Online Appendix A: Countries Included in the DID Analysis

Table A-1: countries included in the DID and descriptive statistics.

Country	MMR 1990	MMR 2013	Reducation in MMR	Intergrative PKO	1st generation PKO
Algeria	160	89	71	0	0
Angola	1400	460	940	1	0
Benin	600	340	260	0	0
Botswana	360	170	190	0	0
Burkina Faso	770	400	370	0	0
Burundi	1300	740	560	1	0
Cabo Verde	230	53	177	0	0
Cameroon	720	590	130	0	0
Central African Republic	1200	880	320	1	0
Chad	1700	980	720	1	1
Comoros	630	350	280	0	0
Congo	670	410	260	0	0
Côte d'Ivoire	740	720	20	1	0
Democratic Republic of the Congo	1000	730	270	1	0
Equatorial Guinea	1600	290	1310	0	0
Eritrea	1700	380	1320	0	1
Ethiopia	1400	420	980	0	1
Gabon	380	240	140	0	0
Gambia	710	430	280	0	0
Ghana	760	380	380	0	0
Guinea	1100	650	450	0	0
Guinea-Bissau	930	560	370	0	0
Kenya	490	400	90	0	0
Lesotho	720	490	230	0	0
Liberia	1200	640	560	1	0
Madagascar	740	440	300	0	0
Malawi	1100	510	590	0	0
Mali	1100	550	550	0	0
Mauritania	630	320	310	0	0
Mauritius	70	73	-3	0	0
Mozambique	1300	480	820	0	1
Namibia	320	130	190	0	1
Niger	1000	630	370	0	0
Nigeria	1200	560	640	0	0
Rwanda	1400	320	1080	0	0
Sao Tome and Principe	410	210	200	0	0
Senegal	530	320	210	0	0
Sierra Leone	2300	1100	1200	1	0
South Africa	150	140	10	0	0
Swaziland	550	310	240	0	0
Togo	660	450	210	0	0
Uganda	780	360	420	0	1
United Republic of Tanzania	910	410	500	0	0
Zambia	580	280	300	0	0
Zimbabwe	520	470	50	0	0

Online Appendix B: Robustness Checks for the DID Analysis

DID Analysis with 2 Time-periods: In robustness checks reported in this online appendix, we have included more control variables: a dummy variable *Conflict 1991-2012* for whether there was at least one armed conflict during 1991-2012 (years in between the pre- and post-treatment year) and a dummy variable *Pre-1990 conflict* for pre-1990 conflict history: whether there was at least one armed conflict between 1947 and 1989 for a given country.[1]

Moreover, there is often much variation in what a civil war entails in terms of the scale of destruction: sometimes a long and devastating war is followed by rapid post-war development, i.e., a "phoenix" effect (Organski and Kugler 1980). We therefore created a *Pre-1990 battle death variable* to account for pre-treatment period severity of civil armed conflicts. Using the PRIO Battle Deaths Dataset 3.0 (Lacina and Gleditsch 2005), this variable measures the cumulative number of pre-1990 battle deaths (soldiers and civilians killed in combat, in thousands) in state-based armed conflicts.[2] Table B-1 shows that including these additional variables did not change the main results. Note that in model specification 7 and 9, the p-values for the $D_{i,t}^{first\ gen}: PKO_{countries}^{first\ gen} \times Post\text{-}PKO\ period$ variable are 0.103 and 0.100 respectively. We have further limited the sample of countries to those that have ever experienced conflicts – therefore countries such as South Africa would be excluded from the analysis – so that we would have an even smaller sample to work with. The result, however, stays the same (Table B-2).

Moreover, peacekeeping might co-occur with other international assistance efforts. Such international efforts might also have an effect on maternal health in the absence of peacekeeping. Using data from the Aid Data project (Tierney et al. 2011), we included three foreign aid variables in robustness checks: *Aid: current* is the current commitment amount of aid for year 1990/2013; *Aid: pre-1990* measures the cumulative amount of aid commitment before 1990; *Aid: 1991-2012* is the cumulative aid commitment between 1991 and 2012.

