

## **Technical appendix**

# **Strengthening accountability through media in Nepal: final evaluation**

**May 2017**

**Research and Learning**

## Contents

Introduction .....	3
1. Survey sampling methodology.....	4
2. Regression analysis.....	5
Variables .....	5
Significance testing .....	5
Analysis .....	5
Full model results .....	8
Knowledge.....	8
Discussion.....	11
Efficacy .....	14
Participation .....	16
Cohesive attitudes.....	20
3. Full results of structural equation modelling (SEM) analysis.....	22

## Introduction

This technical appendix is intended to be read alongside the associated BBC Media Action report, *Strengthening accountability through media in Nepal: final evaluation*. This is available from: <http://dataportal.bbcmmediaaction.org/site/assets/uploads/2017/06/Nepal-Country-Report-2017.pdf>.

## I. Survey sampling methodology

As outlined in the table below, BBC Media Action carried out two national surveys.

**Table I: Quantitative surveys conducted (2013-2016)**

Study	Data collection	Sample size	Criteria
<b>Baseline</b>	December 2012 – January 2013	n=4,000	Nationally representative, adults 15+
<b>Endline</b>	December 2015 – January 2016	n=4,000	Nationally representative, adults 15+

For each of these surveys, the sample was stratified across the major geographical divisions of the country (by region/district/ward). Within these geographical divisions, a probability proportional to size multistage cluster sample was employed. At all stages, the selection of clusters was random and self-weighting. The sampling frame for these surveys was constructed using the 2011 census data.<sup>1</sup> Within enumeration areas, predefined random starting points were used to begin household selection. Random walk was applied with a fixed household interval. Within households, a Kish grid was used to select respondents.

Data collection was carried out using face-to-face interviews and recorded using either paper and pen, or computer-assisted personal interviewing (CAPI).

After data collection, the samples were compared to the latest census data and, where necessary to correct for any imbalances in region/state, gender, age and location (urban vs rural), nested weights applied.

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<sup>1</sup> At baseline, 2001 census data was also used as the 2011 results were only preliminary at that time.

## 2. Regression analysis

This technical appendix summarises the results of analysis BBC Media Action carried out on the Nepal endline dataset (2016), which was representative of Nepal's national adult population (15+).

BBC Media Action carried out regression analysis to test the association between exposure to *Sajha Sawal* and several governance outcomes (political knowledge, discussion, efficacy, participation and cohesive attitudes), while controlling for some of the other key factors which may influence these outcomes.

### Variables

The independent variable for regression analysis was exposure to *Sajha Sawal*, with two categories: regularly exposed to *Sajha Sawal* (exposed to at least every other episode), and never exposed to *Sajha Sawal*. Those who had been exposed, but not regularly, and those without access to media were set as missing.

The dependent variables were constructed as either categorical or continuous variables, dependent on the distribution of the outcome variables. Logistic regression was carried out for categorical dependent variables, and linear (OLS) regression was conducted for continuous dependent variables.

In addition to being based on past research and the specific country context, the confounders used in the analysis were chosen because they were hypothesised to be key factors in influencing the outcome variable. They therefore varied slightly across models.

### Significance testing

Before carrying out regression analysis, BBC Media Action conducted statistical tests in order to measure the strength and the direction of bivariate relationships, as well as to test their significance. More precisely, BBC Media Action analysed:

- The relationship between the main independent variable (exposure) and the construct variables defined as outcomes (political knowledge, discussion, efficacy, participation and cohesive attitudes)
- The relationships among outcome variables
- The relationship between exposure and all the socio-demographic variables potentially associated with it (referred to as “confounders”)
- The relationship between the outcome variables and confounders

BBC Media Action conducted different types of significance tests according to the nature of the variables considered. T-tests and Mann-Whitney U-tests were used to compare the differences between means, Pearson's R and Spearman's Rho tests were used to ascertain correlation, and Chi-squared tests were conducted to measure associations. All tests were conducted with significance at the  $p = 0.05$  level.

### Analysis

As mentioned above, BBC Media Action carried out different types of regression analysis based on the dependent variable.

**Logistic regression model:** this allows researchers to work with categorical variables such as the binary variables where the distribution of the variables does not follow a normal and linear distribution that could have fitted better in another statistical model such as a linear regression. The logistic regression produces a probability value or odds ratio (OR) that indicates how much more likely it is that cases with specific attributes will fit into a

model that explains the presence of certain outcomes. The regressions are calculated with a certain degree of confidence specified by the model. This confidence interval is used to understand if the changes in one variable are associated with changes in the other as a result of a statistical relationship that can be explained by the model. Here, any value above 95% is considered as statistically significant.

**The ordinary least squares (OLS) model:** this allows researchers to work with a continuous dependent variable, derived through confirmatory factor analysis, and independent variables that have either continuous or categorical values. The regression coefficient for the independent variable provides key information indicating the estimated change in the dependent variable associated with a one unit increase in the independent variable. The model seeks to summarise this association by fitting a straight line to predict the value of the dependent variable based on the observed values of the independent variables.

BBC Media Action’s data satisfied the principle assumptions required for justifying the use of OLS: the relationships between the dependent and independent variables were linear and additive, and the error terms were normally distributed, constant, and were not correlated. With these assumptions met, a confidence interval for the regression line was calculated for each estimate and BBC Media Action was able to test whether the hypothesis of a zero slope – that is of no relationship between the two key variables of interest – existed in the true population.

Prior to analysis, BBC Media Action adopted the conventional standard of rejecting the null hypothesis at the 0.05 level. Given this, BBC Media Action expects that any estimated effects that are significantly associated with exposure to the programme of interest fall within the range reported in the confidence intervals 95% of the time.

