



**Strengthening and Linking Women-Led Efforts  
to Promote Women's Property and Literacy  
Rights in Sierra Leone  
Project Effectiveness Review  
*Full Technical Report***



**Oxfam GB  
Women's Empowerment Outcome Indicator**

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## Executive summary

Under Oxfam Great Britain's (OGB) Global Performance Framework, a number of projects are randomly selected each year for a rigorous assessment of their effectiveness. The project 'Strengthening and Linking Women-Led Efforts to Promote Women's Property and Literacy Rights in Sierra Leone' was one of those selected for review in the 2012/13 financial year. This project aimed, firstly, to strengthen the capacity of community-based groups and national women's networks in raising awareness on women's property and literacy rights, and secondly, to advocate for greater participation of women in decision-making on property ownership and for a more enabling environment for women to exercise their property and literacy rights. The project was managed by a consortium of partners and implemented in four districts of Sierra Leone, of which Oxfam was responsible for implementation in Koinadugu and Kailahun Districts.

Under this project, 130 women leaders from communities in the two districts received training on women's rights issues, leadership skills and advocacy skills, and were then supported in carrying out awareness-raising and advocacy on women's property and literacy rights within their communities. They also received training on how to promote adult literacy, using the REFLECT framework. It is the impact of these community-level activities that is evaluated in this Effectiveness Review. The project also involved promoting women's property and literacy rights on local radio stations and providing capacity-building for district-level officials, as well as facilitation of national-level advocacy work: the impact of these activities is not evaluated in this review.

The Effectiveness Review adopted a quasi-experimental impact evaluation design, comparing a sample of women in the communities where the project activities had been implemented to women in nearby comparison communities. In total, 1,027 women were interviewed in Koinadugu and Kailahun districts. The survey questions allow the project's impact on various dimensions of women's empowerment to be evaluated. At the analysis stage, the statistical tools of propensity-score matching (PSM) and multivariable regression were used to reduce bias in making comparisons between the supported and comparison households.

The results provide evidence that the community-level activities of this project have resulted in significant positive effects on some characteristics of women's empowerment in Koinadugu District. In particular, women in communities where the project had been implemented expressed more positive attitudes towards women's political rights and gender equity in education, and stronger opinions against early marriage and violence against women than did women in the comparison communities. Women in the project communities were also significantly more likely to describe themselves as able to read and write a simple letter, and expressed more positive statements about the amount of control they have over their work and their time.

Unexpectedly, fewer of the women in the project communities in Koinadugu said that they had ownership of or control over some land or property than did women in the comparison communities. A potential explanation for this may be that the project activities have resulted in women becoming more aware that they lack control over these assets.

In Kailahun District, it is not clear that there is any difference in overall women's empowerment between the communities where the project was implemented and the comparison communities. While the model of implementation was the same in both districts, there are some important differences between the two environments, which may have led to these differential effects. It is worth noting that some of the project activities not evaluated here – especially the radio discussion programmes – are believed to have had wider impact in Kailahun District than in Koinadugu.

Oxfam in general, and the Sierra Leone team and partners in particular, are encouraged to consider the following to take forward learning from this project:

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- Ensure that mechanisms are in place to monitor the extent to which literacy training and campaign messages are disseminated by leaders trained under a project such as this to other community members.
- Continue following up on progress with women's property and literacy rights in the project districts, to understand what effects this project has in the longer term.

## 1 Introduction and purpose

Oxfam GB has put in place a Global Performance Framework (GPF) as part of its effort to better understand and communicate its effectiveness, as well as to enhance learning across the organisation. This framework requires project/programme teams to annually report output data across six thematic indicator areas. In addition, modest samples of mature projects (e.g. those closing during a given financial year) under each thematic indicator area are being randomly selected each year and rigorously evaluated. One key focus is on the extent to which they have promoted change in relation to relevant OGB global outcome indicators.

*This report documents the findings of a Project Effectiveness Review, focusing on outcomes related to women's empowerment.*

The global outcome indicator for the women's empowerment thematic area is the extent to which targeted women demonstrate greater empowerment, against the median (or 'typical') observation in the comparison area. The household survey carried out in Sierra Leone in March 2013 was part of an effort to capture data on this indicator.

One of the projects selected for an Effectiveness Review in the 2012/13 financial year was the 'Strengthening and Linking Women-Led Efforts to Promote Women's Property and Literacy Rights' project in Sierra Leone. This project had two main aims: firstly, to strengthen the capacity and improve networking between community-based groups and national women's networks to raise awareness of women's property and literacy rights, and secondly, to advocate for greater participation of women in decision-making on property ownership and for a more enabling environment for women to exercise their property and literacy rights. The project was implemented in partnership with Concern, Cooperazione Internazionale (COOPI), Sleyo, and the Forum for African Women Educationalists (FAWE) in four rural districts of Sierra Leone, with Oxfam responsible for implementation in Koinadugu and Kailahun districts.