Adding these aid variables does not change the main results (Table B-3): in model specification 7, 8 and 9, the p-values for the $D_{i,t}^{first\ gen}: PKO_{countries}^{first\ gen} \times Post\text{-}PKO\ period$ variable are 0.172, 0.101 and 0.110 respectively. Aid variables themselves are almost awlays negatively associated with maternal mortality rates; but such relationships are not always statiscally significant. Note one weakness of the aid data used is the fact that only the commitment amount of aid is available; a better measure would be to use the actual amountof disbursement of aid for country-years included in the analysis.

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[1] 1947 is the earliest year that the UCDP/PRIO Armed Conflict Dataset has data for Africa.
[2] Note that in the Battle Deaths data, there are observations that multiple countries are included as the location of the same observation: for example, both Ethiopia and Eretria are included as the location of a conflict in 1998 with a best estimated number of battle deaths of 10,000. In this case, we evenly divided the best estimated number of battle death and assigned them to all countries included in the location variable: for the example just mentioned, we assigned 5000 battle deaths to both Ethiopia and Eretria in 1998.

Table B-1: Estimated Interactive Effects of PKO (Treatment) and Post-PKO Period, robustness checks using more conflict variabls.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
				Dependent variable: Maternal mortality					
$PKO_{countries}^{all}$	446.250***	388.512***	467.786***						
	(112.503)	(112.374)	(112.762)						
$PKO_{countries}^{integrative}$				585.272***	541.372***	597.444***			
				(123.555)	(128.689)	(123.361)			
$PKO_{countries}^{first\ gen}$							10.468	28.627	55.499
							(151.364)	(148.909)	(154.451)
Post-PKO period	−249.596***	−255.565***	−271.806***	−240.773***	−243.844***	−253.203***	−240.310***	−251.939***	−263.018***
	(91.382)	(88.387)	(92.401)	(83.138)	(82.117)	(84.921)	(78.733)	(77.089)	(79.430)
$D_{i,t}^{all}$: $PKO_{countries}^{all}$× Post-PKO period	−345.884**	−344.945**	−338.768**						
	(156.202)	(151.181)	(154.667)						
$D_{i,t}^{integrative}$: $PKO_{countries}^{integrative}$× Post-PKO period				−342.008*	−340.279*	−341.176*			
				(182.259)	(180.169)	(181.360)			
$D_{i,t}^{first\ gen}$: $PKO_{countries}^{first\ gen}$× Post-PKO period							−314.201	−313.447*	−313.589
							(189.576)	(186.656)	(187.982)
GDP per capita	−0.059***	−0.045**	−0.058***	−0.043**	−0.038*	−0.042**	−0.037**	−0.033*	−0.040**
	(0.021)	(0.021)	(0.020)	(0.019)	(0.020)	(0.019)	(0.018)	(0.018)	(0.018)
Population	−5.133	−9.103	7.050	−4.767	−7.697	1.015	0.275	5.844	15.952
	(31.503)	(28.656)	(31.649)	(29.036)	(27.011)	(29.590)	(28.873)	(26.384)	(28.616)
Trade openness	0.589	0.704	0.803	0.977	1.036	1.098	0.896	0.933	0.970
	(1.222)	(1.180)	(1.216)	(1.129)	(1.112)	(1.127)	(1.088)	(1.069)	(1.080)
Urbanization	−3.504	−3.971	−2.513	−5.895**	−6.011**	−5.326*	−6.622**	−6.212**	−5.243*
	(2.706)	(2.600)	(2.799)	(2.613)	(2.540)	(2.736)	(2.662)	(2.508)	(2.717)
Ongoing conflict	87.009	25.755	137.537	195.568*	156.279	221.279*	216.589**	151.016	253.758**
	(99.520)	(100.372)	(107.582)	(108.023)	(112.773)	(112.446)	(103.141)	(112.290)	(107.994)
Pre-1990 conflict	−15.147			−18.926			31.246		
	(79.385)			(74.676)			(75.445)		

