SOCIAL CAPITAL AND THE EFFECTIVENESS OF FOREIGN AID TO THE HEALTH SECTOR

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Theory

- Theoretically, linking beneficiary participation and aid effectiveness follows principal-agent-theory claiming that an active citizenry can make public institutions more responsive to citizen's needs and therefore more accountable for their actions. In practice, participation concerns the design or planning, construction, operation and management as well as monitoring & evaluation of development projects.

- What determines collective action?
    - Apart from specific **characteristics of the project** and the **implementing agency** the success of collective action depends on:
        - ability of a community to act collectively to make decision common to the group, including operational rules of groups regarding use, including entry and exit rules
        - external decision-making arrangements, including bureaucratic and legislative rules
    - Social capital theory suggests that „(...) *features of social organization, such as trust, norms, and networks [that] can improve the efficiency of society by facilitating coordinated actions"*(Putnam et al. 1993)
    - That is, high levels of social capital are likely to facilitate cooperation by lowering the cost of collective action.

LITERATURE ON SOCIAL ACCOUNTABILITY

- Gaventa/Barrett (2012) provide evidence that **local associations** is the most successful type of citizen participation in development projects because membership effectively contributed to responsive and accountable states in the majority of case studies. The second most effective type of citizen engagement increasing government responsiveness are **social movements** (Isham et al. 1995).

- However, these effects are moderated by the level of democratic institutions (Burnside/Dollar 2004) and the level of decentralization.

- Rocha Menorcal/Sharma (2008) & Mansuri/Rao (2013) provide further (case study) evidence on the role of decentralization. They argue that **increasing financial resources** to local governments and **strengthening the capacities of local officials** enhances the ability of local governments to **respond to citizens' needs**, because citizens can communicate their preferences and needs to elected officials and monitor their performance more closely. That is, decentralisation „**brings governments closer to the people"** and makes it more accountable.
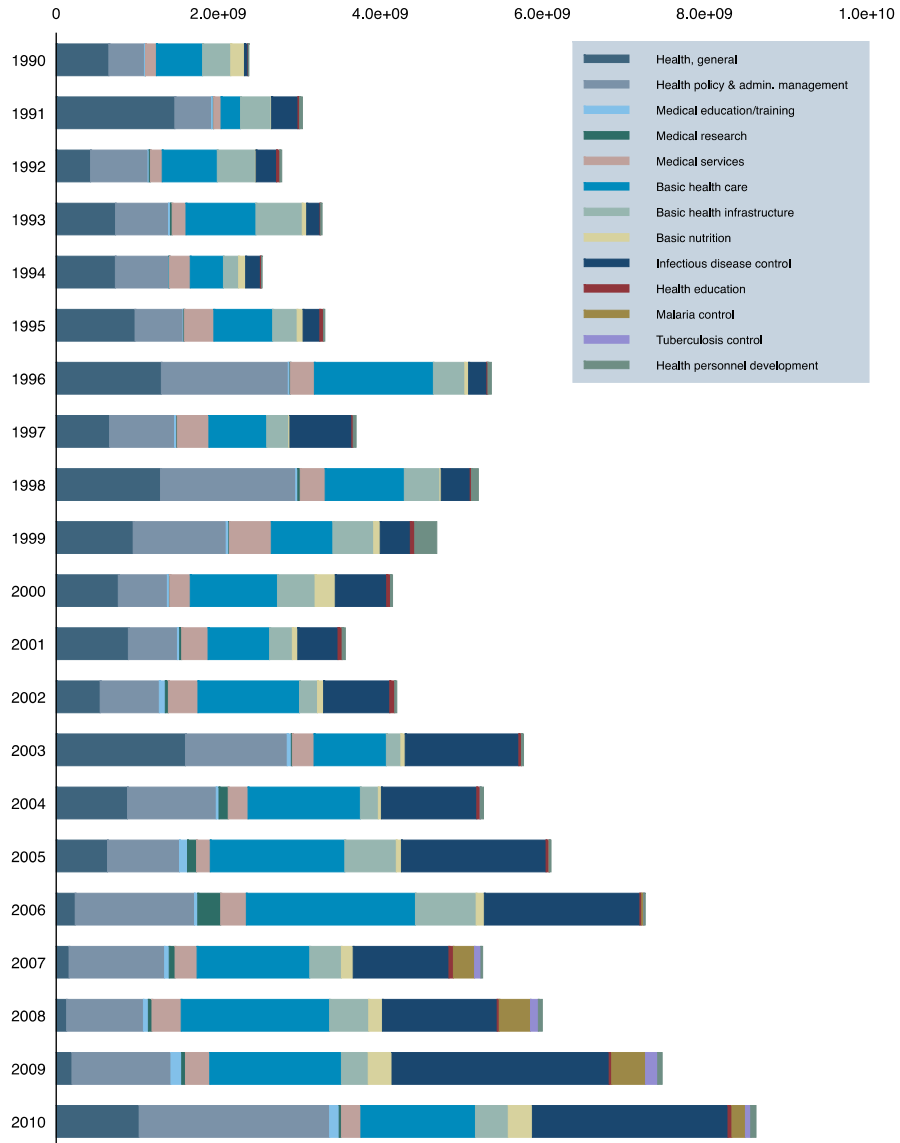
HYPOTHESES
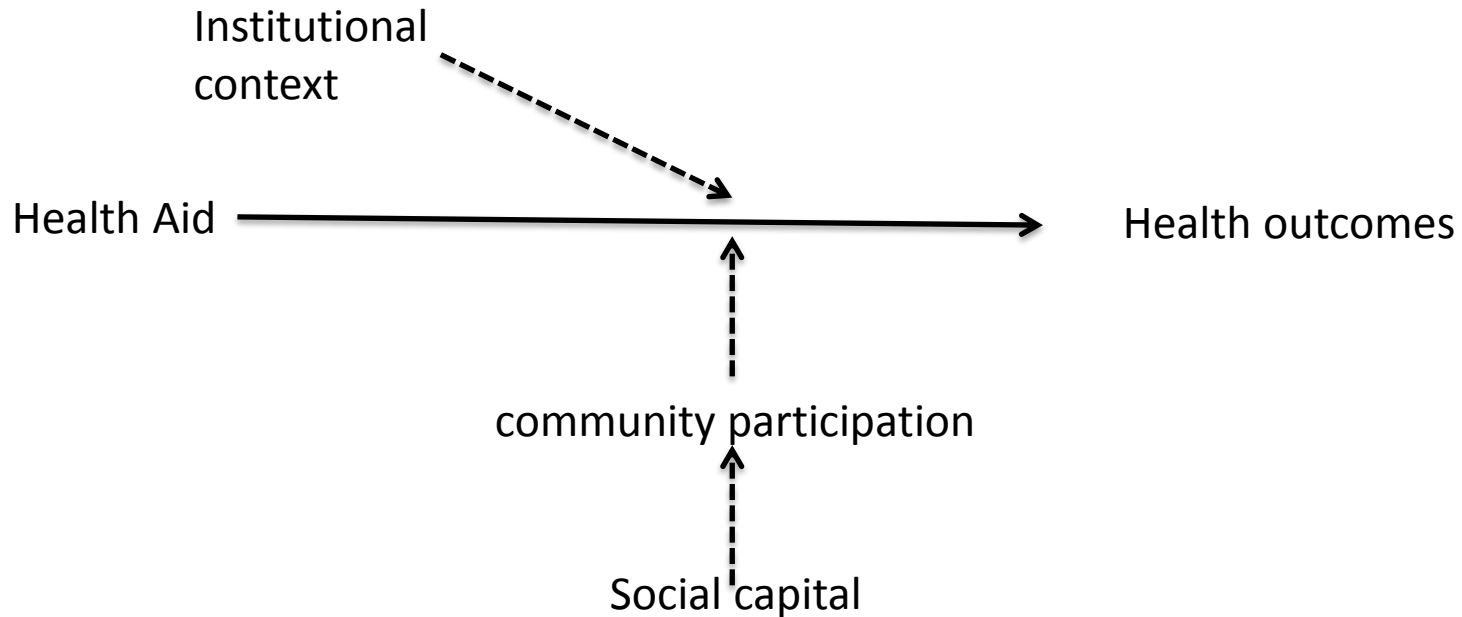
- Health aid is more effective in countries with high levels of social capital.
- Health aid is more effective in countries with high levels of social capital and high levels of „good governance".
- Health aid is more effective in countries with high levels of social capital and high levels of decentralization.
- Health aid is more effective in countries with high levels of social capital and more inclusive political institutions.
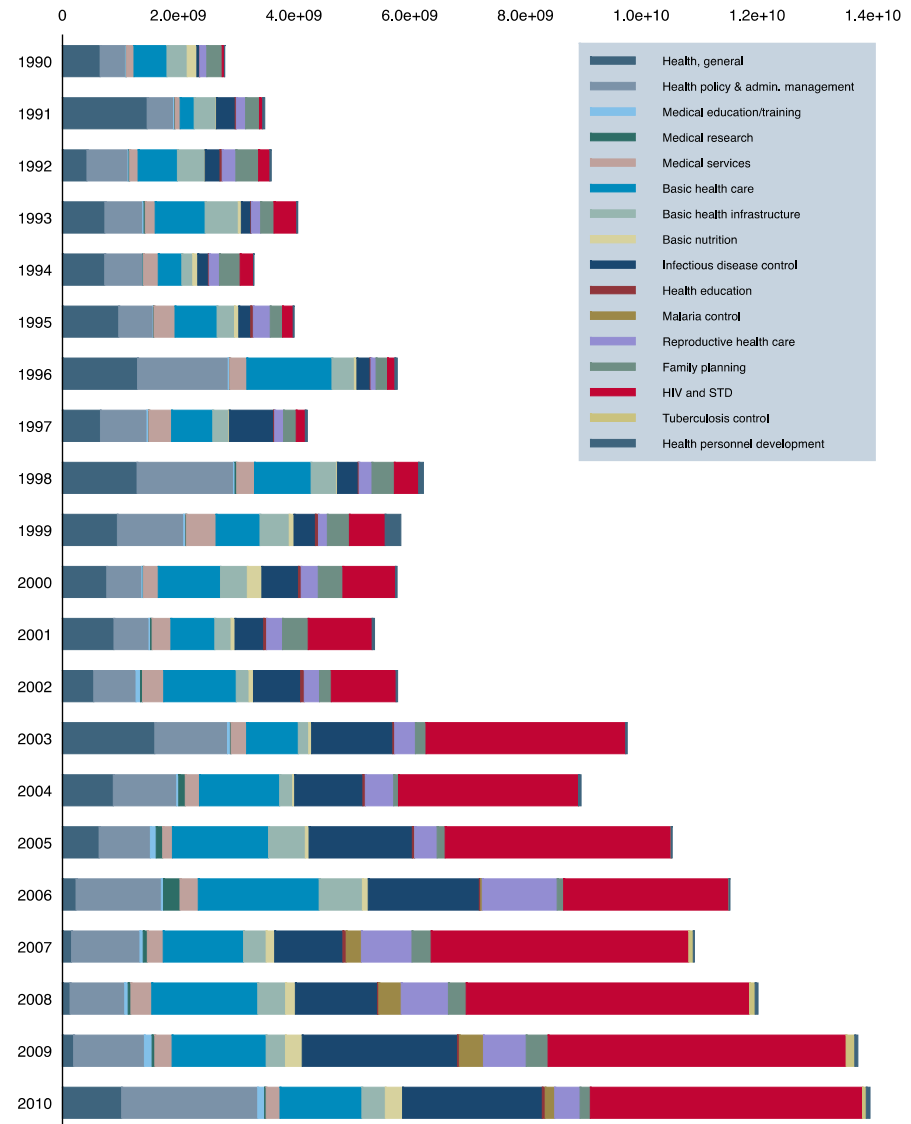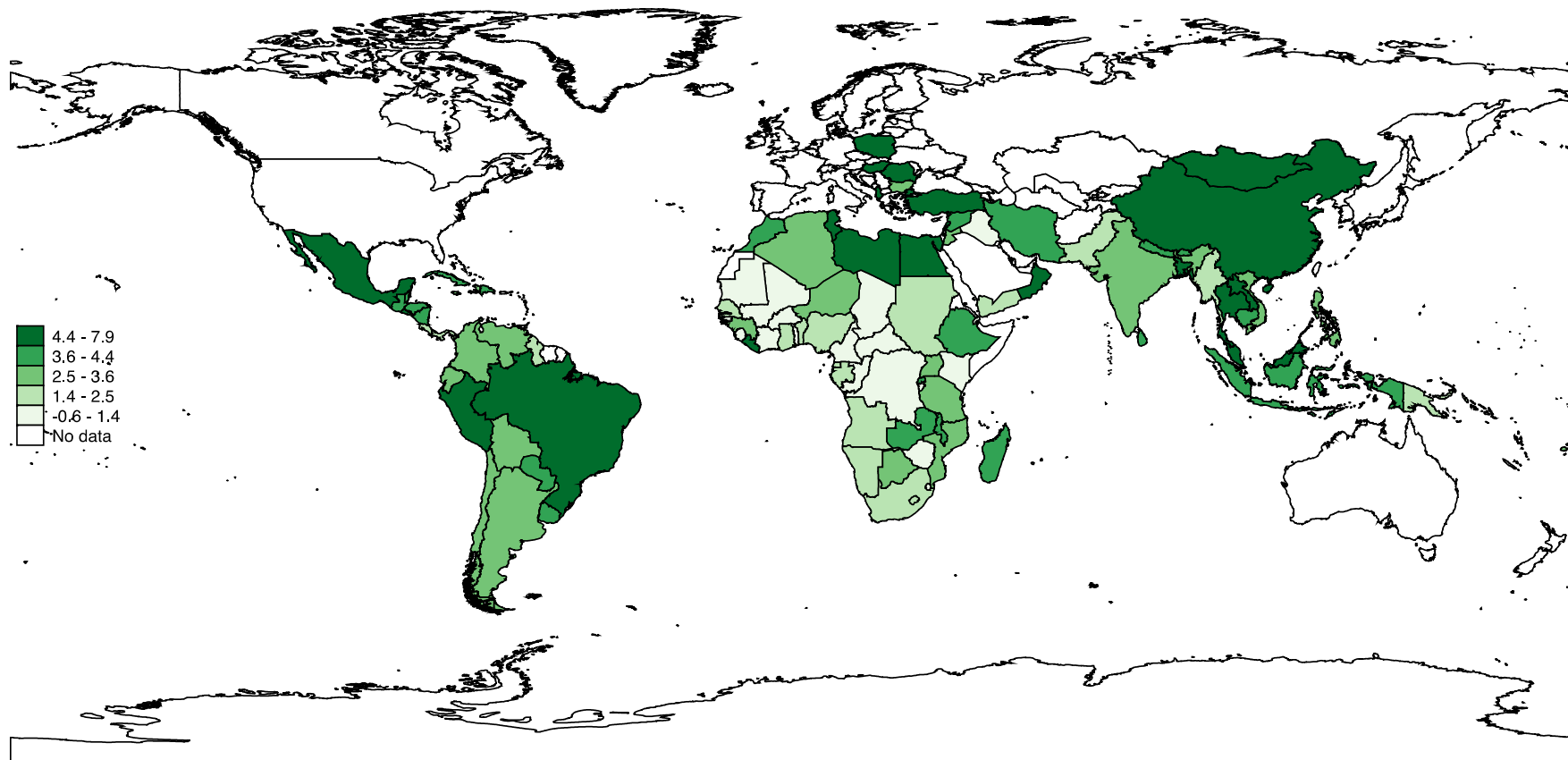
DATA AND METHODS

