.738] -0.017 <sup>**</sup>	-0.318 [-0.713, 0.077] -0.020***	-0.035 [-1.303, 1.232] -0.043***	0.005 [-0.228, 0.238] -0.006***	0.263 [-0.110, 0.636] 0.035***	0.642 <sup>*</sup> [-0.054, 1.338] -0.021 <sup>***</sup>	-0.371 -0.011] [-0.731, -0.011] -0.023***	0.132 [-1.070, 1.333] -0.038***	-0.006 [-0.232, 0.219] -0.005***	
HH_SIZ	[0.032] [0.023, 0.042] -0.207***	-0.017 [-0.032, -0.003] 0.120***	[-0.030, -0.011] 0.130***	-0.043 [-0.056, -0.030] 0.286***	-0.006 [-0.010, -0.002] 0.058***	[0.023, 0.042]	-0.017 [-0.032, -0.002] 0.120***	-0.020 [-0.030, -0.011] 0.129***		-0.006 [-0.010, -0.002] 0.059***	[0.027, 0.044] -0.207***	-0.021 [-0.034, -0.008] 0.128***	-0.023 [-0.031, -0.015] 0.129***	-0.038 [-0.049, -0.027] 0.261***	-0.005 [-0.009, -0.002] 0.053***	
HH_WEA	[-0.223, -0.190] 0.013	[0.099, 0.141] -0.240**	[0.114, 0.145]	[0.256, 0.317]	[0.050, 0.067] -0.100**	[-0.224, -0.190] 0.146		[0.114, 0.145] 0.162	[0.258, 0.319] -0.459	[0.051, 0.067] -0.094	[-0.222, -0.193] 0.035		[0.116, 0.142] 0.064	[0.235, 0.288]	[0.046, 0.060] -0.089 <sup>*</sup>	
YEAR (ref: 2003): 2008	[-0.168, 0.193] -0.025	[-0.450, -0.031] -0.388***	[-0.094, 0.251] 0.143 <sup>*</sup>	[-1.029, -0.238] -0.258	[-0.188, -0.013] -0.024	[-0.348, 0.640] 0.263	[-0.840, 0.309] -0.449	[-0.312, 0.636] 0.064	[-1.284, 0.366] 0.186	[-0.286, 0.098] -0.112	[-0.130, 0.200] -0.021	[-0.434, -0.038] -0.355***	[-0.094, 0.223] 0.116	[-0.912, -0.172] -0.141	[-0.180, 0.001] -0.001	
YEAR (ref: 2003): 2013	[-0.204, 0.155] -0.247***	[-0.594, -0.183] -0.401***	[-0.027, 0.314] 0.354***	[-0.668, 0.153] -1.242***	[-0.113, 0.065] -0.046	[-0.228, 0.755] -0.011	[-1.018, 0.121] -0.498 <sup>*</sup>	[-0.405, 0.534] 0.350	[-0.638, 1.011] -1.370***	[-0.303, 0.078] -0.217**	[-0.185, 0.142] -0.282***	[-0.549, -0.161] -0.412***	[-0.039, 0.272] 0.379***	[-0.528, 0.246] -0.998***	[-0.092, 0.090] -0.009	
YEAR (ref: 2003): 2018  Constant	[-0.433, -0.061] 2.049***	[-0.620, -0.182] -3.635***	[0.178, 0.531] -2.439***	[-1.651, -0.834] 3.562***	[-0.139, 0.048] 0.987***	[-0.505, 0.482] 1.851***	[-1.071, 0.074] -3.572***	[-0.122, 0.821] -2.455***	[-2.184, -0.556] 3.498***	[-0.408, -0.027] 1.065***	[-0.443, -0.120] 2.011***		[0.225, 0.534] -2.453***	[-1.377, -0.620] 3.596***	[-0.103, 0.084] 0.976***	
Constant  Multilevel variance parameter: Level 1	[1.575, 2.524] 0.449***	[-4.523, -2.747] 0.726***	[-2.903, -1.975] 0.462***	[2.191, 4.933] 0.683***	[0.723, 1.251] -1.428***	[1.200, 2.503] 0.445***	[-4.602, -2.542] 0.723***	[-3.088, -1.821] 0.460***	[1.962, 5.033] 0.672***	[0.745, 1.386] -1.456***	[1.575, 2.448] 0.501***	[-4.160, -2.650] 0.767***	[-2.874, -2.032] 0.460***	[2.289, 4.904] 0.675***	[0.724, 1.228] -1.405***	