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Conflict 1991-2012		176.576^{**}			91.099			103.572	
		(83.322)			(80.969)			(74.982)	
Pre-1990 battle death			−1.165			−0.684			−1.062
			(0.983)			(0.964)			(1.009)
Constant	927.644^{*}	902.936^{*}	692.064	944.478^{*}	937.469^{*}	822.573	860.317^{*}	733.689	598.467
	(531.139)	(500.224)	(555.745)	(489.820)	(472.039)	(519.761)	(495.981)	(471.529)	(510.571)
Observations	78	78	78	68	68	68	65	65	65
R^2	0.552	0.579	0.560	0.608	0.616	0.611	0.566	0.580	0.574
Adjusted R^2	0.492	0.523	0.502	0.547	0.556	0.551	0.496	0.511	0.504

Note: $^{*}p<0.1$; $^{**}p<0.05$; $^{***}p<0.01$

Table B-2: Estimated Interactive Effects of PKO (Treatment) and Post-PKO Period, only using countries that have ever experienced an armed conflict.

	Maternal Mortality Rates (MMR)		
	(1)	(2)	(3)
$PKO_{countries}^{all}$	534.919***		
	(101.644)		
$PKO_{countries}^{integrative}$		558.881***	
		(116.819)	
$PKO_{countries}^{first\ gen}$			310.616**
			(137.566)
Post-PKO period	−227.955**	−224.919**	−232.815***
	(94.455)	(92.319)	(81.126)
$D_{i,t}^{all}: PKO_{countries}^{all} \times$ Post-PKO period	−370.356**		
	(145.397)		
$D_{i,t}^{integrative}: PKO_{countries}^{integrative} \times$ Post-PKO period		−328.866*	
		(172.477)	
$D_{i,t}^{first\ gen}: PKO_{countries}^{first\ gen} \times$ Post-PKO period			−413.799**
			(185.702)
GDP per capita	−0.075**	−0.066**	−0.061**
	(0.033)	(0.033)	(0.029)
Population	−49.989	−34.541	−19.674
	(31.145)	(31.230)	(28.375)
Trade openness	−1.260	−1.198	−1.177
	(1.324)	(1.305)	(1.197)
Urbanization	−0.722	−2.295	−2.745
	(3.171)	(3.291)	(3.044)
Constant	1,698.570***	1,492.941***	1,267.682**
	(537.096)	(533.187)	(496.246)
Observations	62	54	48
Adjusted R^2	0.588	0.571	0.559

Note: difference in differences (DID) models with two time-periods – 1990 being the pre-treatment and 2013 the post-treatment period. The treatment is whether there was any peacekeeping operation (both first generation and integrative types) between 1990 and 2013 for model 1; in model 2, the treatment is integrative type of PKO and the control group are countries without PKO, so we exclude countries with first generation PKO from the analysis; in model 3, the treatment is first generation PKO and the control group are countries without PKO – we exclude countries with integrative PKO from the analysis. *p<0.1; **p<0.05; ***p<0.01.