HEALTH AID BY PURPOSE

Health Aid by purpose

Legend:
- Health, general
- Health policy & admin. management
- Medical education/training
- Medical research
- Medical services
- Basic health care
- Basic health infrastructure
- Basic nutrition
- Infectious disease control
- Health education
- Malaria control
- Tuberculosis control
- Health personnel development

Health Aid by purpose including HIV, familiy planning and reproductive health care

Legend:
- Health, general
- Health policy & admin. management
- Medical education/training
- Medical research
- Medical services
- Basic health care
- Basic health infrastructure
- Basic nutrition
- Infectious disease control
- Health education
- Malaria control
- Reproductive health care
- Family planning
- HIV and STD
- Tuberculosis control
- Health personnel development

AVERAGE ANNUAL RATE OF DECLINE IN INFANT MORTALITY (AARD)
1990 - 2011 IN %

■	4.4 - 7.9
■	3.6 - 4.4
■	2.5 - 3.6
■	1.4 - 2.5
□	-0.6 - 1.4
□	No data

HOW TO MEASURE SOCIAL CAPITAL

Social capital is defined as a society's level of trust and networks as well as the degree of inclusiveness and elite-challenging action.

Indices of Social Development (2013) → latent variable approach (Dulal etal. 2011)

- **civic activism** (30): covers the importance of an informed and aware citizenry through access to media, citizens' capacity to express and exercise their views to influence government priorities or governance processes through actions, such as protests and petitions as well as the density of international organizations

- **clubs and associations** (41): reflects a community's bonding ties, which can provide protection against material hardship and reduce risk and uncertainty, by relying on intracommunity ties, such as the assistance of family, friends or neighbours

- **interpersonal trust** (39) trust and safety, which combines generalized trust with the trustworthiness of others (safety). Trust refers to the underlying norm of reciprocity that facilitates exchanges between community members, and enables communities to resolve collective action problems (Foa/Tanner2011)

- **gender equality** (22): measures gender related differences in education and occupational employment as well as womens social and economic rights and gender norms
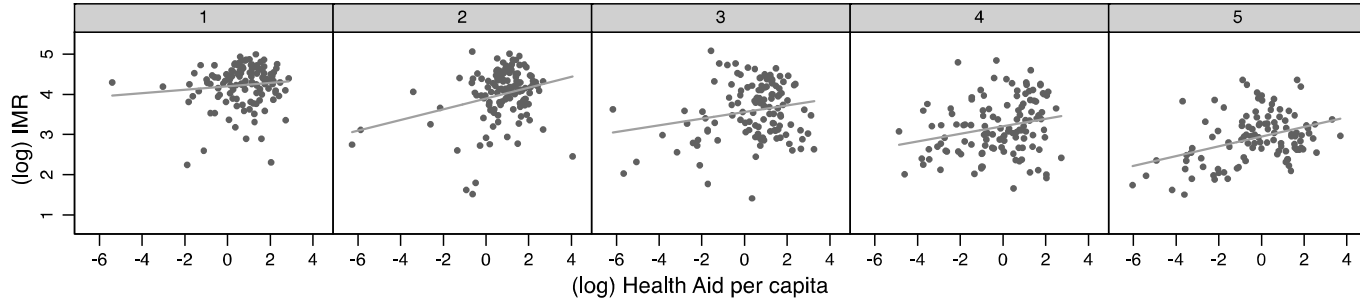
MODEL & ESTIMATION METHODS

$$y_{it} = \alpha_t + \mu_i + \beta_1 AID_{it} + \beta_2 SC_{it} + \beta_3 AID_{it} * SC_{it} + \beta_4 X'_{it} + \varepsilon_{it} \qquad (1)$$
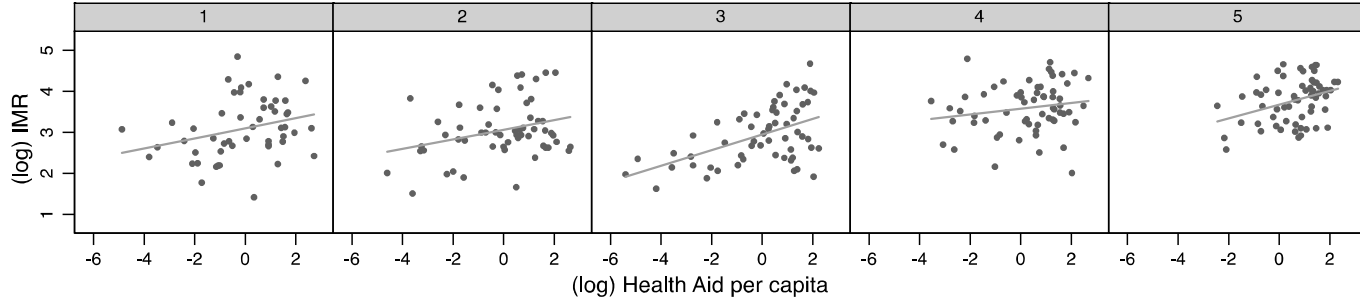
- OLS-LDV (Beck/Katz 1995)
- Difference-GMM & System-GMM (Arellano/Bond 1991)

- alternative estimation methods
  - static panel data models
    - Fixed Effects FE
    - Random Effects (RE)
    - Random coefficient models (RCM)
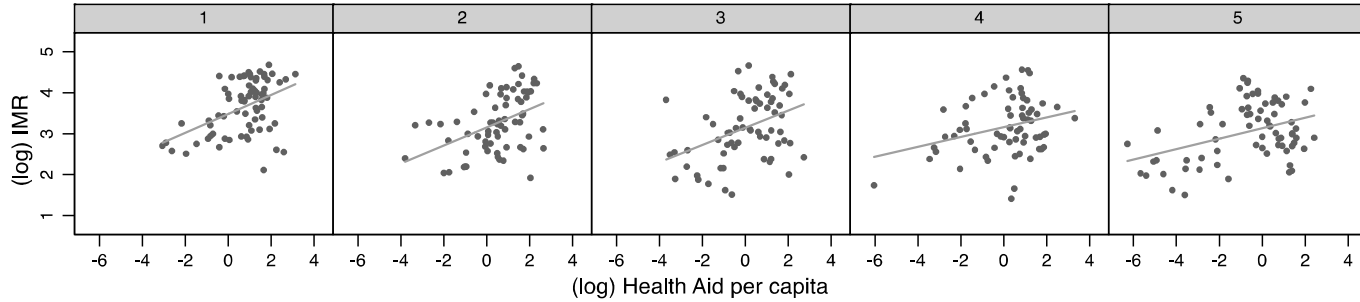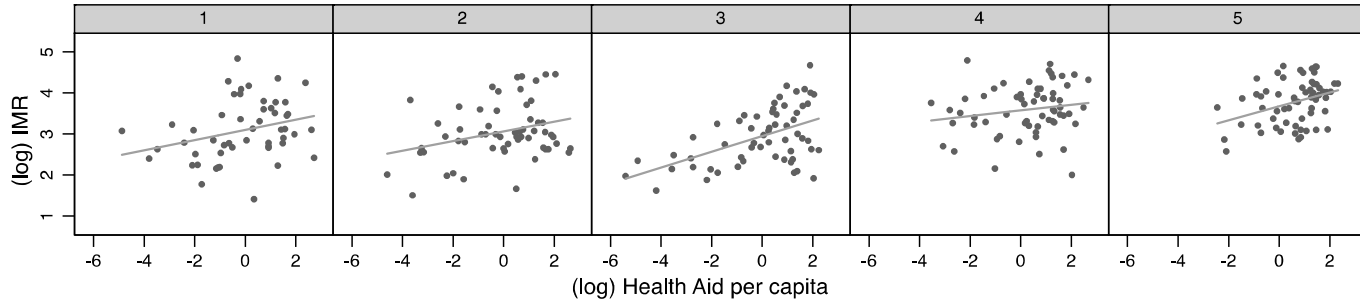 - dynamic panel data models
    - FE-LDV
    - RE-LDV

FINDINGS

Scatterplot by 5 quantiles of CIVIC
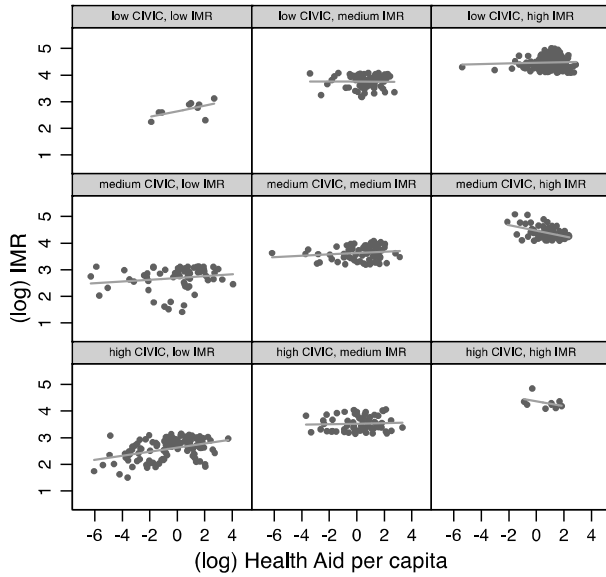
Scatterplot by 5 quantiles of CLUBS
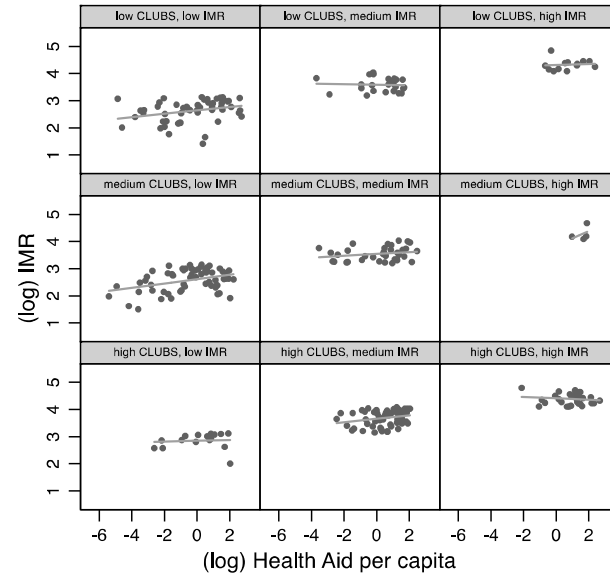
Scatterplot by 5 quantiles of TRUST
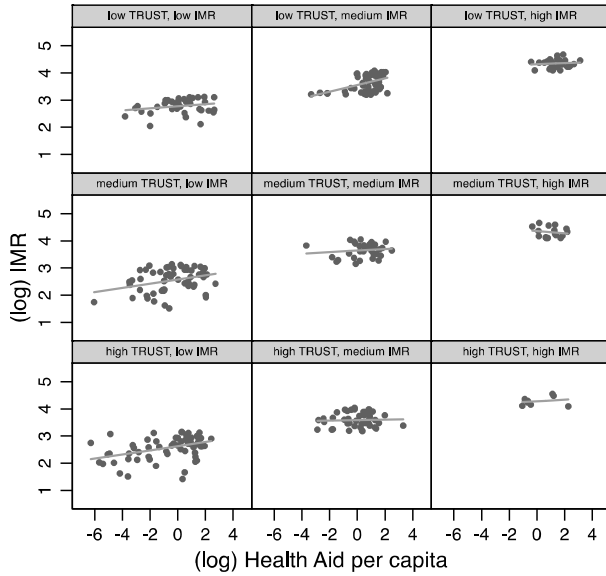
Scatterplot by 5 quantiles of GENDER
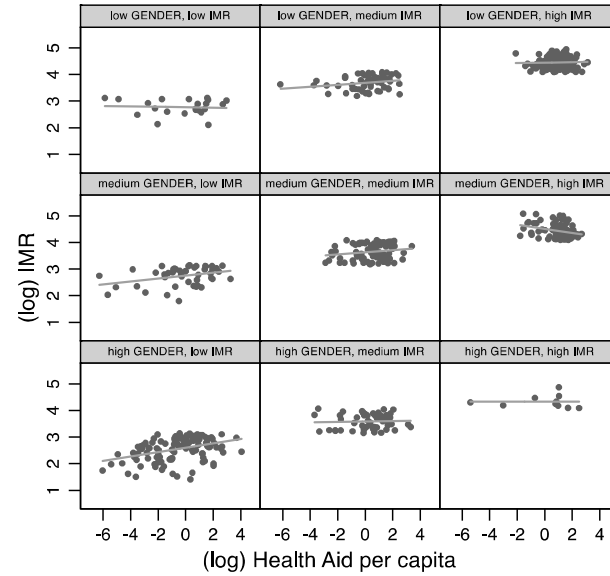
Scatterplot by 3 quantiles of CIVIC & IMR