Multilevel variance parameter: Residual	[0.362, 0.536]	[0.565, 0.888]	[0.383, 0.542]	[0.597, 0.769] 1.322***	[-1.525, -1.330] 0.090***	[0.359, 0.531]	[0.562, 0.884]	[0.381, 0.539]	[0.585, 0.759] 1.321***	[-1.554, -1.359] 0.090***	[0.414, 0.589]	[0.603, 0.931]	[0.387, 0.533]	[0.595, 0.756] 1.281***	[-1.498, -1.313] 0.085***	
Level 1 Observations (child)	34713	34713	34713	[1.282, 1.361] 35019	[0.064, 0.116] 36585	34713	34713	34713	[1.282, 1.361] 35019	[0.064, 0.115] 36585	45437	45437	45437	[1.243, 1.319] 45839	[0.063, 0.107] 47644	
Level 2 Observations (LGA)  Akaike Information Criterion	686 26422.845	686 17601.384	686 30318.818	686 193640.288	687 111227.001	686 26423.667	686 17606.418	686 30319.207	686 193610.157	687 111190.932	689 34655.448	689 21928.17	689 39661.692	689 249499.916	690 144291.105	
Prob. > $X^2$	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	

95% confidence intervals in brackets

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01

Table 4b: Robustness check (3-level models): Link between SIA exposure and maternal health service uptake Main results Year-Interaction models Robustness checks: reporting Dependent variables: various indicators Delivery Antenatal care Delivery Antenatal care Delivery Antenatal care of maternal care and child survival (see

of maternal care and child survival (see	Delivery				atal care		Delivery			Antenatal care				Antenatal care		
right)	At home	At private facility	At public facility	No. of antenatal care visits	No. of tetanus injections	At home	At private facility	At public facility	No. of antenatal care visits	No. of tetanus injections	At home	At private facility	At public facility	No. of antenatal care visits	No. of tetanus injections	
	-0.014	0.001	0.012	0.025	0.012**	0.056	0.035	0.014	0.076	-0.020	-0.018**	-0.002	0.017**	0.017	0.008*	
EXP_PREG	[-0.036, 0.007]	[-0.029, 0.030]	[-0.008, 0.031]	[-0.012, 0.063]	[0.003, 0.021]	[-0.130, 0.243]	[-0.207, 0.276]	[-0.169, 0.197]	[-0.178, 0.330]	[-0.096, 0.055]	[-0.035, -0.002]	[-0.026, 0.023]	[0.001, 0.032]	[-0.013, 0.047]	[-0.000, 0.016]	
EXPxYR						-0.044	-0.033	-0.036	-0.064	0.000						
[yr = 2008]						[-0.232, 0.145]	[-0.278, 0.212]	[-0.221, 0.149]	[-0.337, 0.209]	[-0.076, 0.076]						
EXPxYR						-0.087	-0.040	0.018	-0.128	0.030						