**Table 2: Overview of regression models**

Analysis was carried out on the Nepal endline dataset (2016)

Model	Model performance			Association with exposure		
	Sample size	R square	Significance (OLS only)	Association (OR/ coefficient)	95% confidence interval/ standard error (SE)	Significance
<b>Regression 1.1:</b> Knowledge OLS model	3,130	0.307	<0.001	0.245	0.105 to 0.384	0.001
<b>Regression 1.2:</b> Knowledge OLS model with gender interaction	3,130	0.307	<0.001	Exposure for women -0.008	-0.285 to 0.269	0.955 (not significant)
<b>Regression 2.1:</b> Discussion OLS model	3,204	0.280	<0.001	0.580	0.389 to 0.772	<0.001
<b>Regression 2.2:</b> Discussion OLS model with gender interaction	3,204	0.280	<0.001	Exposure for women -0.032	-0.411 to 0.348	0.870 (not significant)
<b>Regression 3.1:</b>	3,163	0.060	<0.001	-0.043	-0.156 to	0.460 (not

Efficacy OLS model					0.71	significant)
<b>Regression 4.1:</b> Participation OLS model	3,219	0.346	<0.001	0.553	0.418 to 0.688	<0.001
<b>Regression 4.2:</b> Participation OLS model with gender interaction	3,219	0.349	<0.001	Exposure for women -0.508	-0.775 to -0.240	<0.001
<b>Regression 4.3:</b> Participation logistic model	3,219	0.281	-	OR 1.766	SE 0.107	<0.001
<b>Regression 5.1:</b> Cohesive attitudes OLS model	3,211	0.167	<0.001	0.277	0.162 to 0.393	<0.001

## Full model results

Note: 'Ref' indicates the reference category of each variable

### Knowledge

**Table 3: Regression 1.1 - Knowledge OLS model**

Dependent variable: knowledge of governance issues (0 to 10)

Predictor	Unstandardized coefficients		Standardized coefficient	Significance	95.0% confidence interval for B	
	Beta	Standard error	Beta		Lower bound	Upper bound
<b>Not exposed to <i>Sajha Sawal</i></b>	Ref	-	-	-	-	-
<b>Regularly exposed to <i>Sajha Sawal</i></b>	.245	.071	.058	.001	.105	.384
<b>Group membership - not an active member</b>	Ref	-	-	-	-	-
<b>Active member</b>	.300	.061	.077	.000	.180	.421
<b>Interest in politics - not at all interested</b>	Ref	-	-	-	-	-
<b>Not very interested</b>	-.277	.078	-.057	.000	-.429	-.124
<b>Very interested</b>	.663	.072	.158	.000	.522	.804
<b>Region - Central</b>	Ref	-	-	-	-	-
<b>Far Western</b>	-1.029	.106	-.155	.000	-1.237	-.820
<b>Mid-Western</b>	-.639	.093	-.113	.000	-.822	-.456
<b>Western</b>	-.493	.082	-.101	.000	-.653	-.332
<b>Eastern</b>	-.046	.078	-.010	.556	-.198	.107
<b>Male</b>	Ref	-	-	-	-	-
<b>Female</b>	-.301	.068	-.078	.000	-.433	-.168
<b>Rural</b>	Ref	-	-	-	-	-
<b>Urban</b>	.044	.078	.009	.573	-.109	.197
<b>Age 15-24</b>	Ref	-	-	-	-	-
<b>Age 25-34</b>	.122	.100	.027	.219	-.073	.318
<b>Age 35-44</b>	.240	.110	.049	.029	.025	.456
<b>Age 45-54</b>	.286	.119	.054	.017	.052	.519
<b>Age 55-64</b>	.331	.132	.055	.012	.073	.588
<b>Age 65+</b>	.253	.148	.037	.088	-.037	.544
<b>Education - illiterate</b>	Ref	-	-	-	-	-
<b>Literate</b>	.616	.091	.123	.000	.438	.795
<b>Completed primary</b>	.843	.107	.141	.000	.632	1.054
<b>Completed secondary</b>	1.337	.094	.320	.000	1.153	1.522
<b>Completed college/university</b>	2.036	.118	.365	.000	1.805	2.267
<b>Income - medium</b>	Ref	-	-	-	-	-
<b>Low</b>	-.351	.108	-.050	.001	-.562	-.139
<b>High</b>	.053	.106	.008	.616	-.154	.260
<b>Marital status -</b>	Ref	-	-	-	-	-

married, living with spouse						
Single	.124	.106	.023	.241	-.083	.332
Married, not living with spouse	-.172	.153	-.017	.260	-.472	.128
Divorced/separated	-.242	.603	-.006	.688	-1.424	.939
Widowed	.001	.145	.000	.996	-.283	.284
In a marriage where the husband has more than one wife	-.149	.809	-.003	.854	-1.734	1.437
Living with partner	-1.005	1.277	-.012	.431	-3.508	1.499
Constant	3.993	.139		.000	3.721	4.266

The model had an adjusted R square of 0.307. The Durbin-Watson value was 1.745. The F statistic was 52.585 (significance < 0.001).