Scatterplot by 3 quantiles of CLUBS & IMR

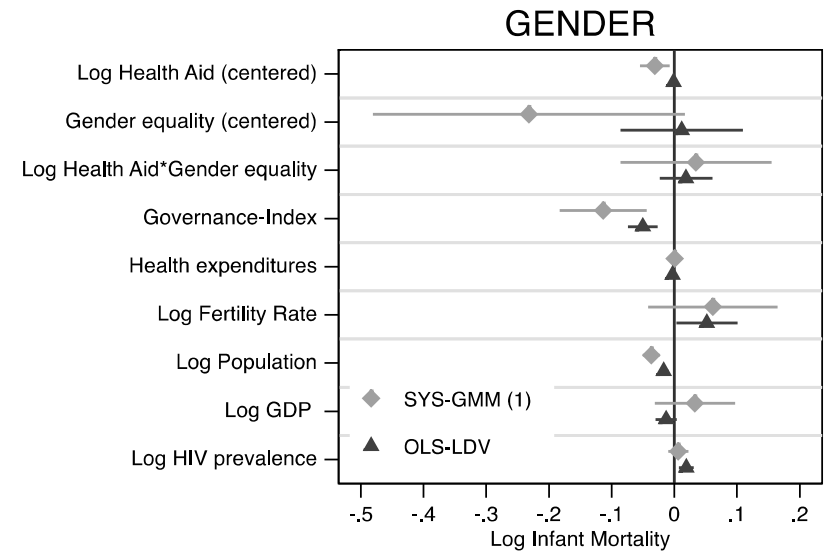Scatterplot by 3 quantiles of TRUST & IMR

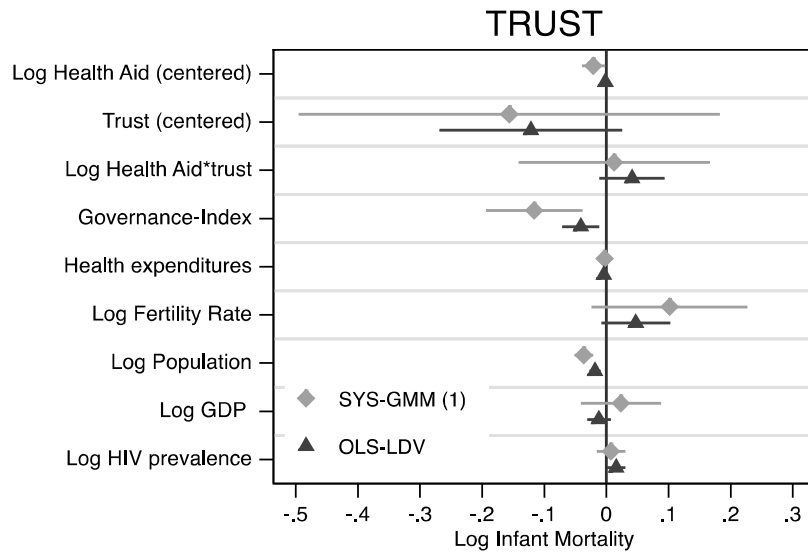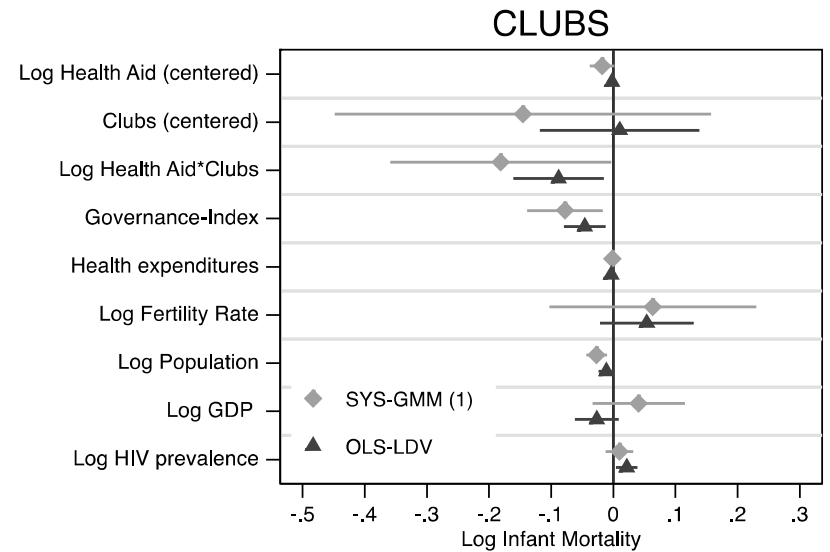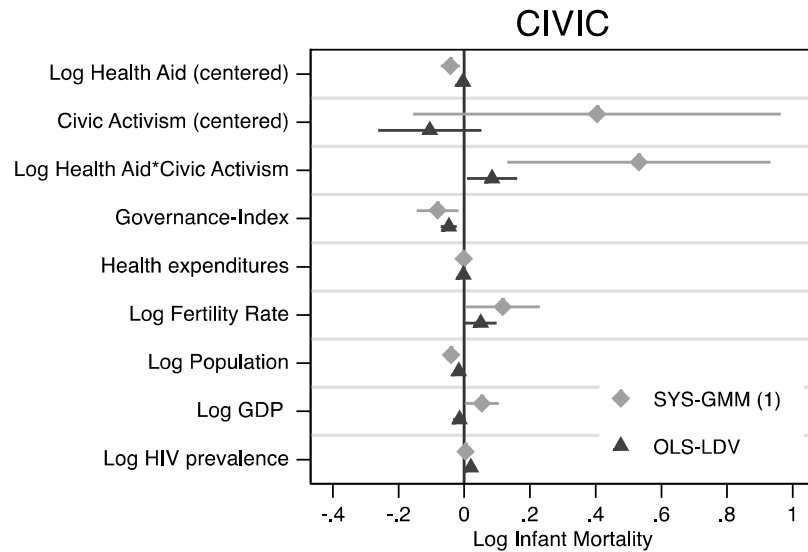Scatterplot by 3 quantiles of GENDER & IMR

Table 1: Summary of the main and interaction effects of social capital on the relationship between DAH and IMR

| SOCIAL CAPITAL	PREDICTORS	FE	RE	LDV-PCSE	SYS-GMM 1-step	SYS-GMM 2-step
CIVIC ACTIVISM (N=107 n=392)	log DAH	0.00486	0.0109	-0.00410	-0.0426***	-0.0421***
		(0.00943)	(0.00720)	(0.00310)	(0.0150)	(0.0142)
	CIVIC	0.406	0.473**	-0.105	0.404	0.413*
		(0.250)	(0.189)	(0.0803)	(0.285)	(0.242)
	log DAHCIVIC	-0.159	-0.0858	0.0845**	0.531***	0.520**
		(0.106)	(0.102)	(0.0389)	(0.204)	(0.213)
CLUBS (N=68 n=221)	log DAH	-0.000631	-0.00163	-0.00216	-0.0180*	-0.0154**
		(0.00914)	(0.00882)	(0.00388)	(0.0101)	(0.00696)
	CLUBS	-0.205	-0.0705	0.0102	-0.146	-0.0882
		(0.177)	(0.172)	(0.0654)	(0.154)	(0.156)
	log DAHCLUBS	0.0209	-0.0403	-0.0881**	-0.181**	-0.132
		(0.0681)	(0.0870)	(0.0373)	(0.0907)	(0.116)
TRUST (N=92 n=266)	log DAH	-0.0104	-0.00710	-0.00161	-0.0209**	-0.0148**
		(0.00980)	(0.00710)	(0.00358)	(0.00959)	(0.00673)
	TRUST	-0.311	-0.417**	-0.122	-0.156	-0.0432
		(0.217)	(0.193)	(0.0751)	(0.173)	(0.124)
	log DAHTRUST	0.0351	0.0180	0.0414	0.0126	0.0154
		(0.0663)	(0.0701)	(0.0269)	(0.0787)	(0.0639)
GENDER EQUALITY (N=107 n=402)	log DAH	0.00758	0.0168**	-0.00129	-0.0310***	-0.0269**
		(0.00796)	(0.00670)	(0.00281)	(0.0120)	(0.0124)
	GENDER	-0.141	-0.411***	0.0120	-0.232*	-0.113
		(0.123)	(0.132)	(0.0498)	(0.127)	(0.131)
	log DAHGENDER	-0.145**	-0.128**	0.0186	0.0347	0.0428
		(0.0565)	(0.0502)	(0.0214)	(0.0614)	(0.0577)

Note: All models include period fixed effects. Linear regression models with panel corrected standard errors (OLS-LDV) are adjusted for panel-specific (AR1) autocorrelation and heteroskedastic panels. Fixed effects models use cluster-robust standard errors. In GMM models DAH, governance, GDP per capita and fertility rate are specified as endogenous variables. In 2-step GMM Windmeijer bias-corrected robust standard errors are used. *** p<0.01, ** p<0.05.

System-GMM and OLS-LDV (PCSE)

CIVIC

	Log Infant Mortality
Log Health Aid (centered)	
Civic Activism (centered)	
Log Health Aid*Civic Activism	
Governance-Index	
Health expenditures	
Log Fertility Rate	
Log Population	
Log GDP	SYS-GMM (1)
Log HIV prevalence	OLS-LDV

CLUBS

	Log Infant Mortality
Log Health Aid (centered)	
Clubs (centered)	
Log Health Aid*Clubs	
Governance-Index	
Health expenditures	
Log Fertility Rate	
Log Population	
Log GDP	SYS-GMM (1)
Log HIV prevalence	OLS-LDV

TRUST

	Log Infant Mortality
Log Health Aid (centered)	
Trust (centered)	
Log Health Aid*trust	
Governance-Index	
Health expenditures	
Log Fertility Rate	
Log Population	
Log GDP	SYS-GMM (1)
Log HIV prevalence	OLS-LDV

GENDER

	Log Infant Mortality
Log Health Aid (centered)	
Gender equality (centered)	
Log Health Aid*Gender equality	
Governance-Index	
Health expenditures	
Log Fertility Rate	
Log Population	
Log GDP	SYS-GMM (1)
Log HIV prevalence	OLS-LDV

Note: SYS-GMM(1) & OLS-LDV. Lagged dependent variable (LDV) not shown.