[yr = 2013]						[-0.274, 0.100]	[-0.282, 0.203]	[-0.165, 0.201]	[-0.388, 0.133]	[-0.047, 0.107]						
EXPXYR						-0.068	-0.026	-0.008	0.034	0.052						
[yr = 2018]	***	***	***			[-0.255, 0.120]	[-0.271, 0.219]	[-0.192, 0.176]	[-0.223, 0.292]	[-0.027, 0.132]	***	***	***			
MOT_ANC	-0.133***	0.048***	0.063***			-0.133***	0.048***	0.063***			-0.139***	0.052***	0.064***			
	[-0.141, -0.124] -0.062***	[0.040, 0.056] 0.041***	[0.056, 0.069] 0.057***	0.091***	0.029***	[-0.141, -0.125] -0.062***	[0.040, 0.056] 0.041***	[0.056, 0.069] 0.057***	0.091***	0.029***	[-0.147, -0.132] -0.063***	[0.045, 0.059] 0.040***	[0.058, 0.070] 0.061***	0.090***	0.029***	
MOT_EDM	-0.062 [-0.077, -0.047]	[0.020, 0.061]	[0.043, 0.071]	[0.068, 0.113]	[0.020, 0.038]	-0.062 [-0.077, -0.047]	[0.020, 0.061]	[0.043, 0.071]	[0.069, 0.113]	[0.020, 0.038]	-0.063 [-0.076, -0.051]	[0.021, 0.058]	[0.049, 0.073]	[0.070, 0.109]	[0.021, 0.038]	
	-0.029***	0.024**	0.034***	0.081***	0.022***	-0.029***	0.024**	0.034***	0.081***	0.022***	-0.026***	0.017*	0.037***	0.075***	0.024***	
MOT_EDF	[-0.044, -0.014]	[0.003, 0.046]	[0.020, 0.048]	[0.062, 0.100]	[0.013, 0.030]	[-0.044, -0.014]	[0.003, 0.045]	[0.020, 0.048]	[0.062, 0.100]	[0.013, 0.030]	[-0.039, -0.014]	[-0.003, 0.036]	[0.025, 0.050]	[0.054, 0.096]	[0.017, 0.032]	
MOT AWE	-0.910***	0.232***	0.972***	1.927***	0.633***	-0.909***	0.232***	0.971***	1.908***	0.628***	-0.900***	0.236***	0.948***	1.894***	0.637***	
MOT_AWE	[-0.986, -0.835]	[0.120, 0.344]	[0.895, 1.049]	[1.682, 2.172]	[0.572, 0.694]	[-0.985, -0.834]	[0.120, 0.344]	[0.894, 1.049]	[1.662, 2.153]	[0.565, 0.690]	[-0.966, -0.834]	[0.136, 0.337]	[0.882, 1.015]	[1.665, 2.123]	[0.586, 0.688]	
MOT_AGE	-0.003	-0.001	0.003	0.009***	0.000	-0.003	-0.001	0.003	0.009***	0.000	-0.001	-0.001	0.001	0.005*	0.000	
WOI_AGE	[-0.008, 0.002]	[-0.008, 0.006]	[-0.002, 0.008]	[0.003, 0.015]	[-0.002, 0.002]	[-0.008, 0.002]	[-0.008, 0.006]	[-0.002, 0.008]	[0.004, 0.015]	[-0.002, 0.002]	[-0.005, 0.004]	[-0.007, 0.005]	[-0.003, 0.005]	[-0.000, 0.011]	[-0.003, 0.002]	
HH_RUR	0.528***	-0.345***	-0.335***	-0.514***	-0.142***	0.532***	-0.345***	-0.340***	-0.510 <sup>***</sup>	-0.145 <sup>***</sup>	0.474***	-0.309***	-0.313***	-0.511 <sup>***</sup>	-0.149 <sup>***</sup>	
· · · · · · · · · · · · · · · · · · ·	[0.439, 0.618]	[-0.453, -0.238]	[-0.419, -0.251]	[-0.778, -0.249]	[-0.205, -0.080]	[0.442, 0.622]	[-0.453, -0.237]	[-0.424, -0.256]	[-0.776, -0.244]	[-0.209, -0.082]	[0.395, 0.554]	[-0.405, -0.213]	[-0.387, -0.239]	[-0.730, -0.293]	[-0.207, -0.091]	