Table B-3 Estimated Interactive Effects of PKO (Treatment) and Post-PKO Period, robustness checks using foreign aid variabls.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
				Dependent variable: Maternal mortality					
$PKO_{countries}^{all}$	410.721***	426.682***	442.822***						
	(109.574)	(113.966)	(110.115)						
$PKO_{countries}^{integrative}$				573.928***	567.513***	580.014***			
				(121.764)	(123.907)	(124.093)			
$PKO_{countries}^{first\ gen}$							−3.679	11.297	−12.830
							(149.957)	(152.019)	(155.786)
Post-PKO period	−219.944**	−262.396***	−288.211***	−221.188***	−252.134***	−250.762***	−227.432***	−247.670***	−228.392***
	(88.773)	(91.929)	(92.142)	(82.728)	(83.286)	(86.434)	(78.433)	(79.368)	(81.201)
$D_{i,t}^{all}: PKO_{countries}^{all} \times$ Post-PKO period	−332.862**	−361.086**	−363.324**						
	(150.571)	(155.888)	(153.028)						
$D_{i,t}^{integrative}: PKO_{countries}^{integrative} \times$ Post-PKO period				−366.981**	−359.896*	−351.579*			
				(180.123)	(181.256)	(182.355)			
$D_{i,t}^{first\ gen}: PKO_{countries}^{first\ gen} \times$ Post-PKO period							−264.840	−316.174	−307.342
							(191.570)	(190.082)	(189.244)
GDP per capita	−0.063***	−0.063***	−0.059***	−0.046**	−0.047**	−0.043**	−0.041**	−0.040**	−0.038**
	(0.020)	(0.021)	(0.020)	(0.019)	(0.020)	(0.019)	(0.018)	(0.018)	(0.018)
Population	51.894	22.930	63.557	26.431	22.314	12.815	33.042	11.440	−22.582
	(38.519)	(44.227)	(50.013)	(36.860)	(40.471)	(50.741)	(35.203)	(39.053)	(47.392)
Trade openness	1.070	0.806	0.897	1.198	1.181	1.057	1.014	0.901	0.787
	(1.190)	(1.229)	(1.203)	(1.116)	(1.129)	(1.127)	(1.079)	(1.101)	(1.086)
Ongoing conflict	119.976	84.956	116.338	204.479*	194.235*	193.425*	232.498**	217.858**	210.717**
	(96.951)	(98.799)	(98.830)	(106.314)	(106.974)	(107.958)	(102.687)	(103.272)	(103.258)
Urbanization	−3.952	−3.260	−3.060	−6.122**	−5.722**	−5.742**	−6.494**	−6.219**	−6.690**
	(2.586)	(2.684)	(2.637)	(2.530)	(2.564)	(2.630)	(2.521)	(2.572)	(2.600)
Aid: current	−0.134**			−0.079			−0.068		
	(0.059)			(0.059)			(0.056)		
Aid: pre-1990		−0.008			−0.008			−0.002	
		(0.008)			(0.008)			(0.007)	

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Aid: 1991-2012			-0.008^{*}			-0.002			0.003
			(0.004)			(0.005)			(0.004)
Constant	115.555	534.413	-46.813	502.227	566.868	691.604	410.873	710.004	1,187.611
	(617.788)	(687.341)	(765.665)	(586.761)	(627.772)	(766.448)	(569.901)	(618.177)	(727.594)
Observations	78	78	78	68	68	68	65	65	65
R^2	0.583	0.557	0.570	0.619	0.614	0.609	0.577	0.566	0.569
Adjusted R^2	0.528	0.498	0.513	0.560	0.554	0.548	0.507	0.494	0.498

Note: $^{*}p<0.1;$ $^{**}p<0.05;$ $^{***}p<0.01$

Checking the Parallel Trend Assumption Using Leads and Lags: We have followed recent publications in economics (e.g., Autor 2003) and formally tested the parallel trend assumption by including interactions between the so-called leads and lags with the DID indicator in a panel DID setting. We find strong evidence for the parallel trend assumption.

More specifically, a formal test for the parallel trend assumption is to interact the DID treatment variable with time dummies: here the dummy variables indicate whether for a country included in the analysis, this year is one year (t-1) before the PKO started, two year (t-2) before PKO, three year (t-3), …, so on and so forth, for years before PKO – their interactions with the DID indicator are often called *leads*; for years after PKO, whether this is one year (t+1) after a PKO started, two year (t+2) after PKO, three year (t+3) after, …, so on and so forth – their interactions with the DID indicator are *lags*.