The marginal effect of DAH on IMR for values of social capital
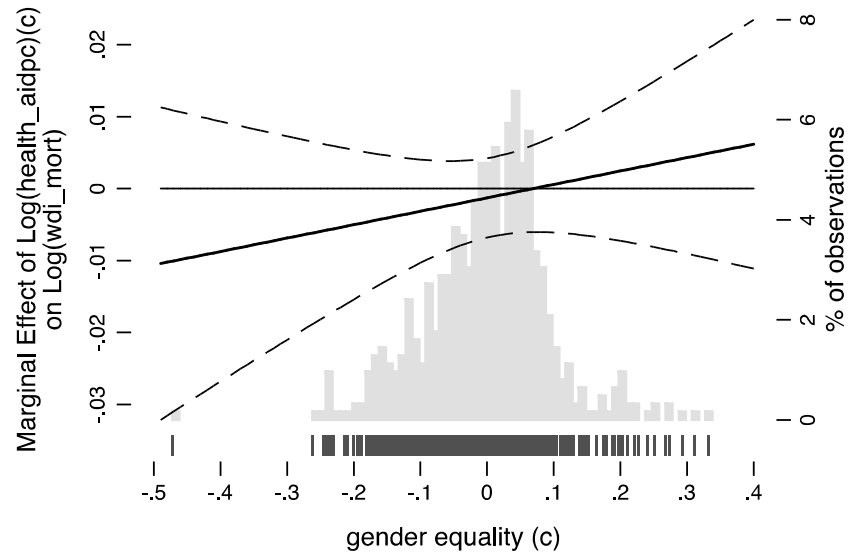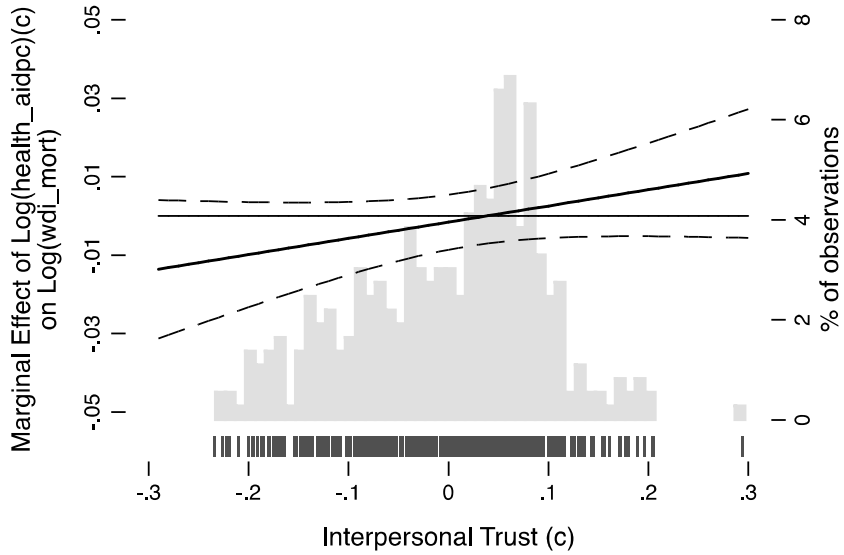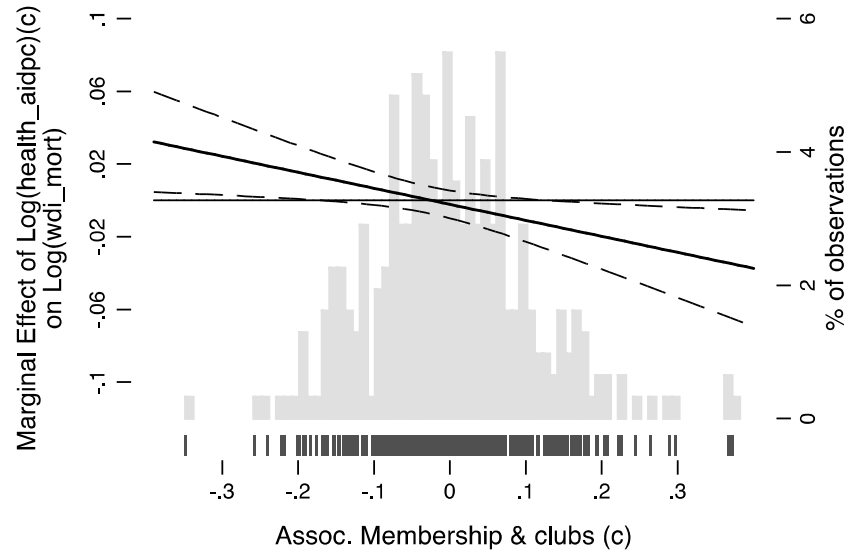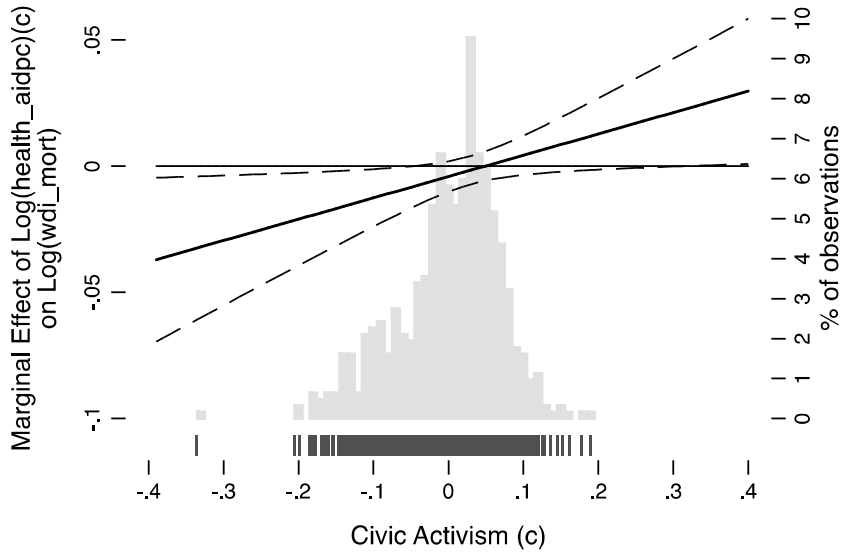
Does institutional context influence the relationships between DAH, Social capital and IMR?
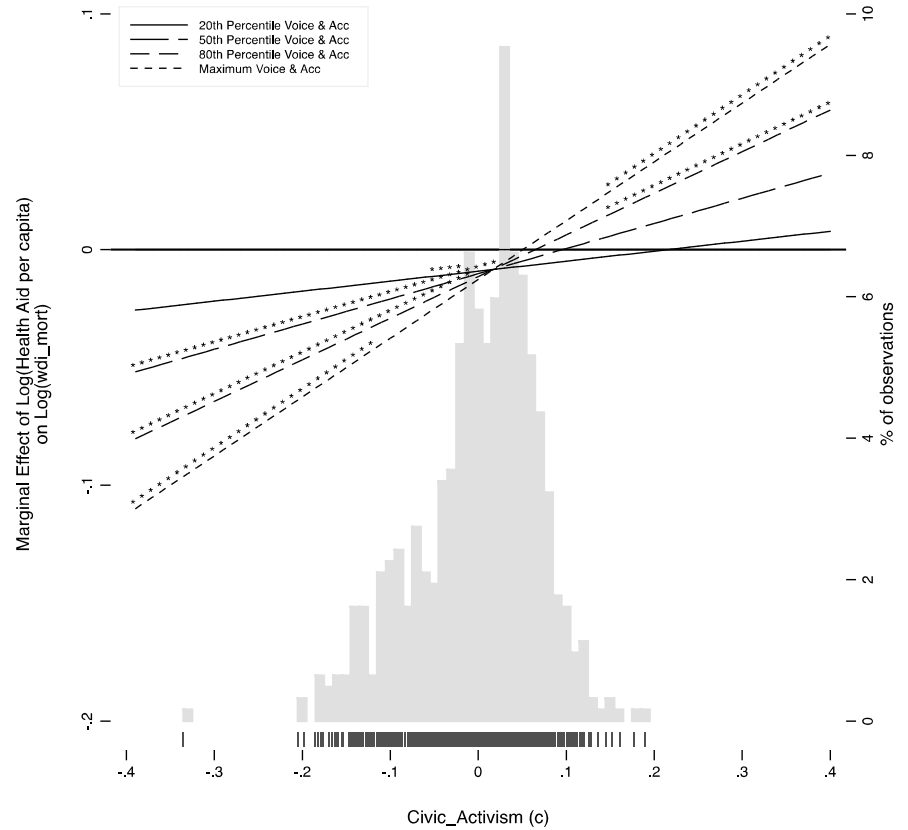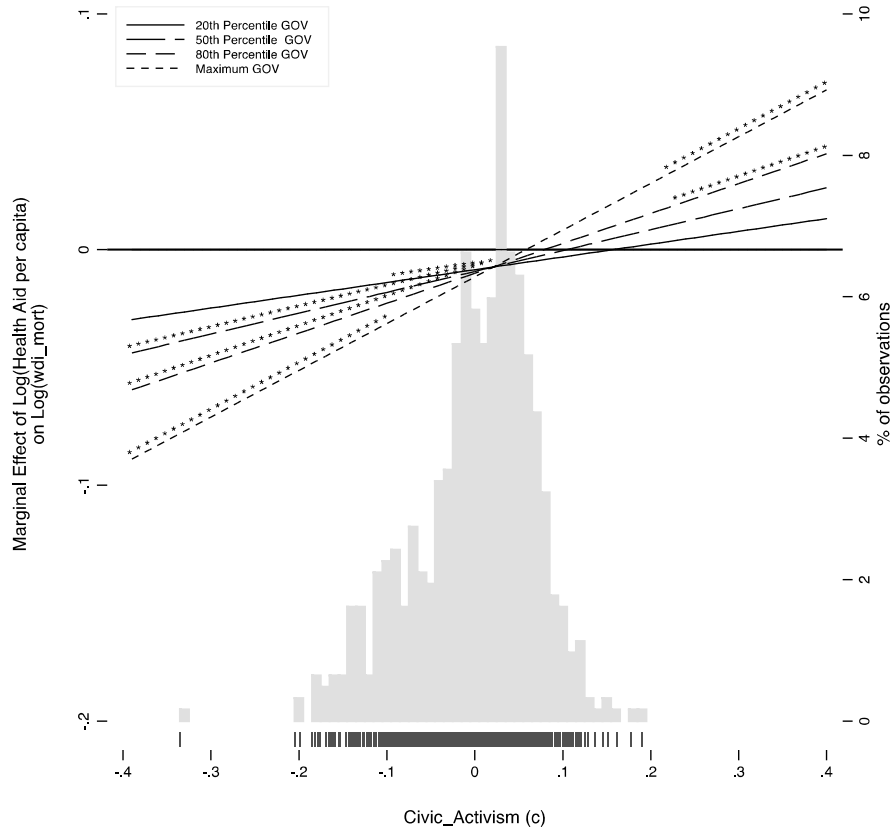
Governance and the marginal effect of DAH on IMR for different values of civic activism

	Governance Index	Voice & Accountability	Selectorate Size	Coalition size
DAH	-0.00930***	-0.0103***	-0.00580*	-0.00386
	(0.00355)	(0.00375)	(0.00315)	(0.00331)
GOVERNANCE-Index	0.0330***	0.00204	-0.00195	-0.0436*
	(0.0121)	(0.0113)	(0.0234)	(0.0241)
CIVIC	-0.221**	-0.214**	-0.134	-0.123
	(0.0920)	(0.0984)	(0.0820)	(0.0825)
DAHGOVERNANCE	-0.00140	-0.00143	0.0258*	-0.00790
	(0.00509)	(0.00499)	(0.0147)	(0.0128)
DAHCIVIC	0.0910*	0.107**	0.0925**	0.125***
	(0.0476)	(0.0458)	(0.0395)	(0.0432)
GOVERNANCECIVIC	-0.00916	0.0561	0.433	0.249
	(0.114)	(0.109)	(0.613)	(0.392)
DAHGOVERNANCECIVIC	0.0670	0.0847	0.192	-0.0856
	(0.0513)	(0.0587)	(0.342)	(0.133)
EXPEND	-0.00240	-0.00302*	-0.0131***	-0.0123**
	(0.00150)	(0.00164)	(0.00497)	(0.00521)
lagged IMR	0.958***	0.957***	0.963***	0.963***
	(0.0188)	(0.0199)	(0.0208)	(0.0202)
log FERTIL	0.0680***	0.0730***	0.0397	0.0346
	(0.0240)	(0.0259)	(0.0259)	(0.0258)
log POP	-0.0172***	-0.0136***	-0.0148***	-0.0144***
	(0.00394)	(0.00410)	(0.00429)	(0.00422)
log GDP	-0.00810	-0.0173	-0.0204*	-0.0203*
	(0.00951)	(0.0106)	(0.0110)	(0.0109)
log HIV	0.0156***	0.0147**	0.0176***	0.0187***
	(0.00555)	(0.00601)	(0.00669)	(0.00656)
Constant	0.307**	0.326**	0.406***	0.404***
	(0.142)	(0.147)	(0.157)	(0.154)
Observations	392	392	391	392
R-squared	0.994	0.994	0.995	0.995
Number of ccode	107	107	107	107

Note: Panel corrected standard errors in parentheses with AR1 process within panels *** p<0.01, ** p<0.05, * p<0.1

# Governance and the marginal effect of DAH on IMR

Formal political institutions and the marginal effect of DAH on IMR
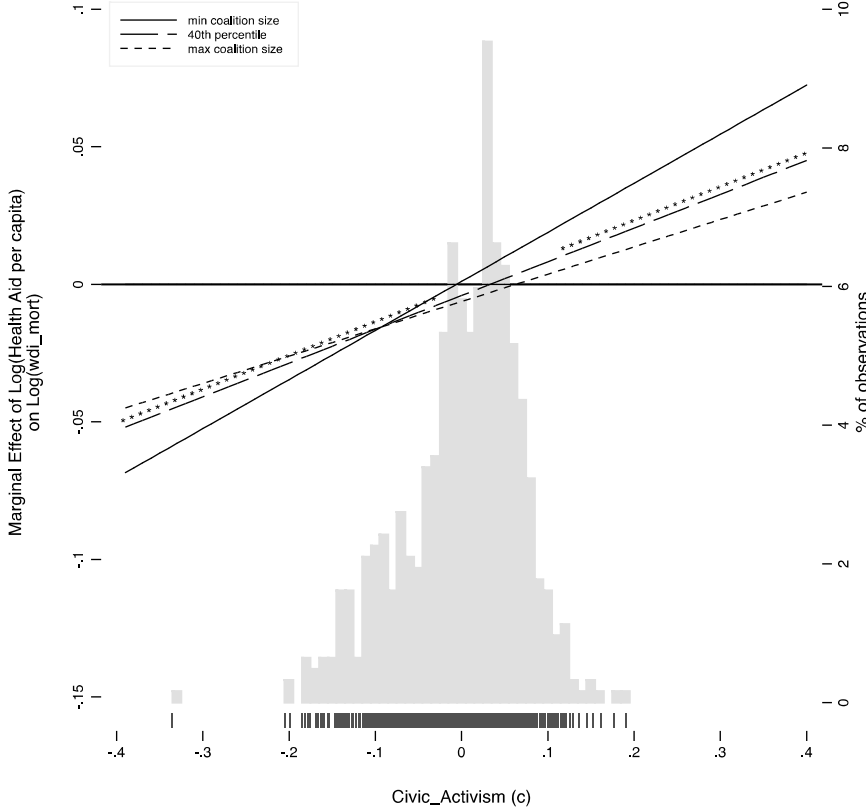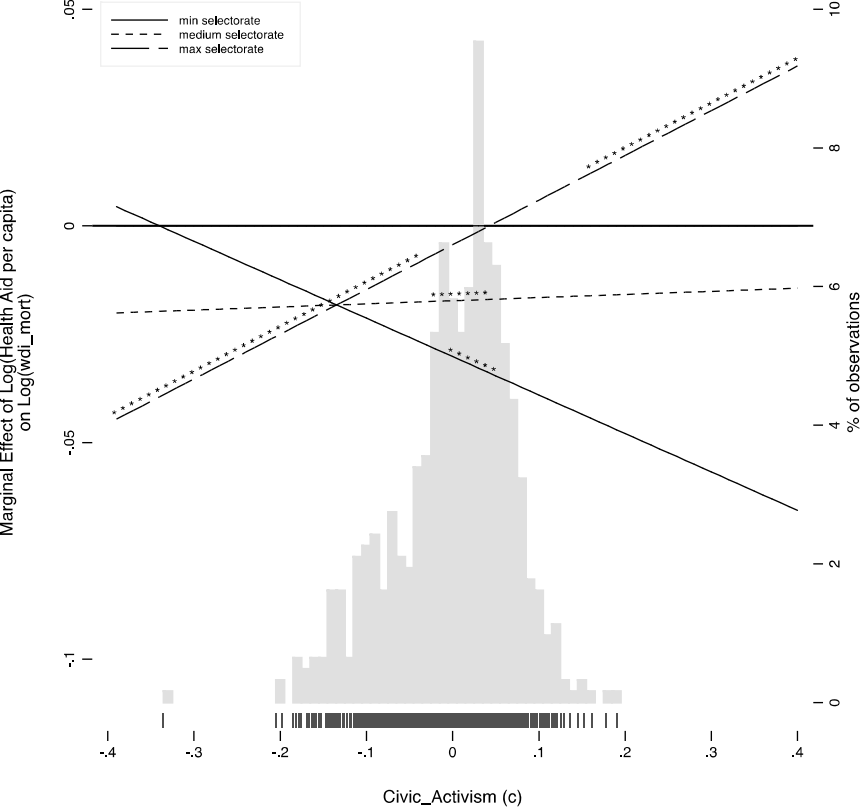
	Locally elected Executive	Subnational authority	Autonomous Regions	Federation
lagged DECENTRALIZATION	0.0169	0.00172	0.0355***	0.0138
	(0.0120)	(0.0278)	(0.0127)	(0.0182)
lagged AID	-0.0125*	-0.00326	-0.00618	-0.00662*
	(0.00756)	(0.00891)	(0.00376)	(0.00366)
DECENTRALIZATIONAID	0.00673	0.0102	-0.00265	0.00390
	(0.00830)	(0.0133)	(0.00866)	(0.00936)
CIVIC	-0.128	-0.157	-0.144	-0.0693
	(0.122)	(0.186)	(0.101)	(0.0922)
DECENTRALIZATIONCIVIC	0.263*	0.229	0.335	-0.309
	(0.144)	(0.290)	(0.206)	(0.282)
AIDCIVIC	0.0482	0.0923	0.138***	0.128***
	(0.0660)	(0.111)	(0.0480)	(0.0479)
DECENTRALIZATIONAIDCIVIC	0.105	-0.0564	-0.206	0.0395
	(0.0754)	(0.148)	(0.189)	(0.137)
lagged IMR	0.974***	0.965***	0.983***	0.977***
	(0.0211)	(0.0309)	(0.0192)	(0.0207)
lagged GOV	-0.0350**	-0.0353*	-0.0215*	-0.0254*
	(0.0149)	(0.0210)	(0.0130)	(0.0131)
lagged EXPEND	-0.000843	0.000480	-0.000950	-0.00137
	(0.00180)	(0.00209)	(0.00163)	(0.00169)
lagged FERTIL	0.0871***	0.108**	0.0980***	0.0933***
	(0.0253)	(0.0475)	(0.0223)	(0.0239)
lagged POP	-0.0162***	-0.0117*	-0.0135***	-0.0128***
	(0.00463)	(0.00625)	(0.00434)	(0.00478)
lagged GDP	0.00242	0.00739	0.0199*	0.0160
	(0.0125)	(0.0125)	(0.0106)	(0.0113)
lagged HIV	0.0122*	0.00682	0.00911	0.0110*
	(0.00687)	(0.0146)	(0.00584)	(0.00633)
Constant	0.0671	-0.0491	-0.154	-0.0983
	(0.170)	(0.218)	(0.157)	(0.173)
Observations	240	124	301	300