To realise these aims, 130 women leaders in communities across the two districts were identified, and given training on women's property rights and literacy rights, leadership skills and advocacy skills. The same women were also trained in how to promote adult literacy using the REFLECT methodology. The project then supported and supervised these community leaders in carrying out awareness-raising and advocacy on women's property rights within their communities, as well as in implementing literacy training for women. Male community leaders and district-level office-holders also received training and sensitisation on women's property rights and were encouraged to support the passing of by-laws at district or chiefdom level to better recognise and protect these rights.

These activities were supported through the use of discussions on community radio stations to promote women's property rights issues. In order to develop a joint advocacy strategy for the protection of women's property and literacy rights throughout the country, capacity building was carried out with the national coalition of organisations that work on women's rights issues..

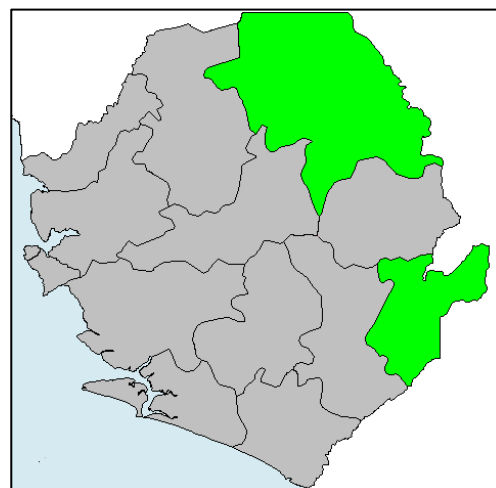


Figure 1.1: Sierra Leone with Koinadugu and Kailahun districts highlighted in green

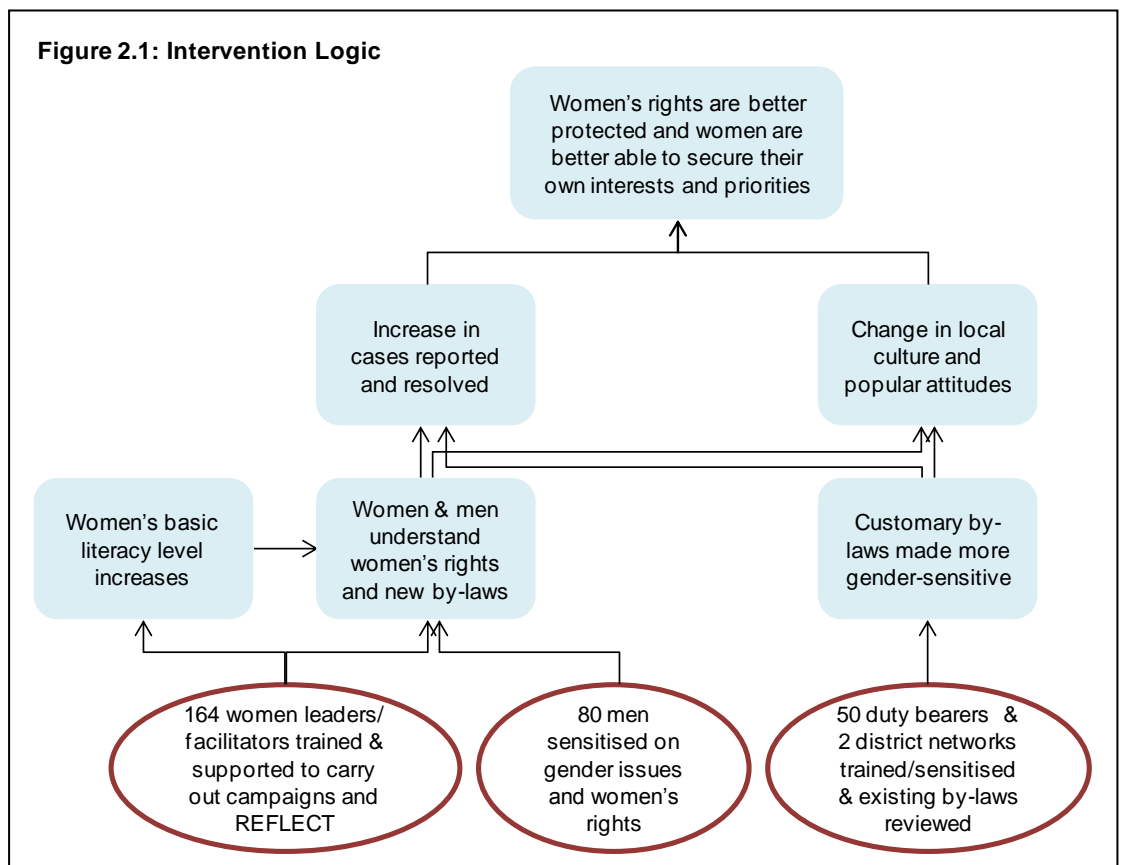
This Effectiveness Review evaluates the effect of the interventions that were carried out at a community level – primarily through the awareness-raising, local-level advocacy and literacy training carried out by the women leaders. Since the evaluation methodology (discussed in more detail in the next section) involved comparing the outcomes for women from different communities within the same chiefdoms and districts, no assessment can be made of the impact of the project activities that were carried out at district or national level. This means that the results of the training of district-level office holders, the radio discussions, and the national-level advocacy are not covered by this Effectiveness Review.

