

# FAMILY PLANNING PROGRAM EFFECTS: A REVIEW OF EVIDENCE FROM MICRODATA

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Table 1: Estimates of the effect of family planning programs on fertility outcomes

Country	Study Period	Measure of Family Planning	Fertility measure	Marginal or Incremental Effect Size	Relative Effect Size	Background Fertility Change During Study Period (where possible)	Percent Change Explained (where possible)	Citation	Notes
Bangladesh	1974-1980	Program exposure	General fertility rate	1.8	25%			Phillips et al., 1982	
Bangladesh	1967-1990	Program exposure	Number of children 0-8	0.41	25%	25%		Foster and Roy, 1997	
Bangladesh	1974-1996	Program exposure	Children ever born	1-1.5	15%			Joshi and Schultz, 2007	
Bangladesh	1974-1996	Program exposure	Lifetime fertility	0.5	13%	40%	33%	Sinha, 2005	Background fertility change is calculated roughly as the difference in lifetime fertility among women in treatment areas before and after treatment (7.21 vs 4.29)
Bangladesh	1974-1996	Program exposure	Child to woman ratio	0.12	17%	46%	37%	Joshi and Schultz, 2007	Relative effect size is calculated roughly as the average change in fertility scaled by 1974 fertility level
Bangladesh	1974-1996	Program exposure	Children ever born	1	23%*			Joshi and Schultz, 2013	Relative effect size is calculated as the marginal change in children ever born/overall sample mean children ever born
China	1970-1979	Program exposure	Yearly birth hazard (third and higher parity)	.12-.16	35-78%				Relative effect sizes shown occur among third and higher parity births
China	1980-1990	Policy binding	Probability of having a second child	0.11	13%			Li et al., 2005	Effect size shows large heterogeneity across urbanicity and education levels.
Colombia	1965-1993	Years of program exposure	Children ever born	.25-.33	5%	51%	6-7%	Miller, 2010	
Ethiopia	2003-2006	Program exposure	Total births during study period	-	-	-	-	Desai and Tarozzi, 2011	Results on total births during the 3 year study period are mixed, and in some cases point estimates are positive.
Ethiopia	1990-2005	Program exposure	Children ever born	0-.9*	0-20%			Portner et al., 2011	Effect size varies by educational attainment with effects concentrated among uneducated mothers
Ghana	1996-2003	Program exposure	Total fertility rate	1	15%			Debpur et al., 2002, Phillips et al., 2006	
Ghana	1995-2010	Period of program exposure	Total fertility rate	0.42	42%			Phillips et al., 2012	
Indonesia	1970-1993	Lifetime program exposure	Children ever born	0.9	18%			Angeles et al., 2005b	Simulation results shown
Indonesia	1982-1987	Family planning program inputs (mobile family planning visits, clinics and fieldworkers per 1000)	Quarterly birth hazard	0.0002	1.9%	25%	4.2-7.8%*	Gertler and Molyneux, 1994	Range of effect sizes reflects the results of a structural proximate determinants model showing program inputs account for about 4.2% of fertility decline, and a reduced form model showing program inputs account for about 7.8% of fertility decline. Marginal and relative effect sizes shown are from reduced form specifications.
Indonesia	1986-1994	Family planning program subsidies, village distribution centers and family planning clinics)	Quarterly birth hazard	-0.0174	17%			Molyneux and Gertler, 2000	Results shown are the combined net effects of each program input estimated (calculated by scaling regression coefficients with mean input values, and summing across family planning program inputs). Values are approximate given approximated sample mean values and baseline quarterly birth hazards. Reduced form estimates for
Indonesia	1976-1986	Proportion of households with family planning clinic	Children ever born	-	-	-	-	Pitt et al. 1993	
Iran	1986-1996	Family planning service availability; length of exposure	Child to woman ratio	0.04-.08	4-8%	46%	8%-20%*	Salehi-Isfahani et al., 2010	Share of fertility decline explained calculated using the overall mean child to woman ratio in 1986 (0.95) and 1996 (0.51)
Iran	1970-2004	Years of program exposure	Children ever born	.63-.99*	18-28%			Modrek and Ghobadi, 2011	Marginal effect size calculated roughly using overall mean children ever born
Iran	1970-2000	Family planning service availability	Yearly birth hazard	.02-.05				Hashemi and Salehi-Isfahani, 2013	Marginal effect size observed for higher parity births
Kenya	2005-2009	Program exposure	Incident pregnancy	-	-	-	-	Kosgei et al., 2011	
Peru	1972-1991	Dispensary and pharmacy placement within community	Children ever born	.93-1.3*	25-35%			Angeles et al., 2005a	Marginal effect size, as measured through simulations, varies depending on educational attainment
Romania	1988-1992	Contraceptive availability	Yearly birth hazard	0.07				Pop-Eleches, 2010	
Romania	1988-1992	Contraceptive availability	Total fertility rate	.39-1.1*	28-34%			Pop-Eleches, 2010	Marginal effect size varies depending on educational attainment
Tanzania	1970-1991	Lifetime program exposure	Children ever born	0.57	10-20%*			Angeles et al., 1998	Range of effect sizes, as measured through simulation, correspond to placement of family planning dispensaries, hospitals and health centers.

Column 4 reports the change in fertility associated with a one unit change in the relevant measure of family planning program, Column 5 gives the effect size relative to fertility level at baseline, Column 6 reports the overall change in fertility observed during the period of study, and Column 7 reports the implied percent of the overall fertility decline explained by family planning.