HH_REL (ref: Catholic): Other Christian	0.031	-0.023	0.014	-0.071	-0.031	0.030	-0.023	0.015	-0.076	-0.031	0.053	-0.085	0.055	-0.116	-0.028	
	[-0.093, 0.156]	[-0.145, 0.099]	[-0.095, 0.124]	[-0.288, 0.146]	[-0.084, 0.022]	[-0.095, 0.154]	[-0.146, 0.099]	[-0.094, 0.125]	[-0.295, 0.143]	[-0.084, 0.021]	[-0.059, 0.164]	[-0.194, 0.023]	[-0.043, 0.153]	[-0.336, 0.104]	[-0.075, 0.019]	
HH_REL (ref: Catholic): Islam	0.148 <sup>*</sup> [-0.006, 0.301]	-0.079 [-0.242, 0.084]	-0.021 [-0.158, 0.116]	-0.042 [-0.433, 0.349]	-0.040 [-0.107, 0.027]	0.147 <sup>*</sup> [-0.006, 0.301]	-0.079 [-0.242, 0.084]	-0.023	-0.045 [-0.439, 0.348]	-0.042	0.161** [0.024, 0.297]	-0.129 <sup>*</sup> [-0.275, 0.018]	0.021 [-0.101, 0.143]	-0.134 [-0.491, 0.224]	-0.054 [-0.126, 0.019]	
	0.951***	[-0.242, 0.064] -0.902***	-0.156, 0.116]	-0.455, 0.549j	-0.308***	0.951***	-0.242, 0.064] -0.904***	[-0.160, 0.114] -0.455**	-0.439, 0.346j	[-0.109, 0.025] -0.313***	0.855***	-0.852***	-0.394**	-0.491, 0.224] -0.543**	-0.247***	
HH_REL (ref: Catholic): Traditionalist	[0.590, 1.312]	-0.902 [-1.367, -0.437]	[-0.819, -0.094]	[-1.011, -0.098]	[-0.423, -0.193]	[0.590, 1.311]	[-1.369, -0.438]	[-0.817, -0.093]	[-1.024, -0.109]	-0.313 [-0.428, -0.197]	[0.523, 1.187]	-0.652 [-1.284, -0.420]	[-0.729, -0.059]	[-1.031, -0.054]	[-0.375, -0.119]	
	-0.389	0.218	0.409	0.037	-0.087	-0.389	0.220	0.407	0.149	-0.063	-0.306	0.306	0.305	-0.590	-0.231 <sup>*</sup>	
HH_REL (ref: Catholic): Other	[-1.143, 0.365]	[-1.057, 1.493]	[-0.350, 1.169]	[-1.052, 1.125]	[-0.512, 0.338]	[-1.143, 0.365]	[-1.056, 1.496]	[-0.353, 1.166]	[-0.923, 1.220]	[-0.476, 0.350]	[-0.894, 0.282]	[-0.687, 1.299]	[-0.284, 0.893]	[-1.351, 0.171]	[-0.486, 0.023]	
IIII ETII (nof Elici), Enlani	0.824***	-0.200	-0.744***	-0.608**	-0.280***	0.788***	-0.205	-0.704***	-0.687**	-0.256***	0.841***	-0.160	-0.785***	-0.576**	-0.282***	
HH_ETH (ref: Ekoi): Fulani	[0.369, 1.279]	[-1.163, 0.764]	[-1.189, -0.300]	[-1.110, -0.106]	[-0.405, -0.155]	[0.332, 1.244]	[-1.168, 0.759]	[-1.149, -0.258]	[-1.223, -0.151]	[-0.388, -0.125]	[0.426, 1.256]	[-0.962, 0.642]	[-1.186, -0.384]	[-1.075, -0.078]	[-0.405, -0.158]	
HH ETH (ref: Ekoi): Hausa	0.979***	-0.399	-0.748***	-0.134	-0.115 <sup>**</sup>	0.945***	-0.403	-0.708***	-0.211	-0.092 <sup>*</sup>	0.995***	-0.610	-0.763***	-0.124	-0.124**	
Titi_ETTT (ref. Exol). Hadda	[0.532, 1.426]	[-1.328, 0.531]	[-1.183, -0.313]	[-0.634, 0.366]	[-0.217, -0.013]	[0.497, 1.393]	[-1.332, 0.526]	[-1.144, -0.272]	[-0.731, 0.310]	[-0.198, 0.014]	[0.586, 1.404]	[-1.393, 0.172]	[-1.157, -0.369]	[-0.601, 0.354]	[-0.231, -0.017]	