Note: Panel corrected standard errors in parentheses with AR1 process within panels *** p<0.01, ** p<0.05, * p<0.1

Marginal effect of DAH on IMR for different values of Civic Activism and Decentralization
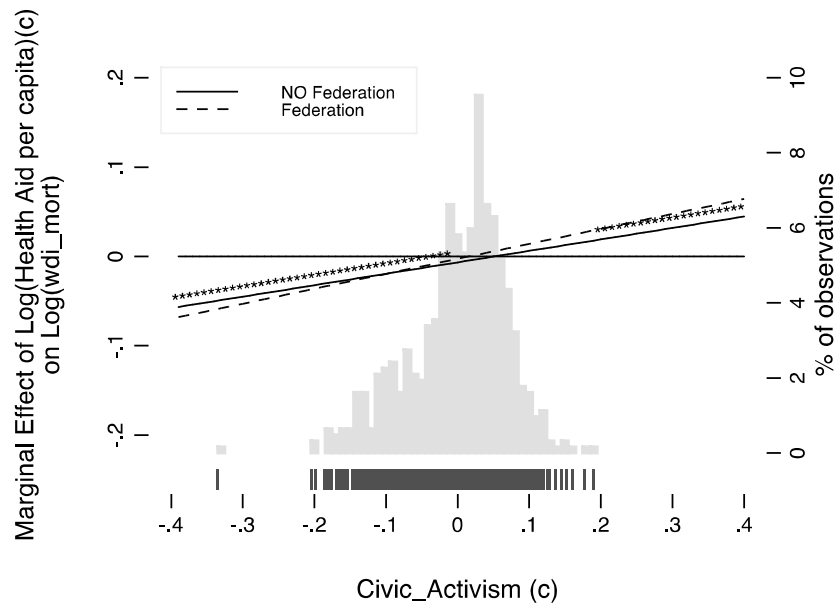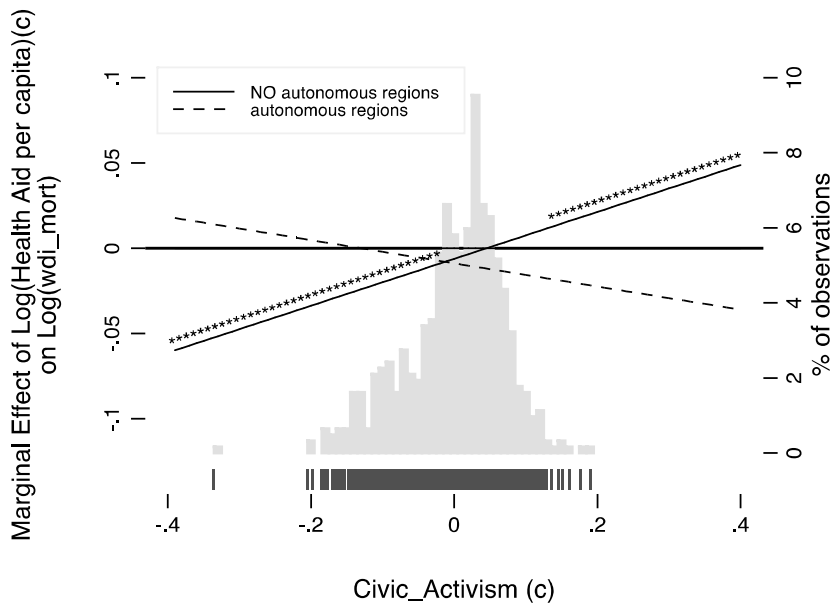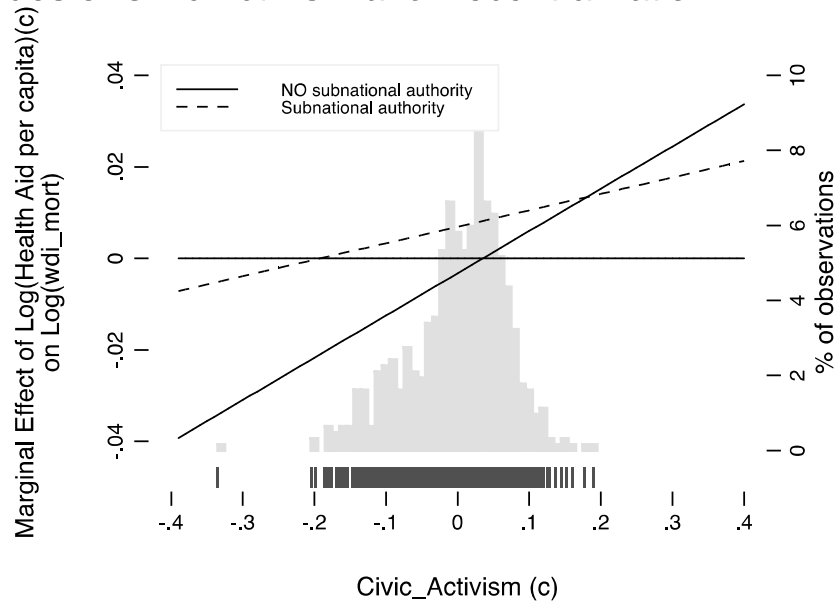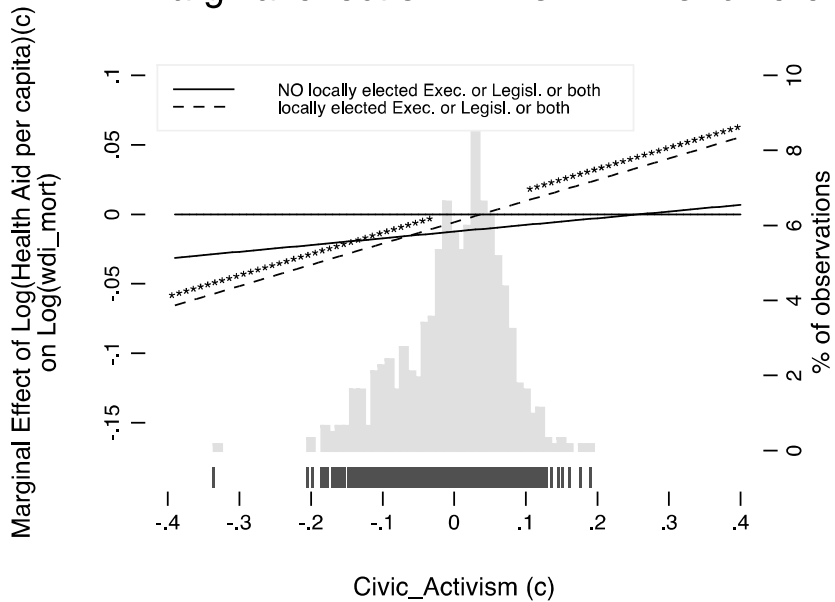
ROBUSTNESS CHECKS

- case selection
  - drop outlier according to HADI-Method, DFBETA and COOKS'D
- accounting for other covariates
  - number of physicians
  - years of female education
  - regional dummies
  - (inter-/intra country) conflict
  - water aid
  - all other development assistance *(REST= TOTAL – DAH - WATER)*
- testing different data sources:
  - DAH broadly defined (adding *Family Planning, Reproductive Health Care*, *HIV*)
  - cumulative DAH over 5-year periods
  - Institute of Health Metrics (IHME): health aid *disbursements*
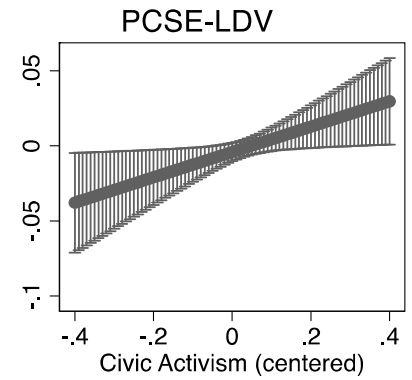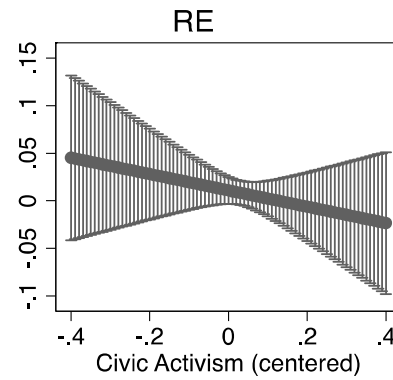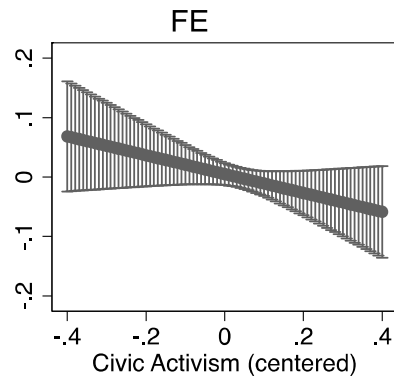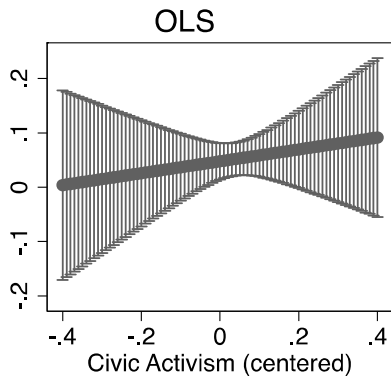- „convergence" model
- → **qualitatively similar results**