The idea is that one can include the interactions of the time dummies and the treatment indicator for all the periods except one interaction for the most distant pre-treatment period due to the dummy variable trap. Now all the other interactions are expressed relative to the omitted period which serves as the baseline. If the outcome trends between treatment and control group are the same, then coefficients associated with the *leads* should all be insignificant, i.e., the difference in differences is not significantly different between the two groups in the pre-treatment periods. An attractive feature of this test is that also the interactions of the time dummies after the treatment with the treatment indicator – that is, the *lags*, is informative as they show whether the treatment effect fades out over time, stays constant, or even increases.

We have conducted such as a test using interaction terms between these year dummy variables and the DID indicator. Since we have a panel between 1990 and 2013, we can have very long leads and lags. Indeed, Table B-4 reports our tests with leads as far as 15 years before PKO started and lags also as far as 15 years after the first year PKO started. For example, *PKO leads: t-15* captures the interaction term between the DID indicator and a year dummy variable indicating that this is 15 years before PKO; *PKO lags: t+15* captures the interaction term between the DID indicator and a dummy variable that is 15 years after PKO first started.

If the parallel trend assumption holds, all the coefficients for the leads should not be statistically different from 0 – this is what we find in Table B-4 of this online appendix. Moreover, the estimates on the coefficients associated on the lags (note *PKO lags: t0* indicates the year in which a PKO started) – that is, *PKO lags: t+1, PKO lags: t+2, PKO lags: t+3, …, PKO lags: t+15* – are all negative, indicating PKO reduces MMR; but only after *PKO lags: t+2*, they achive statitical significance level p <=.10, which suggests the effect of PKO on reducing MMR only kicks after second year after a PKO was deployed.

Table B-4: Testing the parallel trend assumption using leads and lags of PKOs based on panel data, 1990-2013.

	Maternal Mortality Rates (MMR)	
	(1)	(2)
Peace Keeping Leads and Lags		
PKO leads: *t-15*	0.706	10.483
	(140.259)	(139.760)
PKO leads: *t-14*	24.151	15.008
	(115.554)	(115.237)
PKO leads: *t-13*	−45.795	−54.802
	(105.521)	(105.211)
PKO leads: *t-12*	−41.994	−47.104

	(106.027)	(105.712)
PKO leads: *t-11*	−48.687	−50.035
	(106.559)	(106.204)
PKO leads: *t*-10	−0.574	−6.166
	(101.233)	(100.904)
PKO leads: *t*-9	−64.391	−67.456
	(97.921)	(97.575)
PKO leads: *t*-8	−14.277	−77.848
	(93.482)	(94.234)
PKO leads: *t*-7	−31.777	−33.330
	(93.638)	(93.370)
PKO leads: *t*-6	−46.292	−46.374
	(94.114)	(93.857)
PKO leads: *t*-5	−59.111	−58.711
	(94.169)	(93.858)
PKO leads: *t-4*	−73.142	−71.600
	(94.206)	(93.882)
PKO leads: *t*-3	−99.064	−95.371
	(91.549)	(91.214)
PKO leads: *t*-2	−100.965	−94.475
	(91.605)	(91.273)
PKO leads: *t*-1	−132.081	−125.079
	(90.963)	(90.638)
PKO lags: *t0*	−133.011	−127.718
	(91.033)	(90.701)
PKO lags: *t+1*	−141.323	−132.701
	(91.355)	(91.032)
PKO lags: *t+2*	−159.023*	−153.515*
	(91.415)	(91.082)
PKO lags: *t+3*	−188.150**	−182.331**
	(91.497)	(91.163)
PKO lags: *t+4*	−217.636**	−211.215**
	(91.532)	(91.200)
PKO lags: *t+5*	−240.403***	−235.725***
	(91.580)	(91.247)
PKO lags: *t+6*	−265.217***	−261.235***
	(91.625)	(91.294)
PKO lags: *t+7*	−278.822***	−274.460***
	(92.825)	(92.491)
PKO lags: *t+8*	−293.419***	−288.622***
	(92.875)	(92.541)
PKO lags: *t+9*	−307.237***	−302.450***
	(92.911)	(92.579)
PKO lags: *t+10*	−333.372***	−328.722***
	(93.660)	(93.328)
PKO lags: *t+11*	−378.132***	−374.247***
	(94.491)	(94.165)
PKO lags: *t+12*	−397.626***	−391.995***
	(94.535)	(94.204)
PKO lags: *t+13*	−411.576***	−406.079***
	(94.572)	(94.244)
PKO lags: *t+14*	−427.554***	−421.701***
	(96.627)	(96.283)
PKO lags: *t+15*	−435.041***	−429.020***