HH ETH (ref: Ekoi): Ibibio	0.427*	0.030	-0.243	-0.170	-0.099	0.397	0.028	-0.209	-0.228	-0.075	0.596***	-0.198	-0.381 <sup>*</sup>	-0.025	-0.135	
_	[-0.063, 0.917]	[-0.920, 0.980]	[-0.721, 0.234]	[-0.746, 0.405]	[-0.352, 0.153]	[-0.093, 0.888]	[-0.922, 0.979]	[-0.687, 0.269]	[-0.835, 0.379]	[-0.327, 0.176]	[0.144, 1.047]	[-1.009, 0.612]	[-0.817, 0.055]	[-0.417, 0.367]	[-0.329, 0.058]	
HH_ETH (ref: Ekoi): lgala	0.105	0.377	-0.091	-0.114	0.288**	0.068	0.373	-0.048	-0.199	0.312**	0.086	0.108	-0.018	0.101	0.304**	
	[-0.446, 0.657] -0.358	[-0.572, 1.327] 0.818 <sup>*</sup>	[-0.604, 0.423] -0.431*	[-0.505, 0.278] 0.755***	[0.044, 0.532] 0.020	[-0.484, 0.621] -0.388 <sup>*</sup>	[-0.577, 1.323]	[-0.562, 0.465]	[-0.610, 0.212] 0.694***	[0.071, 0.554] 0.044	[-0.411, 0.582] -0.355*	[-0.694, 0.909] 0.595	[-0.480, 0.444] -0.390*	[-0.276, 0.477] 0.772***	[0.033, 0.576] 0.016	
HH_ETH (ref: Ekoi): lgbo	-0.336 [-0.813, 0.097]	[-0.078, 1.713]	-0.431 [-0.862, 0.001]	0.755 [0.284, 1.225]	[-0.080, 0.120]	-0.388 [-0.843, 0.068]	0.816 <sup>*</sup> [-0.080, 1.711]	-0.395 <sup>*</sup> [-0.828, 0.037]	[0.188, 1.199]	[-0.052, 0.140]	-0.355 [-0.774, 0.065]	[-0.159, 1.350]	-0.390 [-0.783, 0.003]	[0.399, 1.145]	[-0.077, 0.109]	
	0.857***	-0.265	-0.705***	-0.772 <sup>*</sup>	-0.083	0.829***	-0.266	-0.673***	-0.839**	-0.066	0.802***	-0.416	-0.684***	-0.731 <sup>*</sup>	-0.080	
HH_ETH (ref: Ekoi): ljaw / lzon	[0.336, 1.378]	[-1.253, 0.723]	[-1.212, -0.199]	[-1.550, 0.007]	[-0.259, 0.093]	[0.308, 1.351]	[-1.254, 0.722]	[-1.180, -0.167]	[-1.640, -0.038]	[-0.248, 0.115]	[0.329, 1.275]	[-1.254, 0.422]	[-1.141, -0.227]	[-1.484, 0.023]	[-0.247, 0.087]	
==	1.104***	-0.411	-0.925***	-0.316	-0.153**	1.068***	-0.413	-0.882***	-0.410	-0.128*	0.944***	-0.240	-0.813***	-0.276	-0.169***	
HH_ETH (ref: Ekoi): Kanuri / Beriberi	[0.593, 1.616]	[-1.629, 0.808]	[-1.424, -0.426]	[-0.771, 0.138]	[-0.276, -0.030]	[0.555, 1.581]	[-1.632, 0.806]	[-1.382, -0.382]	[-0.915, 0.095]	[-0.257, 0.002]	[0.484, 1.404]	[-1.230, 0.751]	[-1.258, -0.367]	[-0.708, 0.156]	[-0.286, -0.052]	
HH_ETH (ref: Ekoi): Tiv	-0.140	0.642	-0.010	-0.676***	-0.421***	-0.173	0.639	0.025	-0.750***	-0.399***	-0.082	0.460	-0.040	-0.570**	-0.358***	
TITI_LTTT (Tel. Exol). TIV	[-0.647, 0.367]	[-0.304, 1.588]	[-0.511, 0.491]	[-1.181, -0.171]	[-0.581, -0.260]	[-0.681, 0.334]	[-0.307, 1.586]	[-0.477, 0.526]	[-1.281, -0.219]	[-0.564, -0.234]	[-0.549, 0.384]	[-0.343, 1.262]	[-0.493, 0.413]	[-1.059, -0.080]	[-0.492, -0.224]	