Marginal effect of DAH on IMR for different values of civic activism
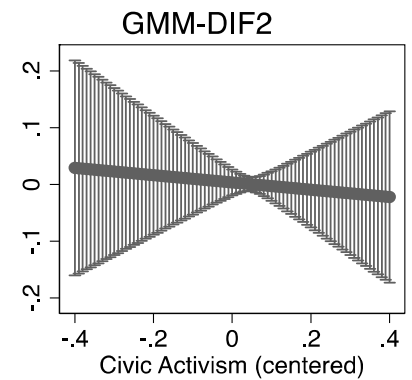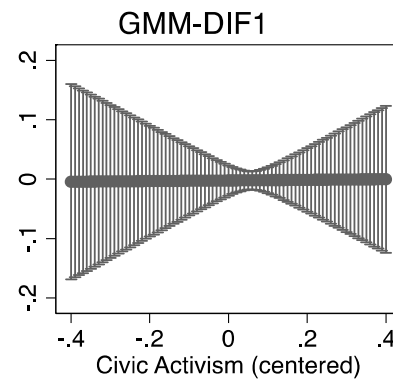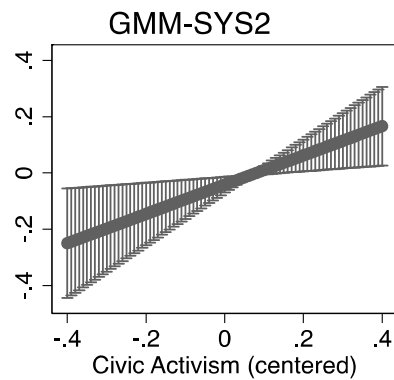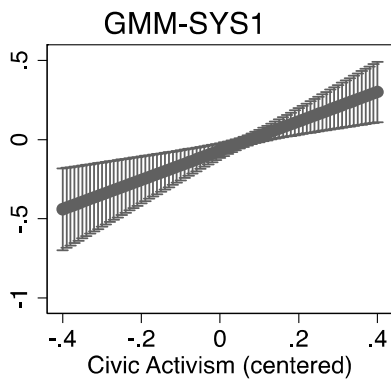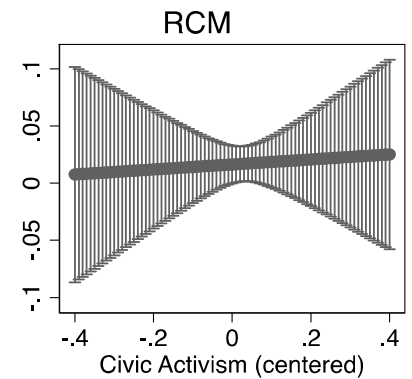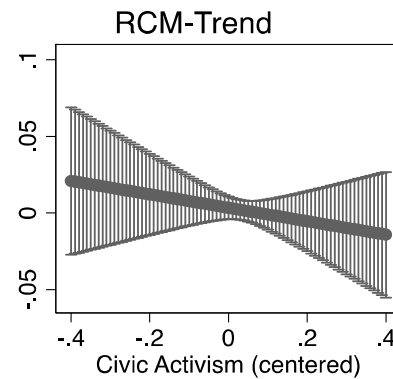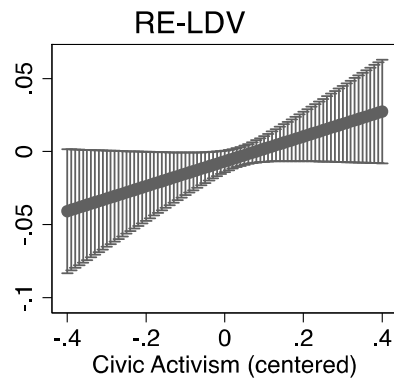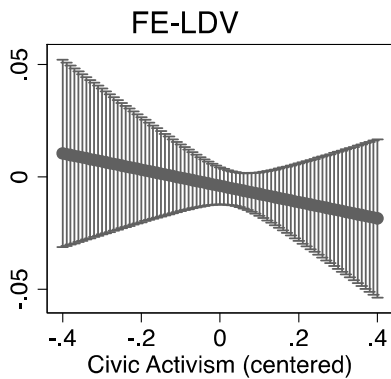
Marginal effect of DAH on IMR for different values of Clubs & Associations
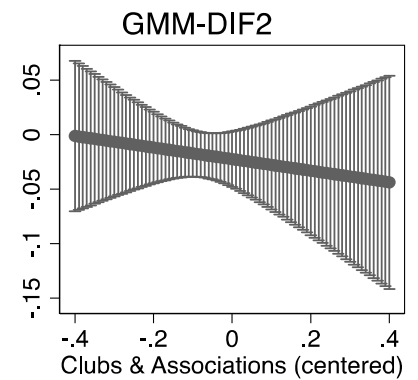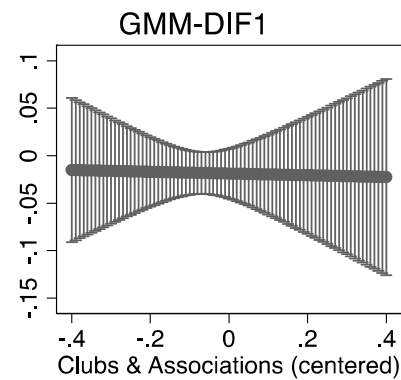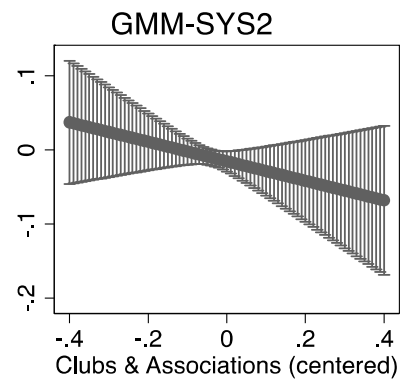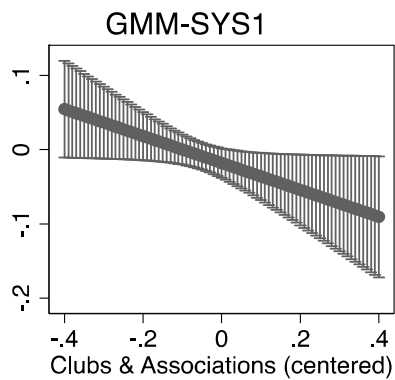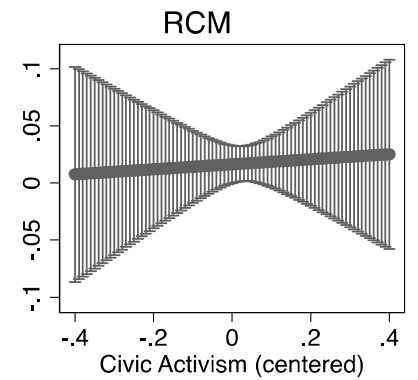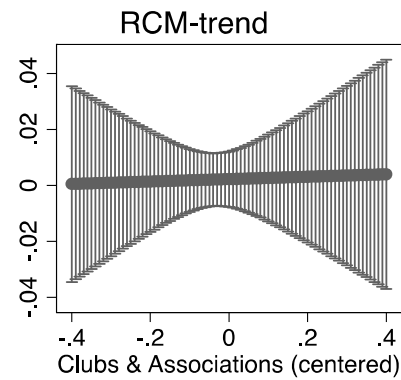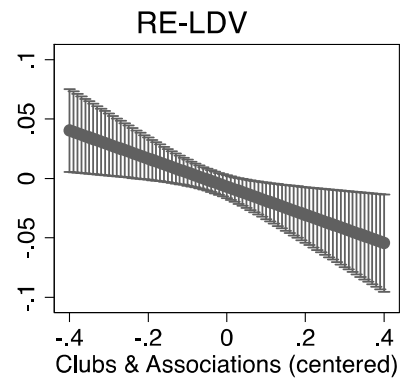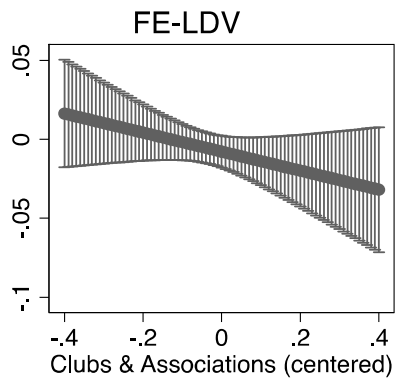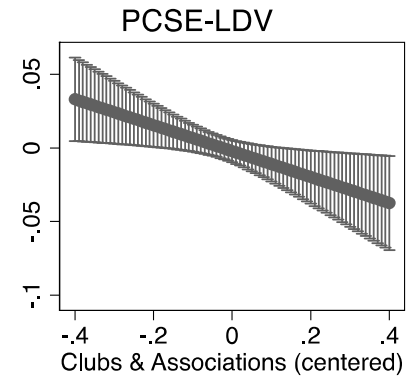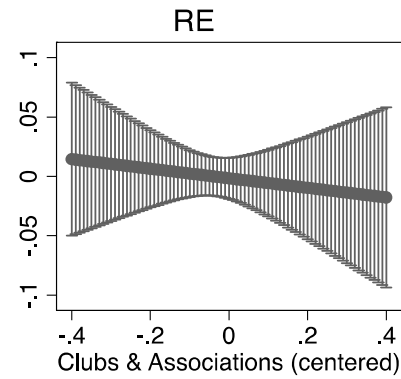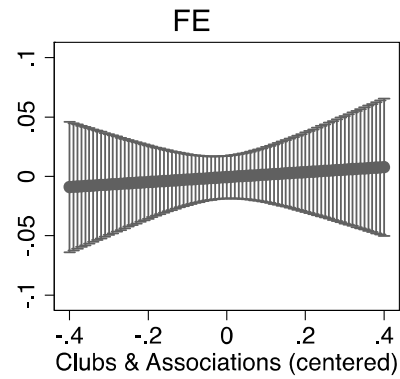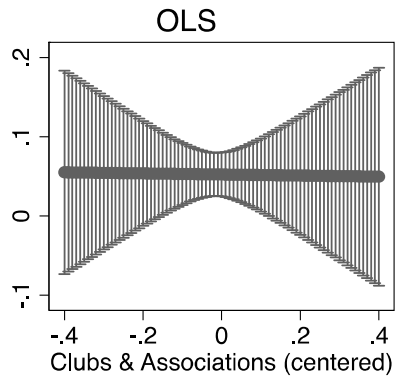
Marginal effect of DAH on IMR for different values of Trust
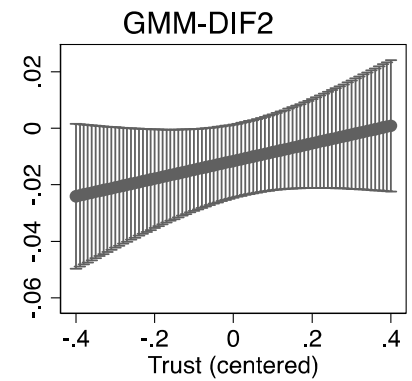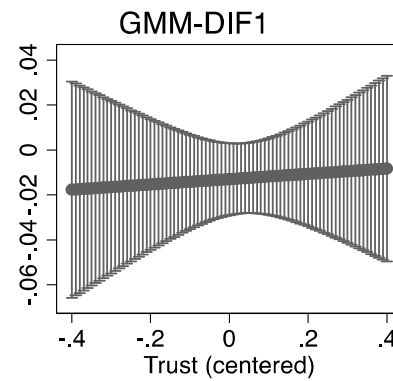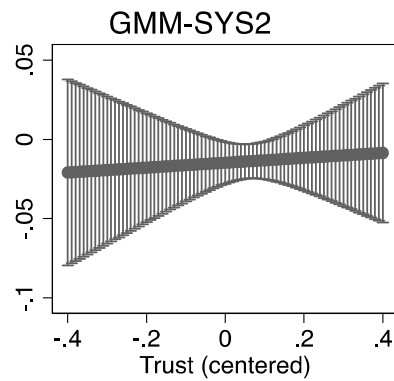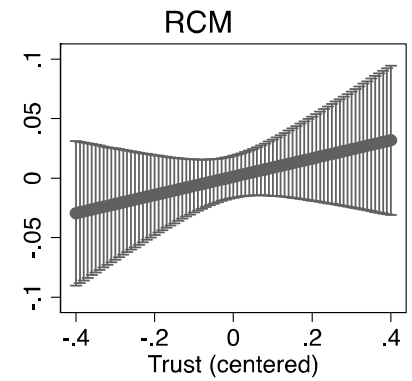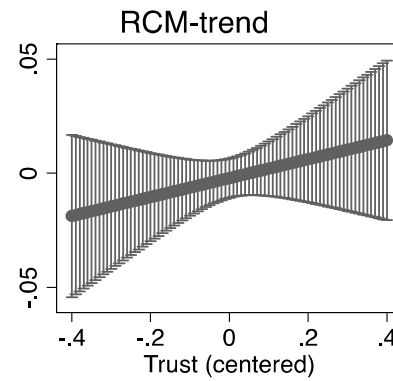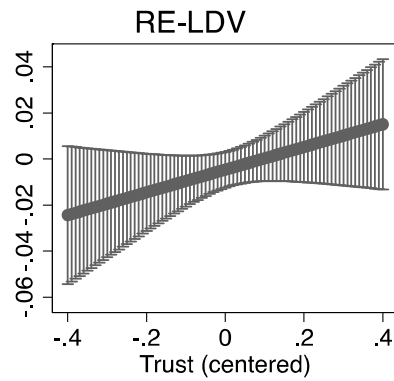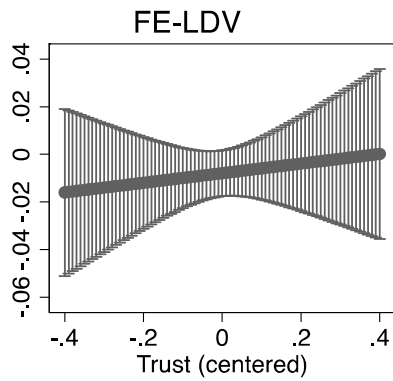
Marginal effect of DAH on IMR for different values of Gender Equality
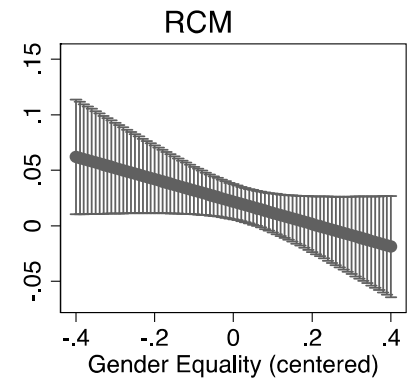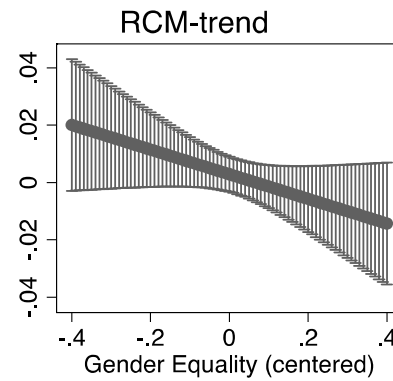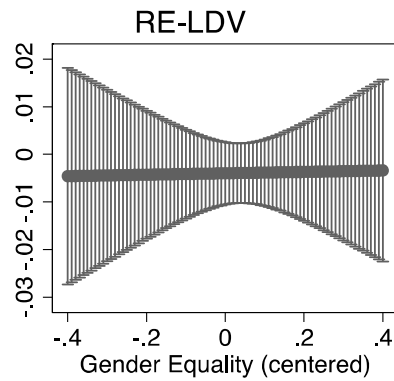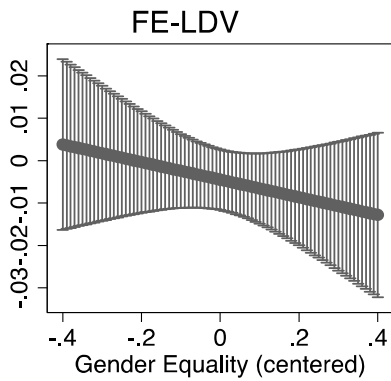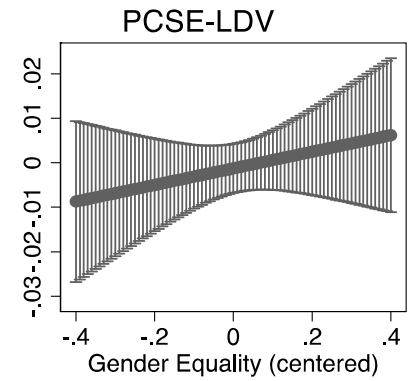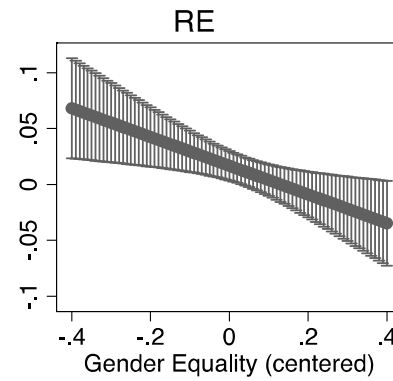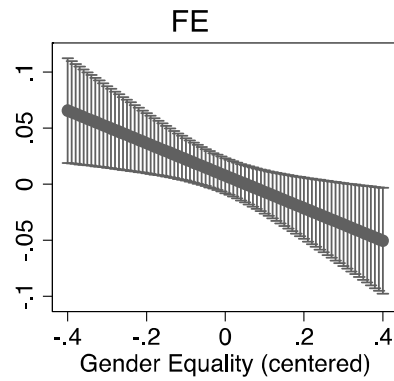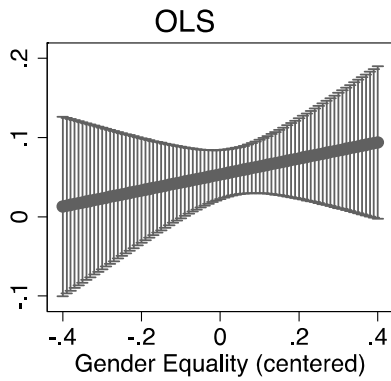
CONCLUSION