	(90.409)	(90.095)
GDP per capita	−0.036***	−0.037***
	(0.005)	(0.005)
Ongoing conflict	39.980*	37.281*
	(20.380)	(20.691)
Polity		−3.316**
		(1.289)
Constant	933.981***	905.552***
	(90.825)	(90.817)
Fixed country effects	Yes	Yes
Fixed year effects	Yes	Yes
Observations	1,068	1,053
Adjusted R^2	0.925	0.925

Note: difference in differences (DID) models with panel data – 1990-2013. The treatment is whether there was all peacekeeping operation (both first generation and integrative types). *p<0.1; **p<0.05; ***p<0.01.

Online Appendix C: Robustness Checks for the Matching Analysis

Using Aid Data: In this online appendix, we also reported regression results based on matched samples after including grid-cell level foreign aid as a pre-treatment covariate and a control variable. We hope this can partly address the concern that peacekeeping might co-occur with other international assistance efforts which might also have an effect on maternal health. Note that geo-coding foreign aid projects is still an ongoing research effort: for example, the Aid Data project has coded all projects approved from 1995-2014 of the World Bank IBRD/IDA lending lines (World Bank IBRD-IDA, Level 1, Version 1.4.1).[3] Being probably the most comprehensive geo-coded aid data for Africa, it does not include aid projects from other international institutions and from donor countries directly.

Another concern using this data set for grid cell level analysis is that for an aid project that involves multiple locations and years of implementation, one lacks information on how the commitment and disbursement amounts are distributed between different locations and over time. We have to evenly divide the commitment and disbursement amounts to all location-years. For these empirical limitations, we only report the results in this online appendix. More specifically, we create a variable *Aid: commitment* which is the grid-cell level cumulative amount of aid commitment before peace keeping was first depployed in a location; we have also used the disturment amount which have more zero-value observations, but essentially give simialr results (no effect for aid and positive effects for PKO).

After controlling for grid-cell level pre-peace keeping cumulative aid, we still find that peace keeping increases maternal health services and women's education. Note that the *PKO: 25km buffer* variable is the PKO treatment defined as within a 25 km buffer zone – the same PKO variable we used in Table 5 and 6 in the main text. In the third model specification of Table C-1, the p-value for the *PKO: 25km buffer* variable is 0.13, similar to the estimate in the second model specifcation in Table 5 of the main text.

Dropping Democratic Republic of Congo of 2007 and Liberia of 2007: The DHS data tells us whether respondents have used health services; however, we need to make sure that female respondents used these services after a PKO was deployed.

The DHS questions on "m1: tetanus injection" and "m14: antenatal care" that we used sampled mothers age 15-49 and with at least a live birth in the *five years* preceding the survey, asking the number of tetanus toxoid injections and the number of antenatal visits during the pregnancy for the last live birth. In other words, information on tetanus injection and antenatal visits is for the period of five years preceding the survey: for example, if a survey was conducted in 2013, the information on tetanus injection/antenatal care is for 2009-2013.

The subnational level DHS data that we used are Democratic Republic of Congo of 2007 and 2013 – therefore capturing maternal care for the 2003-2007 and 2009-2013 periods. The subnational level data for PKO locations cover the period of 1999-2006 for Democratic Republic of Congo. There is an overlap between PKO locations data (1999-2006) and the 2007 Democratic Republic of Congo DHS data that measures maternal care for 2003-2007, which raises the question whether "*female respondents used these services even before PKO was authorized*." But the time period for the PKO locations data (1999-2006) definitely precedes the 2013 round of the DHS that measures maternal care of 2009-2013. The safest strategy then is to conduct a robustness analysis only using 2013 round of the DHS data for Democratic Republic of Congo, that is, dropping the 2007 round DHS data.