**Table 4: Regression 1.2 – Knowledge OLS model with gender interaction**

Dependent variable: knowledge of governance issues (0 to 10)

Predictor	Unstandardized coefficients		Standardized coefficient	Significance	95.0% confidence interval for B	
	Beta	Standard error	Beta		Lower bound	Upper bound
Not exposed to <i>Sajha Sawal</i>	Ref	-	-	-	-	-
Regularly exposed to <i>Sajha Sawal</i>	.248	.087	.058	.004	.077	.418
Male	Ref	-	-	-	-	-
Female	-.299	.076	-.078	.000	-.447	-.151
Exposure for women	-.008	.141	-.001	.955	-.285	.269
Group membership – not an active member	Ref	-	-	-	-	-
Active member	.300	.061	.077	.000	.180	.420
Interest in politics – not at all interested	Ref	-	-	-	-	-
Not very interested	-.277	.078	-.057	.000	-.429	-.124
Very interested	.663	.072	.158	.000	.522	.804
Region - Central	Ref	-	-	-	-	-
Far Western	-1.029	.106	-.155	.000	-1.237	-.821
Mid-Western	-.639	.093	-.113	.000	-.822	-.456
Western	-.492	.082	-.101	.000	-.653	-.332
Eastern	-.046	.078	-.010	.557	-.198	.107
Rural	Ref	-	-	-	-	-
Urban	.044	.078	.009	.572	-.109	.198
Age 15-24	Ref	-	-	-	-	-
Age 25-34	.122	.100	.027	.219	-.073	.318
Age 35-44	.240	.110	.049	.029	.024	.456
Age 45-54	.286	.119	.054	.017	.052	.519

<b>Age 55-64</b>	.330	.132	.055	.012	.072	.588
<b>Age 65+</b>	.253	.148	.037	.087	-.037	.544
<b>Education - illiterate</b>	Ref	-	-	-	-	-
<b>Literate</b>	.616	.091	.123	.000	.438	.795
<b>Completed primary</b>	.843	.108	.141	.000	.632	1.054
<b>Completed secondary</b>	1.337	.094	.320	.000	1.153	1.522
<b>Completed college/university</b>	2.036	.118	.365	.000	1.805	2.268
<b>Income - medium</b>	Ref	-	-	-	-	-
<b>Low</b>	-.351	.108	-.050	.001	-.562	-.139
<b>High</b>	.053	.106	.008	.617	-.154	.260
<b>Marital status - married, living with spouse</b>	Ref	-	-	-	-	-
<b>Single</b>	.124	.106	.023	.241	-.083	.332
<b>Married, not living with spouse</b>	-.172	.153	-.017	.262	-.472	.128
<b>Divorced/separated</b>	-.242	.603	-.006	.688	-1.424	.940
<b>Widowed</b>	.001	.145	.000	.996	-.283	.284
<b>In a marriage where the husband has more than one wife</b>	-.150	.809	-.003	.853	-1.736	1.436
<b>Living with partner</b>	-1.007	1.278	-.012	.431	-3.512	1.498
<b>(Constant)</b>	3.992	.141		.000	3.717	4.268

The model had an adjusted R square of 0.307. The Durbin-Watson value was 1.745. The F statistic was 50.691 (significance < 0.001).

## Discussion

**Table 5: Regression 2.1 – Discussion OLS model**

Dependent variable: average discussion score (0 to 10)

Predictor	Unstandardized coefficients		Standardized coefficient	Significance	95.0% confidence interval for B	
	Beta	Standard error	Beta		Lower bound	Upper bound
<b>Not exposed to <i>Sajha Sawal</i></b>	Ref	-	-	-	-	-
<b>Regularly exposed to <i>Sajha Sawal</i></b>	.580	.098	.101	.000	.389	.772
<b>Group membership – not an active member</b>	Ref	-	-	-	-	-
<b>Active member</b>	.632	.084	.120	.000	.467	.797
<b>Interest in politics – not at all interested</b>	Ref	-	-	-	-	-
<b>Not very interested</b>	-.626	.106	-.095	.000	-.835	-.418
<b>Very interested</b>	1.009	.099	.177	.000	.815	1.202
<b>Region – Central</b>	Ref	-	-	-	-	-
<b>Far Western</b>	-.694	.146	-.077	.000	-.979	-.408
<b>Mid-Western</b>	-.532	.128	-.069	.000	-.782	-.282
<b>Western</b>	-.208	.112	-.031	.063	-.427	.011
<b>Eastern</b>	-.366	.106	-.058	.001	-.574	-.157
<b>Male</b>	Ref	-	-	-	-	-
<b>Female</b>	-.655	.093	-.126	.000	-.837	-.473
<b>Rural</b>	Ref	-	-	-	-	-
<b>Urban</b>	.463	.107	.067	.000	.253	.673
<b>Age 15-24</b>	Ref	-	-	-	-	-
<b>Age 25-34</b>	.148	.136	.024	.279	-.120	.415
<b>Age 35-44</b>	.034	.151	.005	.823	-.262	.329
<b>Age 45-54</b>	.211	.163	.029	.196	-.109	.531
<b>Age 55-64</b>	-.041	.180	-.005	.821	-.394	.313
<b>Age 65+</b>	-.206	.203	-.022	.311	-.604	.192
<b>Education - illiterate</b>	Ref	-	-	-	-	-
<b>Literate</b>	.501	.125	.073	.000	.257	.745
<b>Completed primary</b>	.742	.147	.092	.000	.454	1.031
<b>Completed secondary</b>	1.061	.129	.187	.000	.809	1.313
<b>Completed college/university</b>	1.579	.162	.208	.000	1.262	1.896
<b>Income - medium</b>	Ref	-	-	-	-	-
<b>Low</b>	-.813	.148	-.086	.000	-1.103	-.523
<b>High</b>	-.009	.145	-.001	.949	-.293	.274
<b>Marital status – married, living with spouse</b>	Ref	-	-	-	-	-
<b>Single</b>	-.025	.145	-.003	.863	-.309	.259

<b>Married, not living with spouse</b>	-.270	.210	-.020	.198	-.681	.141
<b>Divorced/separated</b>	-.217	.826	-.004	.793	-1.836	1.402
<b>Widowed</b>	-.249	.198	-.020	.209	-.637	.139
<b>In a marriage where the husband has more than one wife</b>	.481	1.108	.007	.664	-1.691	2.653
<b>Living with partner</b>	-1.685	1.749	-.014	.335	-5.115	1.745
<b>(Constant)</b>	3.343	.191		.000	2.969	3.717

The model had an adjusted R square of 0.280. The Durbin-Watson value was 1.727. The F statistic was 47.333 (significance < 0.001).