Section 2 of this report reviews the intervention logic of the project under consideration. Section 3 and Section 4 follow by presenting the impact evaluation design that was used and the methods of data collection and analysis, respectively. Section 5 presents the results of the analysis of the data. Section 6 concludes with a summary of the results found and some programme learning considerations.

## 2 Intervention logic of the project

Figure 2.1 presents a simple logic model for how the activities carried out at a community level under this project were intended to result in positive changes with regards to women’s rights in the project area.

The key activity for which the impact can be assessed in this Effectiveness Review was the training of women community leaders and facilitators in the awareness raising, carrying out advocacy campaigns. They were also trained on how to implement REFLECT literacy training. These women then provided literacy training to other women in their communities, as well as raising awareness of women’s property rights. A number of men from the



same communities were also charged with awareness raising on women's rights issues.

At the same time as this, the project was advocating at district level for the customary by-laws to be revised to better protect women's rights – particularly with respect to ownership of property. The intervention of the women and men trained at a community level was intended to reinforce this work by sensitising community members to the significance of those revised by-laws. Taken together, these activities are intended to have resulted in a change in local attitudes towards women's rights, and in an increase the number of actions taken to assert women's property rights.

### 3 Impact assessment design

#### 3.1 Limitations in pursuing the 'gold standard'

A social programme's net effect is typically defined as the average gain participants realise in outcome (e.g. improved household food security) from their participation. In other words:

**Impact** = *average post-programme outcome of participants minus what the average post-programme outcome of these same participants would have been had they never participated*

*The Effectiveness Review attempted to ascertain what would have happened in the intervention communities had the project not been implemented.*

This formula seems straightforward enough. However, *directly* obtaining data on the latter part of the equation – commonly referred to as the counterfactual – is logically impossible. This is because a person, household, community, etc. cannot *simultaneously* participate and not participate in a programme. The counterfactual state can therefore never be observed directly; it can only be estimated.

The randomised experiment is regarded by many as the most credible way of estimating the counterfactual, particularly when the number of units (e.g. people, households, or, in some cases, communities) that are being targeted is large. The random assignment of a sufficiently large number of such units to intervention and control groups should ensure that the statistical attributes of the two resulting groups are similar in terms of their a) pre-programme outcomes (e.g. both groups have the same average incomes); and b) observed characteristics (e.g. education levels) and unobserved characteristics (e.g. motivation) relevant to the outcome variables of interest. In other words, randomisation works to ensure that the *potential outcomes* of both groups are the same. As a result – provided that threats, such differential attrition and intervention spillover are minimal – any observed outcome differences observed at follow-up between the groups can be attributed to the programme.

However, implementing an ideal impact assessment design like this is only possible if it is integrated into the programme design from the start, since it requires the introduction of some random element that influences participation. To evaluate an ongoing or completed programme – as in this Effectiveness Review – or one where randomisation is judged to be impractical, it is therefore necessary to apply alternative techniques to approximate the counterfactual as closely as possible.

#### 3.2 Alternative evaluation design pursued

There are several evaluation designs when the comparison group is non-equivalent that can – particularly when certain assumptions are made –

identify reasonably precise intervention effects. One solution is offered by matching. Find units in an external comparison group that possess the same characteristics, e.g. ethnicity, age and sex, relevant to the outcome variable as those of the intervention group and match them on the bases of these characteristics. If matching is done properly in this way, the observed characteristics of the matched comparison group will be identical to those of the intervention group.

The problem, however, with conventional matching methods is that, with large numbers of characteristics on which to match, it is difficult to find comparators with similar combinations of characteristics for each of the units in the intervention group. The end result, typically, is that only a few units from the intervention and comparison groups get matched up. This not only significantly reduces the size of the sample but also limits the extent the findings can be generalised to all programme participants. (This is referred to as the ‘curse of dimensionality’ in the literature.)