- Clubs and associations enhances the effect of DAH on IMR.
- Civic engagement compensates the effect of DAH on IMR.
- Gender equality seems to

THANK YOU FOR YOUR ATTENTION!

APPENDIX

Table A 1: The effect of civic activism on the relationship between health aid and infant mortality

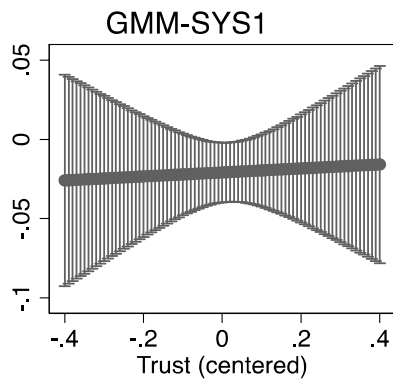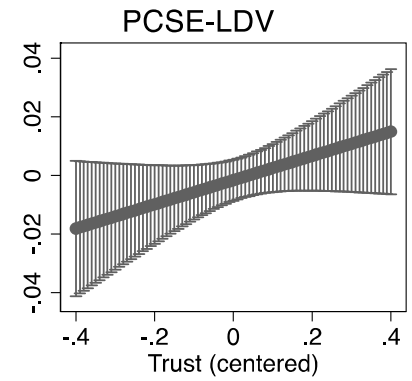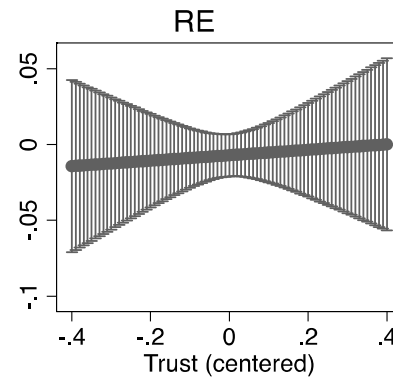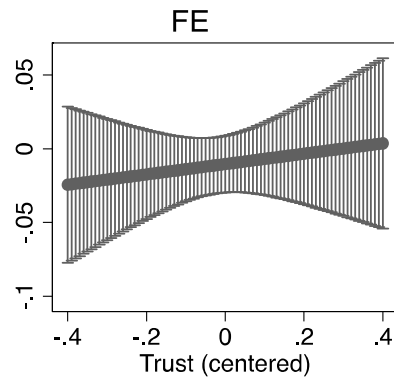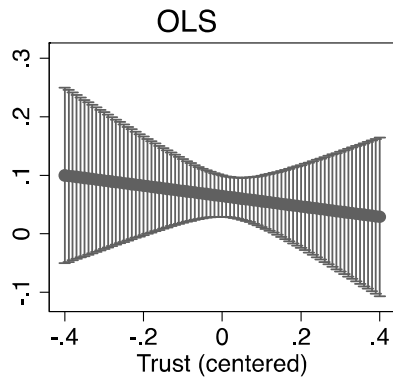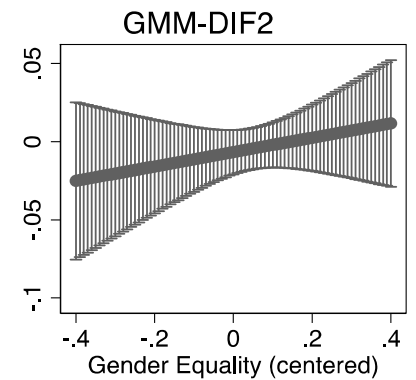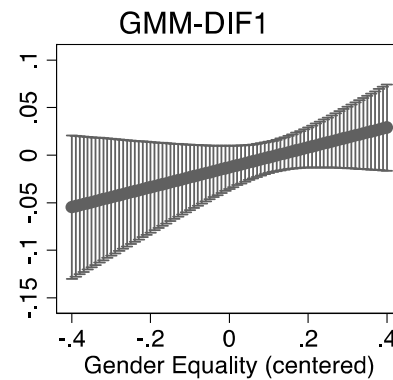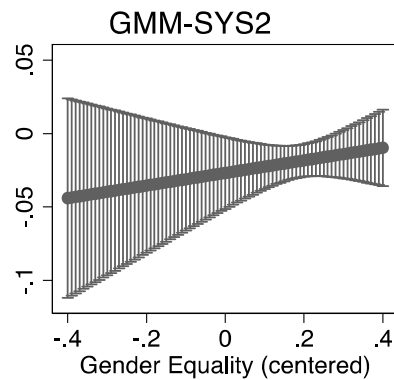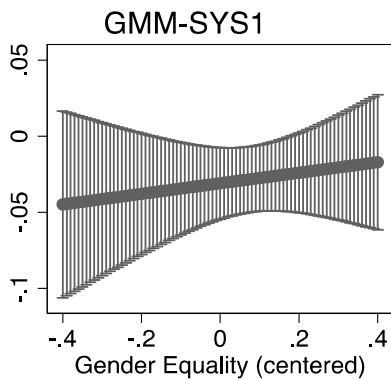|	(1)	(2)	(3)	(8)	(9)	(10)	(14)	(19)	(27)	(28)	(29)	(30)
	OLS	FE	RE	LDV-PCSE	FE-LDV	RE-LDV	RCM trend	RCM2	SYS-GMM 1-step	SYS-GMM 2-step	DIF-GMM 1-step	DIF-GMM 2-step
log DAH	0.0476***	0.00486	0.0109	-0.00410	-0.00403	-0.00674*	0.00333	0.0163*	-0.0426***	-0.0421***	-0.00230	0.00350
	(0.0170)	(0.00943)	(0.00720)	(0.00310)	(0.00419)	(0.00374)	(0.00378)	(0.00837)	(0.0150)	(0.0142)	(0.0130)	(0.0116)
CIVIC	-1.631***	0.406	0.473**	-0.105	-0.0209	-0.127	-0.0849	0.379*	0.404	0.413*	0.285	0.0867
	(0.380)	(0.250)	(0.189)	(0.0803)	(0.114)	(0.0926)	(0.121)	(0.225)	(0.285)	(0.242)	(0.296)	(0.203)
log DAH#CIVIC	0.110	-0.159	-0.0858	0.0845**	-0.0362	0.0853*	-0.0438	0.0220	0.531***	0.520**	0.00532	-0.0640
	(0.200)	(0.106)	(0.102)	(0.0389)	(0.0481)	(0.0490)	(0.0562)	(0.111)	(0.204)	(0.213)	(0.183)	(0.216)
GOV	-0.145***	-0.0778	-0.0924***	-0.0469***	-0.0627**	-0.0479***	-0.0368*	-0.103***	-0.0814**	-0.0899***	-0.0258	-0.0120
	(0.0348)	(0.0475)	(0.0281)	(0.0124)	(0.0251)	(0.0110)	(0.0199)	(0.0260)	(0.0324)	(0.0342)	(0.0577)	(0.0691)
EXPEND	-0.0220***	-0.00760	-0.00977***	-0.00264*	-0.00530**	-0.00332**	-0.000970	-0.00757***	-0.00162	0.00102	-0.00723	-0.00202
	(0.00392)	(0.00481)	(0.00315)	(0.00146)	(0.00254)	(0.00133)	(0.00201)	(0.00291)	(0.00376)	(0.00403)	(0.00482)	(0.00396)
log FERTIL	0.726***	0.298**	0.586***	0.0499**	0.0223	0.0486**	0.434***	0.598***	0.117**	0.130**	-0.0169	-0.0264
	(0.0531)	(0.120)	(0.0612)	(0.0249)	(0.0679)	(0.0232)	(0.0534)	(0.0610)	(0.0577)	(0.0573)	(0.134)	(0.123)
log POP	0.00614	0.485***	4.66e-05	-0.0167***	0.160*	-0.0172***	0.0241	0.00172	-0.0404***	-0.0405***	0.0737	0.0935
	(0.0128)	(0.161)	(0.0216)	(0.00404)	(0.0920)	(0.00458)	(0.0222)	(0.0216)	(0.00736)	(0.00723)	(0.187)	(0.160)
log GDP	-0.156***	-0.200***	-0.347***	-0.0143	-0.0701**	-0.0117	-0.269***	-0.297***	0.0534**	0.0532**	-0.213*	-0.153
	(0.0248)	(0.0696)	(0.0320)	(0.00997)	(0.0339)	(0.0102)	(0.0283)	(0.0310)	(0.0262)	(0.0248)	(0.110)	(0.117)
log HIV	0.0777***	0.00814	0.0453***	0.0199***	0.000825	0.0188***	0.0457***	0.0449***	0.00367	0.00343	-0.00505	-0.00189
	(0.0120)	(0.0312)	(0.0168)	(0.00619)	(0.0168)	(0.00460)	(0.0138)	(0.0160)	(0.00809)	(0.00925)	(0.0156)	(0.0181)
Lag IMR				0.949***	0.786***	0.957***			1.068***	1.049***	0.591***	0.650***
				(0.0210)	(0.0471)	(0.0174)			(0.0479)	(0.0462)	(0.0932)	(0.0757)
trend							-0.107***					
							(0.00987)					
Constant	4.181***	-2.688	5.741***	0.404***	-1.299	0.343**	5.214***	5.438***	-0.307	-0.279		
	(0.313)	(2.823)	(0.478)	(0.152)	(1.480)	(0.146)	(0.441)	(0.471)	(0.389)	(0.323)		
Observations	392	392	392	392	392	392	392	392	392	392	284	284
R-squared	0.864	0.831		0.995	0.945							
Number of ccode		107		107	107				107	107	105	105
instruments									56	56	38	38
Sargan-Test									0	0	4.00e-06	4.00e-06
Hansen-Test									0.333	0.333	0.131	0.131
AR2									0.0682	0.0829	0.526	0.425

Note: The complete estimation results are shown in the appendix. All models include period fixed effects. Linear regression models with panel corrected standard errors (OLS-PCSE) are adjusted for panel-specific (AR1) autocorrelation and heteroskedastic panels. Fixed effects models use cluster-robust standard errors. In Difference and System-GMM models DAH, governance, GDP per capita and fertility rate are specified as endogenous variables. In 2-step GMM Windmeijer bias-corrected robust standard errors are used. *** p<0.01, ** p<0.05, * p<0.1.