**Table 6: Regression 2.2 – Discussion OLS model with gender interaction**

Dependent variable: average discussion score (0 to 10)

Predictor	Unstandardized coefficients		Standardized coefficient	Significance	95.0% confidence interval for B	
	Beta	Standard error	Beta		Lower bound	Upper bound
<b>Not exposed to <i>Sajha Sawal</i></b>	Ref	-	-	-	-	-
<b>Regularly exposed to <i>Sajha Sawal</i></b>	.592	.119	.103	.000	.358	.825
<b>Male</b>	Ref	-	-	-	-	-
<b>Female</b>	-.647	.104	-.124	.000	-.850	-.444
<b>Exposure for women</b>	-.032	.193	-.003	.870	-.411	.348
<b>Group membership – not an active member</b>	Ref	-	-	-	-	-
<b>Active member</b>	.632	.084	.120	.000	.467	.797
<b>Interest in politics – not at all interested</b>	Ref	-	-	-	-	-
<b>Not very interested</b>	-.627	.106	-.095	.000	-.835	-.418
<b>Very interested</b>	1.008	.099	.177	.000	.815	1.202
<b>Region – Central</b>	Ref	-	-	-	-	-
<b>Far Western</b>	-.694	.146	-.077	.000	-.980	-.409
<b>Mid-Western</b>	-.533	.128	-.069	.000	-.783	-.282
<b>Western</b>	-.208	.112	-.031	.064	-.427	.012
<b>Eastern</b>	-.366	.106	-.058	.001	-.574	-.157
<b>Rural</b>	Ref	-	-	-	-	-
<b>Urban</b>	.463	.107	.067	.000	.253	.673
<b>Age 15-24</b>	Ref	-	-	-	-	-
<b>Age 25-34</b>	.148	.136	.024	.279	-.120	.415
<b>Age 35-44</b>	.033	.151	.005	.827	-.263	.329
<b>Age 45-54</b>	.211	.163	.029	.197	-.110	.531
<b>Age 55-64</b>	-.041	.180	-.005	.820	-.394	.313
<b>Age 65+</b>	-.205	.203	-.022	.313	-.603	.193
<b>Education – illiterate</b>	Ref	-	-	-	-	-
<b>Literate</b>	.502	.125	.073	.000	.257	.746

<b>Completed primary</b>	.743	.147	.092	.000	.454	1.032
<b>Completed secondary</b>	1.061	.129	.187	.000	.809	1.313
<b>Completed college/university</b>	1.580	.162	.208	.000	1.263	1.897
<b>Income - medium</b>	Ref	-	-	-	-	-
<b>Low</b>	-.813	.148	-.086	.000	-1.103	-.523
<b>High</b>	-.010	.145	-.001	.947	-.294	.274
<b>Marital status - married, living with spouse</b>	Ref	-	-	-	-	-
<b>Single</b>	-.025	.145	-.003	.864	-.309	.260
<b>Married, not living with spouse</b>	-.268	.210	-.020	.201	-.680	.143
<b>Divorced/separated</b>	-.215	.826	-.004	.795	-1.834	1.404
<b>Widowed</b>	-.249	.198	-.020	.209	-.637	.139
<b>In a marriage where the husband has more than one wife</b>	.478	1.108	.006	.667	-1.695	2.650
<b>Living with partner</b>	-1.694	1.750	-.015	.333	-5.126	1.738
<b>(Constant)</b>	3.339	.192	-	.000	2.961	3.716

The model had an adjusted R square of 0.280. The Durbin-Watson value was 1.727. The F statistic was 45.629 (significance < 0.001).

## Efficacy

**Table 7: Regression 3.1 – Efficacy OLS model**

Dependent variable: average efficacy score (0 to 10)

Predictor	Unstandardized coefficients		Standardized coefficient	Significance	95.0% confidence interval for B	
	Beta	Standard error	Beta		Lower bound	Upper bound
<b>Not exposed to <i>Sajha Sawal</i></b>	Ref	-	-	-	-	-
<b>Regularly exposed to <i>Sajha Sawal</i></b>	-.043	.058	-.014	.460	-.156	.071
<b>Group membership – not an active member</b>	Ref	-	-	-	-	-
<b>Active member</b>	.217	.050	.079	.000	.119	.315
<b>Interest in politics – not at all interested</b>	Ref	-	-	-	-	-
<b>Not very interested</b>	-.267	.063	-.078	.000	-.391	-.143
<b>Very interested</b>	.266	.059	.090	.000	.151	.381
<b>Region – Central</b>	Ref	-	-	-	-	-
<b>Far Western</b>	.489	.086	.105	.000	.320	.659
<b>Mid-Western</b>	.657	.076	.165	.000	.508	.806
<b>Western</b>	.330	.066	.096	.000	.199	.460
<b>Eastern</b>	.089	.063	.028	.158	-.035	.213
<b>Male</b>	Ref	-	-	-	-	-
<b>Female</b>	-.041	.055	-.015	.456	-.149	.067
<b>Rural</b>	Ref	-	-	-	-	-
<b>Urban</b>	.107	.064	.030	.093	-.018	.232
<b>Age 15-24</b>	Ref	-	-	-	-	-
<b>Age 25-34</b>	-.193	.081	-.061	.017	-.352	-.034
<b>Age 35-44</b>	-.219	.090	-.064	.014	-.395	-.044
<b>Age 45-54</b>	-.120	.097	-.032	.216	-.310	.070
<b>Age 55-64</b>	-.156	.107	-.037	.144	-.366	.054
<b>Age 65+</b>	.050	.121	.010	.676	-.186	.287
<b>Education - illiterate</b>	Ref	-	-	-	-	-
<b>Literate</b>	.155	.074	.044	.036	.010	.300
<b>Completed primary</b>	.019	.087	.004	.830	-.153	.190
<b>Completed secondary</b>	-.006	.076	-.002	.940	-.156	.144
<b>Completed college/university</b>	.047	.096	.012	.623	-.141	.236
<b>Income - medium</b>	Ref	-	-	-	-	-
<b>Low</b>	-.015	.088	-.003	.865	-.187	.157
<b>High</b>	-.138	.086	-.029	.108	-.307	.030
<b>Marital status – married, living with spouse</b>	Ref	-	-	-	-	-
<b>Single</b>	.133	.086	.034	.123	-.036	.302