*In an attempt to mitigate bias in estimates of outcomes, two statistical procedures were used: propensity-score matching and multi-variable regression.*

Fortunately, matching on the basis of the propensity score – the conditional probability of being assigned to the programme group, given particular background variables or observable characteristics – offers a way out. Propensity-score matching (PSM) works as follows. Units from both the intervention and comparison groups are pooled. A statistical probability model is estimated, typically through logit or probit regression. This is used to estimate programme participation probabilities for all units in the pooled sample. Intervention and comparison units are then matched within certain ranges of their conditional probability scores. Tests are further carried out to assess whether the distributions of characteristics are similar in both groups after matching. If not, the matching bandwidth or calliper is repeatedly narrowed until the observed characteristics of the groups are statistically similar. Provided that a) the dataset in question is rich and of good quality; b) the groups possess many units with common characteristics (i.e. there is a large area of common support); and c) there are no unobserved differences relevant to the outcome lurking among the groups, PSM is capable of identifying unbiased intervention effects.

Multivariable regression is another approach that is also used to control for measured differences between intervention and comparison groups. It operates differently from PSM in that it seeks to isolate the variation in the outcome variable explained by being in the intervention group *net of other explanatory variables* (key factors that explain variability in outcome) included in the model. The validity of both PSM and multivariable regression are founded heavily on the ‘selection on observables’ assumption, and, therefore, treatment effect estimates can be biased if unmeasured (or improperly measured) but relevant differences exist between the groups.<sup>1</sup> Both PSM and multivariable regression were used to analyse the data collected under this Effectiveness Review, and efforts were made to capture key explanatory variables believed to be relevant in terms of the assessed outcomes, e.g. sex and age of household head, educations levels (see Section 4 below).

While no baseline data were available, efforts were made, as explained below, to reconstruct it through respondent recall. This method does have limitations, e.g. memory failure, confusion between time periods, etc.

<sup>1</sup> One of the MVR procedures that was used attempted to control for possible unobserved differences between the groups. This is the Heckman selection model or two-step estimator. Here, efforts are made to directly control for the part of the error term associated with the participation equation that is correlated with both participation and non-participation. The effectiveness of this method, however, depends, in part, on how well the drivers of participation are modelled.



However, for data that can be sensibly recalled, e.g. ownership of particular household assets, it can serve to enhance the validity of a cross-sectional impact evaluation design. The reconstructed baseline data were used in two ways: First, several of the variables included in the PSM and regression procedures were baseline variables constructed from recalled baseline data. For example, one variable was related to the respondent’s wealth status at baseline, derived through the construction of a household wealth index based on asset ownership and other wealth indicators. This was done in an attempt to control for baseline wealth differences between the intervention and comparison groups.

The second way the reconstructed baseline data were used was to derive pseudo difference-in-difference intervention effect estimates. With longitudinal or panel data, this is implemented by subtracting each unit’s baseline measure of outcome from its endline measure of outcome (i.e. endline outcome status minus baseline outcome status). The intention here is to control for time invariant differences between the groups. Bearing in mind the limitations associated with recalled baseline data, using PSM and/or regression and the difference-in-difference approaches together is considered to be a strong quasi-experimental impact evaluation design.

### **3.3 Selection of project participants and comparison households**

A key factor in ensuring the validity of any non-randomised impact evaluation design is to use an appropriate comparison group. This is particularly true for ex-post, cross-sectional designs. Comparators that differ in relevant baseline characteristics and/or are subjected to different external events and influences are likely to result in misleading conclusions about programme impact. Identifying a plausible comparison group is therefore critically important and is, generally speaking, not an easy task in non-experimental work.

In this case, the project under review was implemented in 42 communities, distributed across 11 chiefdoms in the districts of Koinadugu and Kailahun. To ensure that comparison communities would have reasonably similar characteristics to the project communities, it was decided to select them from within the same chiefdoms as those where the project was implemented. These comparison communities were believed to be far enough away that there would be few spillover effects between the intervention and comparison communities. The disadvantage of this approach is that the results are not able to show the effect of project activities that were carried out at a chiefdom or district level, since the comparison and intervention communities will both have been exposed to them.

For each community in which the project was implemented, a community suitable for comparison was identified, based on factors such as local topography and access to markets and infrastructure. In Kailahun District, no comparison was available for the urban centre of Kailahun town or for the larger villages of Koindu and Dia – these communities were therefore excluded from the Effectiveness Review. In Koinadugu District, the chiefdoms of Sengbeh and Neini were too remote to be accessed within the timing and budget limitations available for the Effectiveness Review, so were also excluded from the review.