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[3] https://github.com/KAPPS-/public_datasets/raw/master/geocoded/WorldBank_GeocodedResearchRelease_Level1_v1.4.1.zip, accessed October 25, 2016.

The case of Liberia is very similar: the subnational level DHS data we used are from 2007 and 2013 that measure maternal care for 2003-2007 and 2009-2013 respectively. The subnational level data for PKO locations cover the period of 2003-2006; there is an overlap between PKO locations data (2003-2006) and the 2007 DHS data that measures maternal care for 2003-2007. However, the PKO locations data (2003-2006) does not overlap with the 2013 round of the DHS that measures maternal care of 2009-2013. The safest strategy is to conduct a robustness analysis only using 2013 round of the DHS data for in the case of Liberia.

The case of Cote d'Ivoire is less complicated: the subnational level DHS data is from 2011 that measures maternal care for 2007-2011. The subnational level data for PKO locations cover the period of 2004-2006: there is no overlap between PKO locations data (2004-2006) and the 2011 DHS data that measures maternal care for 2007-2011.

Therefore, in this online appendix, we conducted new robustness checks only using DHS data for Democratic Republic of Congo of 2013, Liberia of 2013, and Cote d'Ivoire of 2011. In other words, we dropped observations from Democratic Republic of Congo of 2007 and Liberia of 2007. Now we have fewer observations included in the matching analysis, but we still see significant effects of PKO presence on tetanus injection and antenatal care (as well as in education levels and years of education). The results are presented in Table C-3 of the online appendix.[4]

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[4] The p-value for the PKO variable in the second model specification is 0.10.

Table C-1: OLS estimates on the matched sample for maternal health variables.

	m1: tetanus injection	m14: antenatal care	m1: tetanus injection	m14: antenatal care
PKO	4.342**	6.338***		
	(2.189)	(1.728)		
PKO: 25km buffer			2.786	4.687***
			(1.864)	(1.508)
Distance to capital	−0.009***	−0.006***	−0.009***	−0.006***
	(0.002)	(0.002)	(0.002)	(0.002)
Urbanization	0.334	0.082	0.583	0.382
	(0.391)	(0.308)	(0.385)	(0.312)
Time to urban	−0.026***	−0.012*	−0.024***	−0.010**
	(0.008)	(0.006)	(0.005)	(0.004)
Mountain area	−8.669**	−1.279	−3.345	2.312
	(3.932)	(3.104)	(3.445)	(2.786)
Conflict zone	−4.583*	−2.189	−3.821*	−1.542
	(2.455)	(1.938)	(2.017)	(1.631)
Population	−0.00000	−0.00000	−0.00000	−0.00000
	(0.00000)	(0.00000)	(0.00000)	(0.00000)
GDP per capita	0.003	0.002	0.003	0.002
	(0.003)	(0.002)	(0.002)	(0.002)
Aid: commitment	−0.028	0.094	−0.026	0.113
	(0.165)	(0.131)	(0.170)	(0.138)
Constant	90.073***	95.010***	86.606***	92.707***
	(4.134)	(3.263)	(3.323)	(2.687)
Observations	304	304	518	518
R^2	0.226	0.146	0.171	0.107
Adjusted R^2	0.194	0.110	0.151	0.086

Note: $^*p<0.1;$ $^{**}p<0.05;$ $^{***}p<0.01$

Table C-2: OLS estimates on the matched sample for education outcome variables.