<b>Married, not living with spouse</b>	-.217	.124	-.031	.082	-.461	.027
<b>Divorced/separated</b>	.183	.490	.006	.710	-.779	1.144
<b>Widowed</b>	.019	.118	.003	.874	-.212	.249
<b>In a marriage where the husband has more than one wife</b>	-1.151	.658	-.030	.080	-2.441	.139
<b>Living with partner</b>	.223	1.039	.004	.830	-1.814	2.261
<b>(Constant)</b>	5.231	.113	-	0.000	5.009	5.453

The model had an adjusted R square of 0.060. The Durbin-Watson value was 1.684. The F statistic was 8.544 (significance < 0.001).

## Participation

**Table 8: Regression 4.1 – Participation OLS model**

Dependent variable: average participation score (0 to 10)

Predictor	Unstandardized coefficients		Standardized coefficient	Significance	95.0% confidence interval for B	
	Beta	Standard error	Beta		Lower bound	Upper bound
<b>Not exposed to <i>Sajha Sawal</i></b>	Ref	-	-	-	-	-
<b>Regularly exposed to <i>Sajha Sawal</i></b>	.553	.069	.129	.000	.418	.688
<b>Group membership – not an active member</b>	Ref	-	-	-	-	-
<b>Active member</b>	.990	.060	.252	.000	.873	1.106
<b>Interest in politics – not at all interested</b>	Ref	-	-	-	-	-
<b>Not very interested</b>	-.266	.075	-.054	.000	-.413	-.118
<b>Very interested</b>	.863	.070	.203	.000	.726	.999
<b>Region – Central</b>	Ref	-	-	-	-	-
<b>Far Western</b>	.631	.103	.094	.000	.429	.833
<b>Mid-Western</b>	.528	.090	.092	.000	.351	.706
<b>Western</b>	.215	.079	.044	.007	.060	.370
<b>Eastern</b>	.358	.075	.077	.000	.211	.506
<b>Male</b>	Ref	-	-	-	-	-
<b>Female</b>	-.730	.066	-.188	.000	-.858	-.601
<b>Rural</b>	Ref	-	-	-	-	-
<b>Urban</b>	.189	.076	.037	.013	.040	.337
<b>Age 15-24</b>	Ref	-	-	-	-	-
<b>Age 25-34</b>	.241	.097	.053	.013	.051	.430
<b>Age 35-44</b>	.291	.107	.059	.006	.082	.500
<b>Age 45-54</b>	.658	.116	.123	.000	.432	.885
<b>Age 55-64</b>	.557	.128	.092	.000	.307	.808
<b>Age 65+</b>	.500	.144	.072	.001	.218	.782
<b>Education - illiterate</b>	Ref	-	-	-	-	-
<b>Literate</b>	.090	.088	.018	.308	-.083	.263
<b>Completed primary</b>	.210	.104	.035	.044	.006	.415
<b>Completed secondary</b>	.319	.091	.076	.000	.140	.498
<b>Completed college/university</b>	.610	.114	.108	.000	.386	.835
<b>Income - medium</b>	Ref	-	-	-	-	-
<b>Low</b>	-.109	.105	-.015	.299	-.314	.096
<b>High</b>	.221	.102	.032	.031	.020	.421
<b>Marital status – married, living with spouse</b>	Ref	-	-	-	-	-
<b>Single</b>	-.281	.103	-.050	.006	-.482	-.080

<b>Married, not living with spouse</b>	-.263	.148	-.026	.076	-.554	.027
<b>Divorced/separated</b>	.469	.585	.011	.423	-.677	1.615
<b>Widowed</b>	.136	.140	.015	.331	-.139	.411
<b>In a marriage where the husband has more than one wife</b>	.265	.784	.005	.736	-1.273	1.803
<b>Living with partner</b>	-1.204	1.239	-.014	.331	-3.632	1.225
<b>(Constant)</b>	2.128	.135	-	.000	1.863	2.392

The model had an adjusted R square of 0.346. The Durbin-Watson value was 1.789. The F statistic was 64.125 (significance < 0.001).

**Table 9: Regression 4.2 – Participation OLS model with gender interaction**

Dependent variable: average participation score (0 to 10)