The final list of communities in which the survey was carried out is shown in Table 4.1.

*The district capital and two larger villages in Kailahun District had to be excluded from the survey, so the Effectiveness Review focuses on the impact of the project only in smaller communities in that district.*

## 4 Methods of data collection and analysis

### 4.1 Data collection

A survey of women in the two districts was carried out in order to implement the evaluation design described in Section 3. Data was captured on various aspects of women’s empowerment – including in the steps of the project’s intervention logic presented in Section 2 – as well as for key demographic and recalled baseline characteristics of the interviewed households. The questionnaire was administered by a team of enumerators, supervised by an external consultant.

The number of women to be interviewed in each community was specified in advance. In project communities, the number of respondents was proportional to the size of the community within each district. In each comparison community, the number of respondents sampled was 50% greater than the number in the corresponding project community. Households were selected at random in each community by means of the ‘spin the pen’ technique, with each enumerator interviewing respondents in every second household in a specified direction from their starting point. In each household, the senior female household member was taken as the

**Table 4.1: Intervention and comparison communities and sample sizes**

District	Chiefdom	Intervention communities		Comparison communities	
		Community	Households surveyed	Community	Households surveyed
Koinadugu	Mongo	Mongo Town	22	Serenkolia	33
		Seria Town	14	Kameron	21
		Kafarya	6	Kambili	9
	Folosemba Dembelia	Dogoloia	8	Koromasilla	13
		Musaia	12	Hamdalai	18
		Horgo	4	Musamjunction	6
	Wara Wara Yagala	Yataya	28	Kataumya	37
		Heremakono	23	Lekakoro	34
		Alusayua	17	Makakuro	25
Senekedugu		10	Kanuka	15	
Diang Kondebaia	Kondembaia	13	Bendukua	20	
	Badala	6	Yaria	9	
Wara Wara Bofodia	Bofodia	32	Kadenka	32	
	Sakuta	6	Kaseitiny	9	
	Kapopou	5	Kayalian	8	
Kailahun	Luawa	Nyandehun	18	Sandeyalu	27
		Bandajuma	22	Ngjema	33
		Baoma	10	Gbatoma	15
		Monfidor	12	Mendebuima	18
		Ngiehun	30	Gbowubu Gao	45
		Gbalahun	11	Manorsewalu	15
		Borbu	14	Kpandebu	21
	Kissi Teng	Yelandu	4	Koloni	6
Beldu		4	Tumadu	6	
Kangama		10	Bayamalela	8	
Kissi Tongi	Kissi Tongi	Trowadu	5	Sondorkonlobendu	7
		Makor	4	Gawondu	8
		Gbalama	4	Falama	6
		Pokorli	4	Vuahun	6
		Dawa	5	Foidu	6
Kissi Kama	Kissi Kama	Buedu	30	Benduma	8
		Kongoma	11	Gbandiwulo	45
		Ndambo	4	Njaa	17
Totals	Totals	Chiegilo	4	Kunduma	6
			134	Dioma	6
					269

respondent or some other adult female household member in cases where she was not present.

## 4.2 Data analysis

Oxfam developed a data-entry interface in Adobe Acrobat, and data-entry was carried out by a team of temporary staff under the supervision of the consultant. Data analysis was performed in Stata by staff from OGB's office in Oxford.

The results of this analysis are presented in Section 5. Most of the analyses involved group mean comparisons using *t*-tests, as well as propensity-score matching (PSM) with the *psmatch2* module and various multivariable regression approaches. PSM was implemented using both kernel and nearest-neighbour matching without replacement. Backwards stepwise regression was used to identify those variables correlated with either being in an intervention village or a famer group at *p*-values greater than 0.2. Covariate balance was checked following the implementation of each matching procedure, and efforts were made to ensure that the covariates were balanced across groups at *p*-values greater than 0.2. Bootstrapped standard errors enabled the generation of confidence intervals for statistical hypothesis testing. (See Appendix 1 for further details.)

All the covariates presented in Table 5.1 below were included in the various regression approaches undertaken, i.e. regression with robust standard errors (to address issues of heteroscedasticity), robust regression (to reduce the influence of outliers), and regression with control functions (to attempt to control for relevant unobserved differences between the intervention and comparison groups).

## 5 Results

### 5.1 General characteristics

Table 5.1 presents summary statistics on the demographic and baseline characteristics contained in the survey, and compares the averages between the households supported by the project (the 'intervention' households) and the comparison households. The asterisks beside the numbers indicate differences in averages between the groups that are statistically significant at a 90 percent confidence level or greater.