	v106n: education levels	v107n: years of education	v106n: education levels	v107n: years of education
PKO	0.159***	0.795***		
	(0.047)	(0.238)		
PKO: 25km buffer			0.164***	0.879***
			(0.038)	(0.196)
Distance to capital	−0.0002***	−0.001***	−0.0002***	−0.001***
	(0.00005)	(0.0002)	(0.00004)	(0.0002)
Urbanization	0.038***	0.209***	0.046***	0.246***
	(0.008)	(0.043)	(0.008)	(0.040)
Time to urban	−0.0003	−0.001	−0.0001	−0.001
	(0.0002)	(0.001)	(0.0001)	(0.001)
Mountain area	−0.404***	−1.855***	−0.281***	−1.298***
	(0.084)	(0.428)	(0.071)	(0.361)
Conflict zone	0.024	0.187	0.028	0.169
	(0.053)	(0.267)	(0.042)	(0.212)
Population	−0.00000**	−0.00000**	−0.00000***	−0.00000**
	(0.00000)	(0.00000)	(0.00000)	(0.00000)
GDP per capita	0.0001*	0.001*	0.0001**	0.0004*
	(0.0001)	(0.0003)	(0.0001)	(0.0003)
Aid: commitment	−0.001	−0.013	−0.002	−0.015
	(0.004)	(0.018)	(0.004)	(0.018)
Constant	1.244***	5.375***	1.177***	5.108***
	(0.089)	(0.450)	(0.069)	(0.349)
Observations	304	304	518	518
R^2	0.538	0.486	0.479	0.430
Adjusted R^2	0.519	0.465	0.467	0.416

Note: *p<0.1; **p<0.05; ***p<0.01

Table C-3: Results from regression analyses based on matched samples after droping observations from Democratic Republic of Congo of 2007 and Liberia of 2007.

	m1: tetanus injection		m14: antenatal care		v106n: education levels		v107n: years of education	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
PKO	4.435*	4.187	5.623***	5.554***	0.132**	0.115**	0.696**	0.608**
	(2.527)	(2.534)	(2.023)	(2.035)	(0.058)	(0.057)	(0.293)	(0.284)
Distance to capital	−0.009***	−0.009***	−0.008***	−0.008***	−0.0002***	−0.0002***	−0.001***	−0.001***
	(0.003)	(0.003)	(0.002)	(0.002)	(0.0001)	(0.0001)	(0.0003)	(0.0003)
Urbanization		0.507		0.141		0.036***		0.180***
		(0.443)		(0.356)		(0.010)		(0.050)
Time to urban	−0.014	−0.012	−0.005	−0.004	−0.0004*	−0.0003	−0.002**	−0.002
	(0.009)	(0.009)	(0.007)	(0.008)	(0.0002)	(0.0002)	(0.001)	(0.001)
Mountain area	−5.321	−4.508	4.065	4.290	−0.434***	−0.377***	−2.201***	−1.913***
	(4.875)	(4.922)	(3.903)	(3.953)	(0.113)	(0.110)	(0.564)	(0.553)
Conflict zone	−2.253	−1.727	−1.752	−1.606	0.038	0.075	0.222	0.408
	(2.635)	(2.672)	(2.109)	(2.146)	(0.061)	(0.060)	(0.305)	(0.300)
Population	−0.0000	−0.0000	0.0000	−0.0000	0.0000	−0.0000*	0.0000*	−0.0000
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
GDP per capita	0.004	0.005	0.002	0.002	0.0001	0.0001	0.0003	0.0005
	(0.003)	(0.003)	(0.003)	(0.003)	(0.0001)	(0.0001)	(0.0004)	(0.0004)
Intercept	86.125***	84.967***	94.169***	93.847***	1.488***	1.407***	6.729***	6.318***
	(4.661)	(4.766)	(3.732)	(3.828)	(0.108)	(0.107)	(0.540)	(0.535)
Observations	194	194	194	194	194	194	194	194
Adjusted R^2	0.224	0.226	0.125	0.121	0.501	0.531	0.444	0.478

Note: Country and year fixed effects estimated not reported; *p<0.1; **p<0.05; ***p<0.01.