Predictor	Unstandardized coefficients		Standardized coefficient	Significance	95.0% confidence interval for B	
	Beta	Standard error	Beta		Lower bound	Upper bound
<b>Not exposed to <i>Sajha Sawal</i></b>	Ref	-	-	-	-	-
<b>Regularly exposed to <i>Sajha Sawal</i></b>	.733	.084	.171	.000	.568	.898
<b>Male</b>	Ref	-	-	-	-	-
<b>Female</b>	-.608	.073	-.157	.000	-.752	-.465
<b>Exposure for women</b>	-.508	.137	-.070	.000	-.775	-.240
<b>Group membership – not an active member</b>	Ref	-	-	-	-	-
<b>Active member</b>	.984	.059	.250	.000	.867	1.100
<b>Interest in politics – not at all interested</b>	Ref	-	-	-	-	-
<b>Not very interested</b>	-.270	.075	-.055	.000	-.417	-.122
<b>Very interested</b>	.859	.070	.203	.000	.722	.995
<b>Region – Central</b>	Ref	-	-	-	-	-
<b>Far Western</b>	.621	.103	.093	.000	.420	.823
<b>Mid-Western</b>	.518	.090	.090	.000	.341	.695
<b>Western</b>	.221	.079	.045	.005	.066	.376
<b>Eastern</b>	.360	.075	.077	.000	.212	.507
<b>Rural</b>	Ref	-	-	-	-	-
<b>Urban</b>	.193	.076	.037	.011	.045	.342
<b>Age 15-24</b>	Ref	-	-	-	-	-
<b>Age 25-34</b>	.240	.096	.053	.013	.051	.429
<b>Age 35-44</b>	.279	.107	.056	.009	.071	.488
<b>Age 45-54</b>	.650	.115	.122	.000	.424	.876
<b>Age 55-64</b>	.555	.127	.091	.000	.305	.804
<b>Age 65+</b>	.514	.143	.074	.000	.233	.796
<b>Education – illiterate</b>	Ref	-	-	-	-	-
<b>Literate</b>	.099	.088	.019	.262	-.074	.271

<b>Completed primary</b>	.221	.104	.037	.034	.017	.425
<b>Completed secondary</b>	.320	.091	.076	.000	.142	.498
<b>Completed college/university</b>	.622	.114	.110	.000	.398	.846
<b>Income - medium</b>	Ref	-	-	-	-	-
<b>Low</b>	-.110	.104	-.016	.292	-.315	.095
<b>High</b>	.215	.102	.031	.036	.014	.415
<b>Marital status - married, living with spouse</b>	Ref	-	-	-	-	-
<b>Single</b>	-.279	.102	-.050	.007	-.480	-.078
<b>Married, not living with spouse</b>	-.241	.148	-.024	.104	-.531	.050
<b>Divorced/separated</b>	.500	.583	.012	.391	-.644	1.644
<b>Widowed</b>	.136	.140	.015	.333	-.139	.410
<b>In a marriage where the husband has more than one wife</b>	.214	.783	.004	.785	-1.321	1.749
<b>Living with partner</b>	-1.347	1.237	-.016	.276	-3.772	1.078
<b>(Constant)</b>	2.057	.136		.000	1.790	2.323

The model had an adjusted R square of 0.349. The Durbin-Watson value was 1.792. The F statistic was 64.125 (significance < 0.001).

**Table 10: Regression 4.3 - Participation logistic model (participated at least once versus not participated)**

<b>Variable</b>	<b>Standard error</b>	<b>Significance level</b>	<b>Odds ratio</b>
<b>Not exposed to <i>Sajha Sawal</i></b>	Ref	-	-
<b>Regularly exposed to <i>Sajha Sawal</i></b>	.107	.000	1.759
<b>Group membership - not an active member</b>	Ref	-	-
<b>Active member</b>	.089	.000	3.552
<b>Interest in politics - not at all interested</b>	Ref	.000	-
<b>Not very interested</b>	.225	.091	1.463
<b>Somewhat interested</b>	.215	.000	2.812
<b>Very interested</b>	.229	.000	4.557
<b>Male</b>	Ref	-	-
<b>Female</b>	.095	.000	.416
<b>Rural</b>	Ref	-	-
<b>Urban</b>	.106	.550	.939
<b>Age 15-24</b>	Ref	.210	-
<b>Age 25-34</b>	.120	.363	1.116
<b>Age 35-44</b>	.136	.202	1.189
<b>Age 45-54</b>	.157	.050	1.360
<b>Age 55-64</b>	.174	.759	1.055
<b>Age 65+</b>	.196	.631	.910
<b>Education - illiterate</b>	Ref	.577	-

<b>Literate</b>	.133	.202	1.184
<b>Completed primary</b>	.156	.255	1.194
<b>Completed secondary</b>	.135	.802	1.034
<b>Completed college/university</b>	.168	.891	1.023
<b>Income - medium</b>	Ref	.284	-
<b>Low</b>	.193	.322	.826
<b>High</b>	.148	.231	1.195
<b>Constant</b>	.252	.001	.422

The Nagelkerke R statistic for this model was 0.278. The Hosmer and Lemeshow statistic had a chi-square of 18.775 and a significance level of 0.016.

## Cohesive attitudes

**Table 11: Regression 5.1 – Cohesive attitudes OLS model**

Dependent variable: average cohesive attitudes score (0 to 10, where higher numbers mean more cohesive attitudes)