*There are several important differences between the profiles of the households surveyed in the project communities and those surveyed in the comparison communities.*

There are some important differences between the households in the communities where the project was implemented and those in comparison communities. In particular:

- Respondents in project communities in Koinadugu District had generally higher levels of education than those in comparison communities.
- Households in project communities in both districts were significantly less likely to be engaged in agriculture and more likely to be engaged in rearing agriculture and running a non-agricultural household business at baseline in 2009. These differences between the project and comparison communities are more marked in Koinadugu District than in Kailahun District.
- Households in project communities in Koinadugu District were also much more likely than comparison households to be engaged in skilled regular employment, but less likely to be engaged in unskilled regular employment.
- Households in project communities in both districts were located further on average from the centre of the village than were comparison

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**Table 5.1: Descriptive statistics: covariate comparison between treatment groups**

	Overall				Koinadugu District				Kailahun District			
	Intervention	Comparison	Difference	t-statistic	Intervention	Comparison	Difference	t-statistic	Intervention	Comparison	Difference	t-statistic
	Mean	Mean			Mean	Mean			Mean			
Household size	7.840	7.686	0.154	0.78	8.087	7.915	0.172	0.63	7.354	7.239	0.115	0.48
Number of adults	4.716	4.696	0.021	0.13	5.058	5.209	-0.151	-0.70	4.044	3.696	0.348**	2.33
Number of productive adults	4.488	4.545	-0.057	-0.38	4.820	5.046	-0.225	-1.08	3.835	3.570	0.265*	1.81
Household head is female	0.180	0.168	0.012	0.51	0.136	0.131	0.005	0.17	0.267	0.239	0.028	0.70
All adults in household are aged over 60 years	0.002	0.003	-0.002	-0.66	0.000	0.000	0.000	.	0.005	0.010	-0.005	-0.61
Only one adult in household	0.003	0.008	-0.004	-1.09	0.000	0.003	-0.003	-0.82	0.010	0.016	-0.006	-0.62
Age of respondent	39.087	38.386	0.701	0.87	38.364	38.101	0.263	0.25	40.510	38.942	1.568	1.31
Respondent engages in some productive activity	0.982	0.988	-0.006	-0.73	0.985	0.987	-0.001	-0.14	0.976	0.990	-0.015	-1.31
Respondent has some primary education	0.164	0.095	0.069***	3.15	0.141	0.036	0.105***	4.41	0.209	0.210	-0.002	-0.04
Respondent has some secondary education	0.118	0.040	0.078***	4.20	0.121	0.026	0.095***	4.37	0.112	0.068	0.044*	1.74
Respondent is the first wife of her husband	0.776	0.766	0.010	0.37	0.801	0.784	0.017	0.45	0.728	0.731	-0.002	-0.06
Respondent is the second or subsequent wife of her husband	0.081	0.105	-0.024	-1.21	0.107	0.134	-0.027	-0.92	0.029	0.049	-0.020	-1.10
Respondent is widowed, divorced, or never married	0.143	0.129	0.014	0.65	0.092	0.082	0.011	0.42	0.243	0.221	0.022	0.58
Number of adults with some primary education	1.200	0.899	0.301***	3.35	1.218	0.781	0.437***	3.75	1.165	1.129	0.036	0.31
Number of adults with some secondary education	0.968	0.657	0.311***	3.80	1.058	0.634	0.424***	3.92	0.791	0.702	0.089	0.95
Household head is Muslim	0.658	0.629	0.029	0.92	0.709	0.624	0.085**	1.98	0.558	0.638	-0.079*	-1.81