Table A 1: The effect of clubs on the relationship between health aid and infant mortality

	(1) OLS	(2) FE	(3) RE	(8) LDV-PCSE	(9) FE-LDV	(10) RE-LDV	(14) RCM trend	(19) SYS-GMM 1-step	(20) SYS-GMM 2-step	(21) DIF-GMM 1-step	(22) DIF-GMM 2-step
log DAH	0.0523***	-0.000631	-0.00163	-0.00216	-0.00776	-0.00700	0.00218	-0.0180*	-0.0154**	-0.0188	-0.0225*
	(0.0141)	(0.00914)	(0.00882)	(0.00388)	(0.00514)	(0.00490)	(0.00505)	(0.0101)	(0.00696)	(0.0133)	(0.0130)
CLUBS	-0.592***	-0.205	-0.0705	0.0102	0.0747	0.0474	-0.207*	-0.146	-0.0882	0.335	0.428
	(0.212)	(0.177)	(0.172)	(0.0654)	(0.0990)	(0.0789)	(0.117)	(0.154)	(0.156)	(0.223)	(0.295)
log DAH#CLUBS	-0.00689	0.0209	-0.0403	-0.0881**	-0.0603	-0.118**	0.00430	-0.181**	-0.132	-0.00924	-0.0530
	(0.165)	(0.0681)	(0.0870)	(0.0373)	(0.0453)	(0.0470)	(0.0470)	(0.0907)	(0.116)	(0.111)	(0.103)
GOV	-0.108**	-0.0480	-0.0854*	-0.0457***	-0.0462	-0.0479***	-0.0214	-0.0777**	-0.0614	0.0360	0.00525
	(0.0481)	(0.0611)	(0.0442)	(0.0172)	(0.0314)	(0.0178)	(0.0360)	(0.0310)	(0.0457)	(0.0912)	(0.0735)
EXPEND	-0.0361***	0.00127	-0.00883*	-0.00349	-0.00275	-0.00390*	0.00221	-0.00129	-0.000962	0.0104	0.0150*
	(0.00435)	(0.00496)	(0.00469)	(0.00237)	(0.00275)	(0.00204)	(0.00310)	(0.00519)	(0.00634)	(0.00703)	(0.00774)
log FERTIL	0.724***	0.127	0.513***	0.0540	-0.00458	0.0477	0.419***	0.0637	0.0549	0.0455	0.0205
	(0.0754)	(0.143)	(0.0834)	(0.0385)	(0.101)	(0.0355)	(0.0754)	(0.0850)	(0.105)	(0.192)	(0.199)
log POP	0.0197	0.678***	0.0354	-0.0112*	0.254**	-0.0135*	0.0653**	-0.0267***	-0.0292**	0.406**	0.367*
	(0.0185)	(0.184)	(0.0278)	(0.00648)	(0.102)	(0.00759)	(0.0291)	(0.00851)	(0.0116)	(0.177)	(0.190)
log GDP	-0.271***	-0.0497	-0.378***	-0.0264	-0.0420	-0.0291*	-0.364***	0.0409	0.0328	-0.0387	0.0626
	(0.0324)	(0.129)	(0.0417)	(0.0180)	(0.0761)	(0.0160)	(0.0423)	(0.0378)	(0.0355)	(0.166)	(0.183)
log HIV	0.0813***	0.0339	0.0611***	0.0217**	0.00467	0.0195***	0.0687***	0.00982	0.00627	-0.00436	-0.00437
	(0.0208)	(0.0540)	(0.0230)	(0.00888)	(0.0275)	(0.00724)	(0.0209)	(0.0114)	(0.0183)	(0.0387)	(0.0388)
Lag IMR				0.926***	0.691***	0.935***		1.068***	1.057***	0.410***	0.518***
				(0.0343)	(0.0777)	(0.0263)		(0.0705)	(0.0804)	(0.142)	(0.115)
trend							-0.134***				
							(0.0124)				
Constant	5.128***	-7.270**	5.466***	0.514**	-2.799	0.502**	5.309***	-0.368	-0.213		
	(0.396)	(3.394)	(0.598)	(0.236)	(1.795)	(0.220)	(0.598)	(0.452)	(0.458)		
Observations	221	221	221	221	221	221	221	221	221	153	153
R-squared	0.862	0.887		0.994	0.954						
Number of ccode		68		68	68			68	68	64	64
instruments								56	56	38	38
Sargan-Test								0	0	0.0121	0.0121
Hansen-Test								0.267	0.267	0.825	0.825
AR2								0.165	0.194	0.785	0.429

Note: The complete estimation results are shown in the appendix. All models include period fixed effects. Linear regression models with panel corrected standard errors (OLS-PCSE) are adjusted for panel-specific (AR1) autocorrelation and heteroskedastic panels. Fixed effects models use cluster-robust standard errors. In Difference and System-GMM models DAH, governance, GDP per capita and fertility rate are specified as endogenous variables. In 2-step GMM Windmeijer bias-corrected robust standard errors are used. *** p<0.01, ** p<0.05, * p<0.1.

Table A 1: The effect of trust on the relationship between health aid and infant mortality

	(1) OLS	(2) FE	(3) RE	(8) LDV-PCSE	(9) FE-LDV	(10) RE-LDV	(14) RCM trend	(14) RCM2	(19) SYS-GMM 1-step	(20) SYS-GMM 2-step	(21) DIF-GMM 1-step	(22) DIF-GMM 2-step
log DAH	0.0644***	-0.0104	-0.00710	-0.00161	-0.00795	-0.00469	-0.00214	0.00112	-0.0209**	-0.0148**	-0.0130	-0.0116*
	(0.0179)	(0.00980)	(0.00710)	(0.00358)	(0.00492)	(0.00396)	(0.00439)	(0.00899)	(0.00959)	(0.00673)	(0.00815)	(0.00661)
TRUST	-0.472	-0.311	-0.417**	-0.122	-0.137	-0.0957	-0.0584	-0.412**	-0.156	-0.0432	-0.169	-0.00357
	(0.353)	(0.217)	(0.193)	(0.0751)	(0.118)	(0.0840)	(0.0901)	(0.199)	(0.173)	(0.124)	(0.258)	(0.193)
log DAH#TRUST	-0.0886	0.0351	0.0180	0.0414	0.0202	0.0493	0.0415	0.0767	0.0126	0.0154	0.0117	0.0312
	(0.176)	(0.0663)	(0.0701)	(0.0269)	(0.0435)	(0.0358)	(0.0436)	(0.0755)	(0.0787)	(0.0639)	(0.0535)	(0.0265)
GOV	-0.169***	-0.0881	-0.141***	-0.0412***	-0.0586*	-0.0435***	-0.0581*	-0.111***	-0.116***	-0.104***	-0.0218	-0.0561
	(0.0555)	(0.0634)	(0.0403)	(0.0152)	(0.0326)	(0.0151)	(0.0335)	(0.0396)	(0.0396)	(0.0337)	(0.0787)	(0.0822)
EXPEND	-0.0334***	0.00240	-0.00679	-0.00404**	-0.00257	-0.00424**	0.00319	-0.00510	-0.00272	-0.00236	0.00425	0.00546
	(0.00490)	(0.00515)	(0.00455)	(0.00186)	(0.00276)	(0.00171)	(0.00306)	(0.00415)	(0.00424)	(0.00412)	(0.00536)	(0.00649)
log FERTIL	0.693***	0.167	0.596***	0.0474*	0.0205	0.0478*	0.446***	0.594***	0.102	0.108**	0.0458	0.000864
	(0.0788)	(0.128)	(0.0755)	(0.0282)	(0.0949)	(0.0283)	(0.0690)	(0.0743)	(0.0640)	(0.0537)	(0.123)	(0.0907)
log POP	-0.0115	0.431**	-0.0215	-0.0183***	0.228**	-0.0185***	0.00337	-0.00434	-0.0364***	-0.0340***	0.339**	0.192
	(0.0171)	(0.167)	(0.0257)	(0.00459)	(0.0952)	(0.00548)	(0.0274)	(0.0260)	(0.00781)	(0.00849)	(0.145)	(0.156)
log GDP	-0.201***	-0.0271	-0.301***	-0.0118	-0.0274	-0.0133	-0.316***	-0.269***	0.0233	0.0352	-0.0291	-0.0312
	(0.0341)	(0.107)	(0.0381)	(0.00966)	(0.0623)	(0.0111)	(0.0374)	(0.0379)	(0.0330)	(0.0322)	(0.113)	(0.0937)
log HIV	0.0868***	0.0166	0.0558**	0.0158**	0.00419	0.0147**	0.0565***	0.0583***	0.00759	0.00489	-0.0122	0.00469
	(0.0191)	(0.0478)	(0.0222)	(0.00762)	(0.0242)	(0.00613)	(0.0197)	(0.0223)	(0.0118)	(0.0113)	(0.0270)	(0.0207)
Lag IMR				0.960***	0.685***	0.965***			0.998***	1.000***	0.422***	0.501***
				(0.0211)	(0.0743)	(0.0199)			(0.0583)	(0.0492)	(0.122)	(0.111)
trend							-0.120***					
							(0.0111)					
Constant	4.992***	-3.341	5.672***	0.404**	-2.431	0.356**	5.879***	5.340***	0.121	-0.0214		
	(0.403)	(2.937)	(0.579)	(0.163)	(1.626)	(0.170)	(0.563)	(0.566)	(0.456)	(0.400)		
Observations	266	266	266	266	266	266	266	266	266	266	173	173
R-squared	0.818	0.876		0.995	0.950							
Number of ccode		92		92	92		92	92	92	92	84	84
instruments									56	56	38	38
Sargan-Test									0	0	0.00350	0.00350
Hansen-Test									0.336	0.336	0.617	0.617
AR2									0.0950	0.147	0.929	0.707

Note: The complete estimation results are shown in the appendix. All models include period fixed effects. Linear regression models with panel corrected standard errors (OLS-PCSE) are adjusted for panel-specific (AR1) autocorrelation and heteroskedastic panels. Fixed effects models use cluster-robust standard errors. In Difference and System-GMM models DAH, governance, GDP per capita and fertility rate are specified as endogenous variables. In 2-step GMM Windmeijer bias-corrected robust standard errors are used. *** p<0.01, ** p<0.05, * p<0.1.

Table A 1: The effect of gender equality on the relationship between health aid and infant mortality

	(1) OLS	(2) FE	(3) RE	(8) LDV-PCSE	(9) FE-LDV	(10) RE-LDV	(14) RCM trend	(14) RCM 2	(19) SYS-GMM 1-step	(20) SYS-GMM 2-step	(21) DIF-GMM 1-step	(22) DIF-GMM 2-step
log DAH	0.0533***	0.00758	0.0168**	-0.00129	-0.00450	-0.00401	0.00285	0.0216***	-0.0310***	-0.0269**	-0.0128	-0.00673
	(0.0157)	(0.00796)	(0.00670)	(0.00281)	(0.00365)	(0.00334)	(0.00312)	(0.00805)	(0.0120)	(0.0124)	(0.0116)	(0.00722)
GENDER	-0.760***	-0.141	-0.411***	0.0120	0.0913	-0.0163	-0.105**	-0.432***	-0.232*	-0.113	0.000500	0.100
	(0.241)	(0.123)	(0.132)	(0.0498)	(0.0576)	(0.0629)	(0.0480)	(0.141)	(0.127)	(0.131)	(0.101)	(0.0626)
log DAH#GENDER	0.101	-0.145**	-0.128**	0.0186	-0.0208	0.00149	-0.0430	-0.101*	0.0347	0.0428	0.105	0.0460
	(0.128)	(0.0565)	(0.0502)	(0.0214)	(0.0235)	(0.0255)	(0.0271)	(0.0588)	(0.0614)	(0.0577)	(0.0739)	(0.0554)
GOV	-0.179***	-0.0746	-0.0890***	-0.0501***	-0.0631**	-0.0518***	-0.0395**	-0.0905***	-0.114***	-0.103***	0.00386	0.0278
	(0.0355)	(0.0453)	(0.0281)	(0.0121)	(0.0253)	(0.0108)	(0.0190)	(0.0267)	(0.0353)	(0.0320)	(0.0696)	(0.0792)
EXPEND	-0.0222***	-0.00785	-0.0103***	-0.00279*	-0.00545**	-0.00346***	-0.00123	-0.0103***	0.000571	-5.29e-05	0.000637	-8.35e-05
	(0.00401)	(0.00478)	(0.00317)	(0.00148)	(0.00256)	(0.00133)	(0.00193)	(0.00302)	(0.00395)	(0.00554)	(0.00453)	(0.00336)
log FERTIL	0.682***	0.284***	0.566***	0.0521**	0.0268	0.0490**	0.436***	0.551***	0.0614	0.106	0.0375	0.0425
	(0.0634)	(0.107)	(0.0592)	(0.0250)	(0.0626)	(0.0233)	(0.0509)	(0.0571)	(0.0528)	(0.0665)	(0.146)	(0.140)
log POP	-0.0180	0.598***	0.00411	-0.0168***	0.191**	-0.0181***	0.0250	0.0150	-0.0365***	-0.0375***	0.167	0.282*
	(0.0130)	(0.161)	(0.0208)	(0.00377)	(0.0925)	(0.00454)	(0.0229)	(0.0207)	(0.00689)	(0.00825)	(0.169)	(0.163)
log GDP	-0.188***	-0.155**	-0.303***	-0.0130	-0.0578*	-0.0142	-0.244***	-0.277***	0.0329	0.0336	-0.208*	-0.105
	(0.0248)	(0.0737)	(0.0297)	(0.00859)	(0.0336)	(0.00951)	(0.0263)	(0.0288)	(0.0327)	(0.0268)	(0.123)	(0.113)
log HIV	0.0769***	0.0198	0.0540***	0.0193***	0.00567	0.0184***	0.0397***	0.0600***	0.00645	-0.00119	0.0131	-0.00261
	(0.0128)	(0.0305)	(0.0164)	(0.00603)	(0.0161)	(0.00464)	(0.0135)	(0.0157)	(0.00824)	(0.00906)	(0.0194)	(0.0143)
Lag IMR				0.954***	0.789***	0.958***			1.037***	1.028***	0.601***	0.652***
				(0.0196)	(0.0448)	(0.0174)			(0.0471)	(0.0454)	(0.108)	(0.146)
trend							-0.110***					
							(0.00966)					
Constant	4.869***	-4.792*	5.354***	0.373***	-1.881	0.371***	4.995***	5.128***	-0.0715	-0.0709		
	(0.316)	(2.859)	(0.450)	(0.141)	(1.491)	(0.143)	(0.438)	(0.437)	(0.398)	(0.340)		
Observations	402	402	402	402	402	402	402	402	402	402	295	295
R-squared	0.857	0.830		0.995	0.945							
Number of ccode		107		107	107		107	107	107	107	105	105
instruments									56	56	38	38
Sargan-Test									0	0	4.94e-05	4.94e-05
Hansen-Test									0.217	0.217	0.459	0.459
AR2									0.0174	0.0375	0.900	0.937

Note: The complete estimation results are shown in the appendix. All models include period fixed effects. Linear regression models with panel corrected standard errors (OLS-PCSE) are adjusted for panel-specific (AR1) autocorrelation and heteroskedastic panels. Fixed effects models use cluster-robust standard errors. In Difference and System-GMM models DAH, governance, GDP per capita and fertility rate are specified as endogenous variables. In 2-step GMM Windmeijer bias-corrected robust standard errors are used. *** p<0.01, ** p<0.05, * p<0.1.

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