HH_ETH (ref: Ekoi): Yoruba	0.331	0.348	-0.448**	1.415***	0.097*	0.298	0.346	-0.411*	1.348***	0.120**	0.327	0.103	-0.394 <sup>*</sup>	1.495***	0.082	
<u>_</u> (	[-0.123, 0.784]	[-0.551, 1.247]	[-0.883, -0.013]	[0.906, 1.924]	[-0.018, 0.212]	[-0.157, 0.752]	[-0.553, 1.245]	[-0.847, 0.025]	[0.827, 1.869]	[0.007, 0.232]	[-0.091, 0.745]	[-0.654, 0.860]	[-0.790, 0.003]	[0.975, 2.014]	[-0.029, 0.192]	
HH_ETH (ref: Ekoi): Other	0.424*	0.273	-0.350*	0.085	0.029	0.390*	0.271	-0.312	0.011	0.053	0.434**	0.077	-0.349*	0.138	0.032	
	[-0.000, 0.849]	[-0.614, 1.161]	[-0.765, 0.064]	[-0.250, 0.421]	[-0.053, 0.111]	[-0.036, 0.816]	[-0.617, 1.159]	[-0.727, 0.103]	[-0.370, 0.392]	[-0.032, 0.138]	[0.042, 0.826]	[-0.670, 0.823]	[-0.726, 0.028]	[-0.170, 0.445]	[-0.041, 0.105]	
HH_SIZ	0.033***	-0.013*	-0.022*** [-0.031, -0.013]	-0.038*** [-0.054, -0.023]	-0.006*** [-0.010, -0.002]	0.033***	-0.013 <sup>*</sup> [-0.028, 0.001]	-0.022*** [-0.031, -0.012]	-0.039*** [-0.054, -0.023]	-0.006*** [-0.010, -0.002]	0.036*** [0.027, 0.044]	-0.018*** [-0.031, -0.005]	-0.024***	-0.035***	-0.005*** [-0.009, -0.001]	
	[0.023, 0.043] -0.210***	[-0.028, 0.001] 0.120***	0.133***	0.278***	0.057***	[0.023, 0.043] -0.210***	0.120***	0.132***	0.280***	0.057***	-0.211***	0.129***	[-0.032, -0.016] 0.132***	[-0.046, -0.023] 0.256***	0.051***	
HH_WEA	-0.210 [-0.227, -0.193]	[0.099, 0.141]	[0.117, 0.148]	[0.241, 0.314]	[0.047, 0.066]	-0.210 [-0.227, -0.193]	[0.099, 0.141]	[0.117, 0.148]	[0.243, 0.317]	[0.048, 0.067]	-0.211 [-0.225, -0.196]	[0.110, 0.147]	[0.119, 0.145]	[0.220, 0.291]	[0.044, 0.059]	
	0.064	-0.308***	0.077	-0.715***	-0.110**	0.153	-0.236	0.181	-0.538	-0.082	0.081	-0.304***	0.057	-0.625***	-0.099*	
YEAR (ref: 2003): 2008	[-0.114, 0.243]	[-0.514, -0.102]	[-0.096, 0.250]	[-1.142, -0.287]	[-0.213, -0.006]	[-0.338, 0.644]	[-0.812, 0.341]	[-0.295, 0.657]	[-1.384, 0.307]	[-0.295, 0.130]	[-0.083, 0.245]	[-0.499, -0.109]	[-0.102, 0.215]	[-1.057, -0.192]	[-0.207, 0.009]	
VEAD (	0.026	-0.475***	0.136	-0.389*	-0.037	0.260	-0.384	0.064	0.051	-0.109	0.017	-0.437***	0.109	-0.254	-0.011	
YEAR (ref: 2003): 2013	[-0.152, 0.204]	[-0.678, -0.272]	[-0.035, 0.307]	[-0.827, 0.050]	[-0.150, 0.076]	[-0.228, 0.748]	[-0.956, 0.187]	[-0.408, 0.536]	[-0.779, 0.880]	[-0.306, 0.088]	[-0.146, 0.180]	[-0.629, -0.246]	[-0.047, 0.265]	[-0.686, 0.179]	[-0.130, 0.107]	