Household head is of Fullah ethnicity	0.055	0.059	-0.005	-0.28	0.083	0.088	-0.006	-0.23	0.000	0.003	-0.003	-0.82
Land area farmed in 2007 (equivalent number of bushels)	2.832	2.780	0.052	0.29	3.010	2.845	0.165	0.70	2.482	2.652	-0.171	-0.85
HH head's main activity in 2009 was farming	0.717	0.859	-0.142***	-5.17	0.718	0.886	-0.167***	-4.91	0.714	0.806	-0.092**	-2.44
HH head's main activity in 2009 was in a non-agricultural household business	0.139	0.067	0.072***	3.50	0.131	0.052	0.079***	3.18	0.155	0.097	0.058**	1.99
Productive activities of the household in 2009:												
Farming	0.841	0.924	-0.082***	-3.77	0.840	0.938	-0.098***	-3.64	0.845	0.896	-0.052*	-1.75
Processing of crops	0.700	0.782	-0.082***	-2.77	0.728	0.768	-0.040	-1.02	0.646	0.809	-0.163***	-4.23
Rearing livestock	0.648	0.592	0.057*	1.77	0.684	0.611	0.073*	1.70	0.578	0.553	0.024	0.54
Processing livestock products	0.230	0.201	0.029	1.04	0.233	0.199	0.034	0.91	0.223	0.204	0.019	0.53
Non-agricultural household business	0.266	0.191	0.075***	2.74	0.214	0.137	0.076**	2.27	0.369	0.294	0.074*	1.77
Casual labour	0.305	0.329	-0.024	-0.77	0.374	0.382	-0.009	-0.20	0.170	0.227	-0.057	-1.56
Unskilled formal employment	0.064	0.104	-0.039**	-2.03	0.092	0.144	-0.052*	-1.74	0.010	0.026	-0.016	-1.30
Skilled formal employment	0.110	0.076	0.034*	1.68	0.131	0.069	0.062**	2.39	0.068	0.091	-0.023	-0.92
Respondent's main activity in 2009 was farming	0.738	0.846	-0.108***	-3.94	0.733	0.873	-0.140***	-4.06	0.748	0.793	-0.045	-1.21
Respondent's main activity in 2009 was in a non-agricultural household business	0.191	0.096	0.095***	4.02	0.194	0.072	0.122***	4.22	0.184	0.142	0.042	1.28
Productive activities of the respondent in 2009:												
Farming	0.765	0.845	-0.079***	-2.96	0.762	0.850	-0.088**	-2.51	0.772	0.835	-0.063*	-1.79
Processing of crops	0.621	0.628	-0.007	-0.22	0.626	0.562	0.064	1.45	0.612	0.757	-0.146***	-3.57
Rearing livestock	0.550	0.462	0.088***	2.65	0.558	0.438	0.120***	2.69	0.534	0.508	0.026	0.58
Processing livestock products	0.223	0.138	0.085***	3.27	0.238	0.105	0.133***	4.11	0.194	0.204	-0.010	-0.27
Non-agricultural household business	0.272	0.169	0.103***	3.80	0.233	0.114	0.119***	3.61	0.350	0.275	0.074*	1.80
Casual labour	0.242	0.230	0.012	0.42	0.306	0.261	0.044	1.10	0.117	0.168	-0.052	-1.62
Unskilled formal employment	0.039	0.031	0.007	0.54	0.058	0.042	0.016	0.81	0.000	0.010	-0.010	-1.42
Skilled formal employment	0.056	0.023	0.034**	2.32	0.083	0.026	0.056***	2.92	0.005	0.016	-0.011	-1.17
Distance from village centre in 2009 (minutes on foot)	4.501	2.731	1.770***	8.05	4.204	2.288	1.916***	7.93	5.085	3.594	1.491***	4.59
Distance from main district road in 2009 (minutes on foot)	5.972	19.703	-13.731***	-6.05	6.956	25.961	-19.005***	-4.79	4.046	7.518	-3.472***	-3.02
Distance from district centre in 2009 (miles)	19.450	22.580	-3.130*	-1.83	23.782	26.216	-2.434	-0.94	10.934	15.502	-4.567***	-6.16
Wealth index 2009	0.763	-0.512	1.275***	5.98	1.124	-0.757	1.881***	7.36	0.052	-0.035	0.087	0.31
Poorest third in 2009	0.219	0.412	-0.193***	-6.55	0.160	0.454	-0.294***	-7.24	0.335	0.330	0.005	0.11
Middle third in 2009	0.314	0.339	-0.025	-0.80	0.320	0.320	0.000	0.00	0.301	0.375	-0.074*	-1.74
Wealthiest third in 2009	0.467	0.249	0.218***	6.89	0.519	0.225	0.294***	7.19	0.364	0.294	0.070*	1.66
<b>Observations</b>	<b>412</b>	<b>615</b>	<b>1027</b>		<b>206</b>	<b>306</b>	<b>512</b>		<b>206</b>	<b>309</b>	<b>515</b>	