Predictor	Unstandardized coefficients		Standardized coefficient	Significance	95.0% confidence interval for B	
	Beta	Standard error	Beta		Lower bound	Upper bound
<b>Not exposed to <i>Sajha Sawal</i></b>	Ref	-	-	-	-	-
<b>Regularly exposed to <i>Sajha Sawal</i></b>	.277	.059	.080	.000	.162	.393
<b>Group membership – not an active member</b>	Ref	-	-	-	-	-
<b>Active member</b>	.026	.046	.010	.569	-.064	.117
<b>Interest in politics – not at all interested</b>	Ref	-	-	-	-	-
<b>Not very interested</b>	-.570	.074	-.177	.000	-.716	-.424
<b>Very interested</b>	-.400	.071	-.139	.000	-.540	-.260
<b>Interest in politics – very interested</b>	.204	.075	.066	.007	.056	.351
<b>Region – Central</b>	Ref	-	-	-	-	-
<b>Far Western</b>	.958	.180	.087	.000	.606	1.310
<b>Mid-Western</b>	.596	.151	.064	.000	.299	.892
<b>Western</b>	-.037	.128	-.005	.770	-.288	.213
<b>Eastern</b>	-.074	.119	-.010	.535	-.306	.159
<b>Male</b>	Ref	-	-	-	-	-
<b>Female</b>	-.208	.046	-.076	.000	-.299	-.116
<b>Rural</b>	Ref	-	-	-	-	-
<b>Urban</b>	.006	.050	.002	.902	-.092	.104
<b>Age 15-24</b>	Ref	-	-	-	-	-
<b>Age 25-34</b>	-.026	.064	-.009	.682	-.151	.099
<b>Age 35-44</b>	-.118	.077	-.033	.123	-.269	.032
<b>Age 45-54</b>	.033	.087	.008	.702	-.138	.205
<b>Age 55-64</b>	.034	.104	.006	.741	-.170	.239
<b>Age 65+</b>	.036	.121	.006	.768	-.201	.273
<b>Education – illiterate</b>	Ref	-	-	-	-	-
<b>Literate</b>	.475	.083	.116	.000	.313	.638
<b>Completed primary</b>	.593	.075	.179	.000	.445	.740
<b>Completed secondary</b>	.800	.075	.275	.000	.654	.947
<b>Completed college/university</b>	.996	.090	.263	.000	.820	1.171
<b>Income – medium</b>	Ref	-	-	-	-	-
<b>Low</b>	-.106	.055	-.033	.055	-.215	.002
<b>High</b>	.352	.081	.074	.000	.193	.512
<b>Marital status –</b>	Ref	-	-	-	-	-

<b>married, living with spouse</b>						
<b>Single</b>	-.065	.062	-.022	.294	-.187	.056
<b>Married, not living with spouse</b>	-.080	.107	-.012	.452	-.289	.129
<b>Divorced/separated</b>	-.128	.166	-.013	.438	-.453	.196
<b>Widowed</b>	-.129	.118	-.019	.277	-.361	.103
<b>In a marriage where the husband has more than one wife</b>	.310	.229	.022	.177	-.140	.759
<b>Living with partner</b>	.224	.259	.014	.386	-.283	.731
<b>(Constant)</b>	7.546	.107	-	.000	7.335	7.757

The model had an adjusted R square of 0.167. The Durbin-Watson value was 1.411. The F statistic was 24.151 (significance < 0.001).

### 3. Full results of structural equation modelling (SEM) analysis

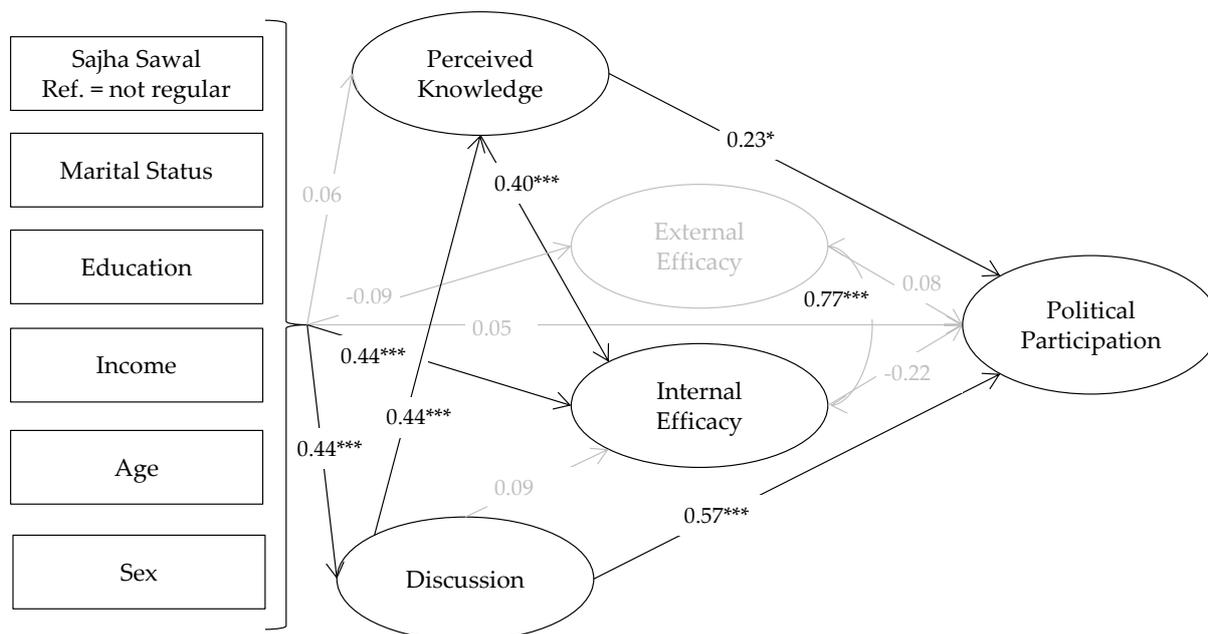
This technical appendix summarises the results of the SEM analysis. See the full technical appendix for more information on the methodology and results, available at:

<http://dataportal.bbcmmediaaction.org/site/>

#### Results from theoretical schematic I

Figure I below gives the results from the first theoretical model, when modelled using the endline dataset. In all case \*\*\* means significant at the 99.9% level, \*\* is significant at the 99% level and \* is significant at the 95% level. No stars means outside the standard level of significance.

**Figure I: Model results from theoretical model I**



The coefficients presented on the diagram relate to regular exposure to *Sajha Sawal* when compared to non-exposure. So the value of 0.44 from the control variables on the left hand side of the diagram to discussion means that those who were exposed to *Sajha Sawal* reported that they had engaged in political discussion 0.44 of standard deviation higher than those who were not exposed.

The values between the ovals represent the standardised relationships between the latent variables, when controlling for all of the elements on the left hand side of the diagram. So the 0.40 between perceived knowledge and internal efficacy means that those who were one standard deviation higher on political knowledge were likely to be around two-fifths of a standard deviation higher on their feeling of political internal efficacy.