YEAR (ref: 2003): 2018	-0.189 <sup>**</sup>	-0.468***	0.342***	-1.296 <sup>***</sup>	-0.046	-0.027	-0.408	0.362	-1.422***	-0.186 <sup>*</sup>	-0.232***	-0.456***	0.363***	-1.065***	-0.012	
TEAR (161. 2003). 2010	[-0.374, -0.005]	[-0.684, -0.252]	[0.165, 0.519]	[-1.916, -0.676]	[-0.207, 0.115]	[-0.518, 0.464]	[-0.983, 0.167]	[-0.112, 0.836]	[-2.332, -0.511]	[-0.402, 0.029]	[-0.393, -0.072]	[-0.650, -0.263]	[0.207, 0.518]	[-1.660, -0.471]	[-0.174, 0.150]	
Constant	1.852***	-3.405***	-2.482***	3.574***	0.910***	1.715***	-3.476***	-2.522***	3.511***	0.966***	1.834***	-3.202***	-2.497***	3.689***	0.929***	
	[1.322, 2.382]	[-4.464, -2.346]	[-2.980, -1.984]	[2.722, 4.426]	[0.764, 1.055]	[1.024, 2.407]	[-4.657, -2.294]	[-3.182, -1.861]	[2.422, 4.599]	[0.730, 1.201]	[1.340, 2.328]	[-4.134, -2.269]	[-2.953, -2.040]	[2.816, 4.561]	[0.774, 1.085]	
Multilevel variance parameter: Level 1	0.353***	2.194***	0.151***	0.731***	-1.488***	0.351***	2.191***	0.151***	0.722***	-1.522***	0.380***	2.175***	0.172***	0.698***	-1.534***	
·	[0.170, 0.536]	[1.041, 3.348]	[0.067, 0.235]	[0.524, 0.938]	[-1.757, -1.219]	[0.169, 0.534]	[1.038, 3.343]	[0.067, 0.236]	[0.515, 0.929]	[-1.797, -1.246]	[0.188, 0.571]	[1.070, 3.279]	[0.080, 0.264]	[0.491, 0.905]	[-1.791, -1.277]	
Multilevel variance parameter: Level 2	0.256***	0.255***	0.337***	-0.047	-1.653***	0.254***	0.255***	0.334***	-0.057	-1.679*** [1.815_1.542]	0.266***	0.222***	0.321***	-0.073	-1.615***	
	[0.197, 0.316]	[0.183, 0.328]	[0.271, 0.403]	[-0.276, 0.181] 1.320***	[-1.789, -1.517] 0.088***	[0.195, 0.314]	[0.183, 0.328]	[0.269, 0.400]	[-0.287, 0.173] 1.319***	[-1.815, -1.542] 0.088***	[0.211, 0.322]	[0.162, 0.282]	[0.263, 0.378]	[-0.297, 0.151] 1.279***	[-1.740, -1.490] 0.083***	
Multilevel variance parameter: Residual				1.320 [1.190, 1.449]	[0.040, 0.137]				1.319 [1.190, 1.448]	[0.040, 0.137]				1.279 [1.150, 1.409]	[0.038, 0.129]	
Level 1 Observations (child)	34713	34713	34713	35019	36585	34713	34713	34713	35019	36585	45437	45437	45437	45839	47644	
Level 2 Observations (LGA)	757	757	757	757	758	757	757	757	757	758	761	761	761	761	762	
Level 3 Observations (state)	37	37	37	37	37	37	37	37	37	37	37	37	37	37	37	
Akaike Information Criterion	26186.547	17119.846	30165.878	192900.905	111038.932	26188.211	17125.583	30165.157	192869.798	111007.527	34345.877	21317.031	39462.966	248646.722	144047.955	
Prob. > $X^2$	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	

95% confidence intervals in brackets

Supplemental material

\* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01