The components that are 'greyed out' were non-significant mediator variables and pathways between regular exposure to *Sajha Sawal* and political participation. Put another way, these components play no role in shaping the political participation of the individual due to regular exposure to *Sajha Sawal*.

There were direct and indirect effects of the control variable on the ultimate dependent variable (political participation). These were found by multiplying the coefficients along the pathways represented by single headed arrows. The rationale for the pathways was given by the theoretical

models outlined in a separate report (available on request). Hence the results are valid only in as much as the theoretical arguments are valid.

These results show that:

- The total effect of *Sajha Sawal* on political participation = 0.429\*\*\*
  - This means that exposure to *Sajha Sawal* was associated with increased political participation by 0.43 of a standard deviation.
- The direct effect of *Sajha Sawal* on political participation = 0.05 not significant
  - This means that the direct effect was slightly positive, but insignificant

Indirect effects, in order of size:

1. Via political discussion = 0.25\*\*\*
2. Via knowledge and political discussion = 0.045\*
3. Despite adding to the total indirect effect, and hence to the total effect, all other pathways were statistically insignificant

Overall, therefore, exposure to *Sajha Sawal* was associated with an increase in political participation but this was found to operate through the associated increases in the mediating variable of political discussion, which was the significant mediating variable for all pathways. Knowledge also played a role, but only through its knock on effect through increased discussion.

There were both indirect and direct effects from the other control variables included in the model.

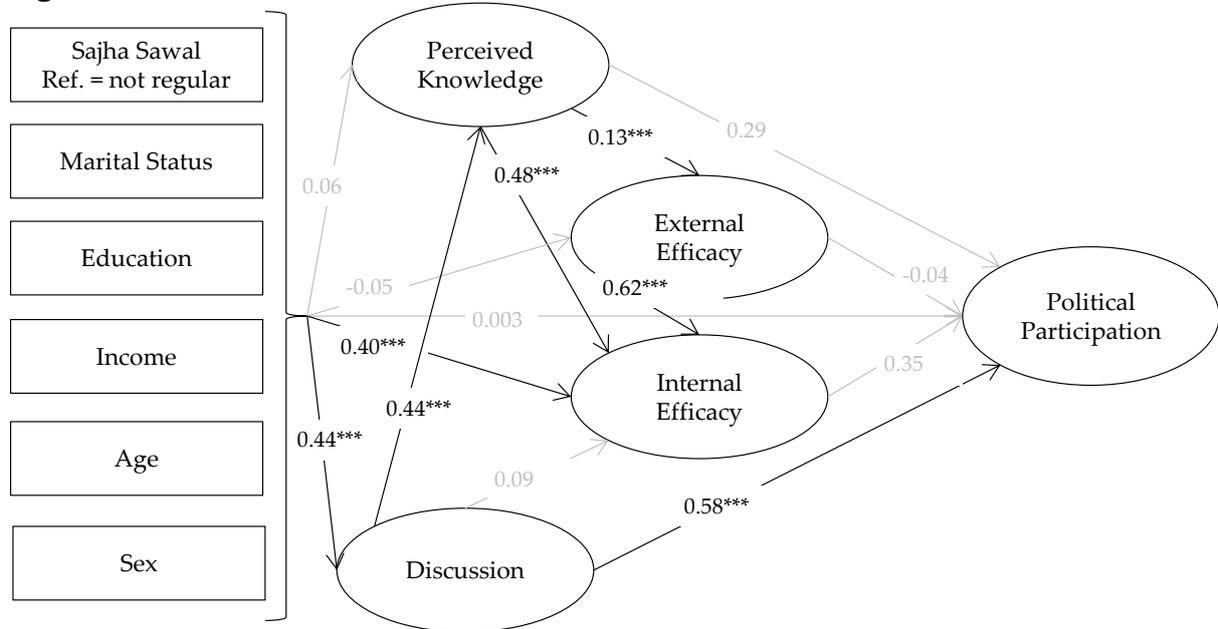
The effects of each followed the following pattern:

- Being educated to a level lower than secondary school reduced individuals' political participation, more than being educated to secondary school and above increased participation. These effects only occurred indirectly and, as with exposure to *Sajha Sawal*, the main mediator was political discussion
- Being single was associated with a lower level of political participation, relative to those who were married. Being separated, widowed and/or divorced was associated with the same level of participation as being married, though both groups' sample sizes were small
- Somewhat counterintuitively, income appeared not to be related with levels of political participation. However, income was strongly correlated with education
- Age (being older) increased political participation. This effect was direct, and not effected by any mediators
- Women participated less than men (by around half of a standard deviation). This effect was split almost evenly between a direct effect and operating through political discussion

## Results from theoretical schematic 2

Figure 2 gives the results from the second theoretical model. The presentation is of the same form as the previous section but some extra indirect pathways were included due to the addition of pathways from perceived political knowledge to external political efficacy, and from external political efficacy to internal political efficacy.

**Figure 2: Model results from theoretical model 2**



These results show that:

- The total effect of *Sajha Sawal* on political participation = 0.429\*\*\*
  - As in model 1, this means that exposure to *Sajha Sawal* was associated with an increase in political participation of 0.43 of a standard deviation
- The direct effect of *Sajha Sawal* on political participation = 0.003 (not significant)
  - This means that the direct effect was slightly negative, but insignificant

There was only one significant indirect effect, and that was via political discussion with a value of 0.256. Other insignificant mediation pathways added to the overall effect, although they were not significant themselves.

These results are consistent with those found in the previous model and thus reiterate the same conclusion: that *Sajha Sawal* only affected political participation though the indirect pathway with political discussion.

All of the effects of the control variables were the same as in the first model.