\*p<0.1, \*\*p<0.05, \*\*\*p<0.01

households. However, those in Koinadugu were also located on average much closer to the main district road than were comparison households. Households in project communities in Kailahun were also located significantly closer to the main road and to the district capital than were the comparison households – though these differences are not as large as in Koinadugu.

- Households in project communities in Koinadugu District were considerably better off (in terms of indicators such as their ownership of livestock, household goods and other assets<sup>22</sup>) at baseline in 2009 than were those in comparison communities. Fifty-two per cent of households in project communities were in the top third of households by wealth status in that district, and only 16 per cent were in the bottom third. In Kailahun, there is also a slight bias towards wealthier households at the top of the scale, but again the difference is not as marked as in Koinadugu.

The existence of these differences between the average characteristics of the supported and comparison households (particularly in Koinadugu District) makes it particularly important to control for these baseline and demographic characteristics when examining differences in outcome variables. All the variables listed in Table 5.1 have been controlled for in the PSM and regression models for which the results are presented in Section 5.3 below. Unfortunately the large number of differences led to difficulties in finding appropriate matches among the comparison respondents for each of the intervention respondents. As a consequence, the estimates derived from the models presented in Section 5.3 apply to only a subset of the women surveyed in the project communities. In Kailahun District in particular, nearly 20 per cent of the interviewed women are excluded from the analysis based on the PSM kernel model and from the multivariate regression models. (Even larger numbers of interviewed women are excluded from the PSM nearest-neighbour models.)

## **5.2 Differences between the supported and comparison households in exposure to the project activities**

The questionnaire asked all respondents to state whether they had participated in any of the types of interventions carried out under the SLEA53 project since 2009. The results are shown in Table 5.2 below. As can be clearly seen, the proportions of women in the project communities who reported having participated in each of these activities (or who reported that male household members participated) range between 30 and 45 per cent; significant numbers of respondents in the comparison communities also reported participating in similar activities. This is not surprising, since it is known that other organisations implemented similar activities in the district during the same period. In Kailahun District, the picture is very different: only a small minority of the respondents report that they participated (or male household members participated) in each type of activity and, except in the case of gender training for men, these proportions are not significantly greater in the project communities than in the comparison communities. These figures are shown graphically in Figure 5.1.

*In Kailahun District, only a small proportion of those surveyed reported having exposure to training or campaigning activities, even in the project communities.*

<sup>22</sup> The construction of the household wealth index is discussed in detail in Appendix 2.

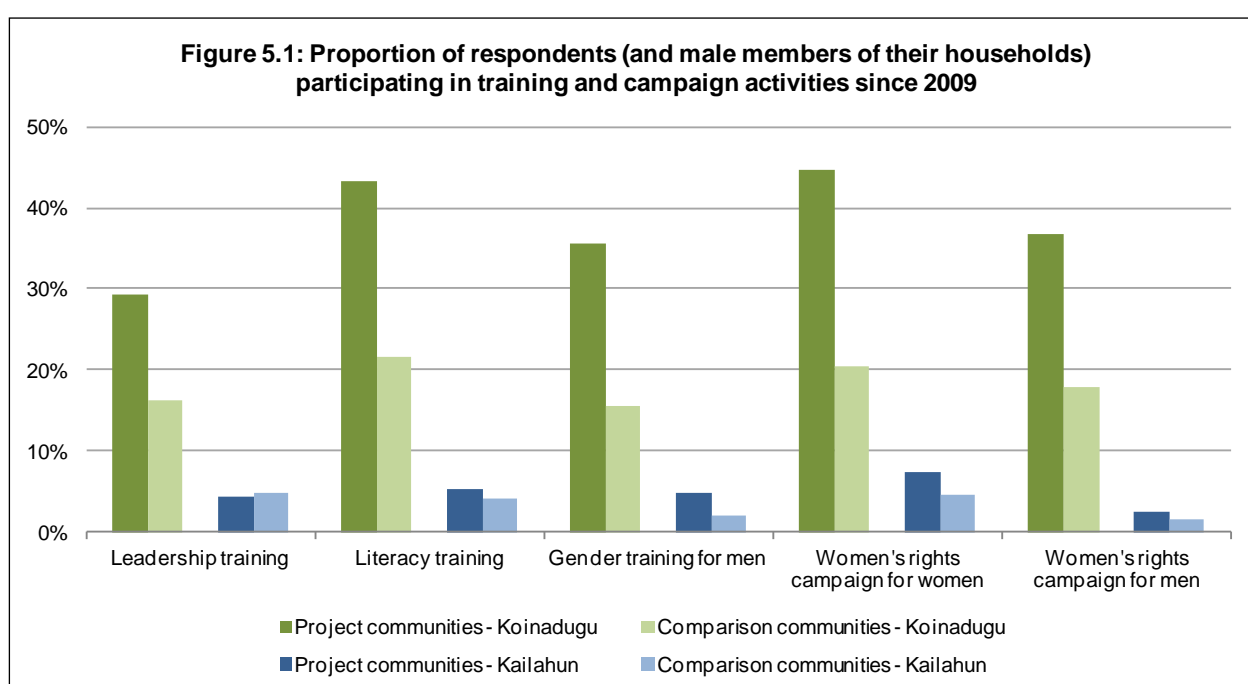
**Table 5.2: Differences in the proportions of respondents reporting exposure to the project activities since 2009**

	Koinadugu District				Kailahun District			
	Intervention Mean	Comparison Mean	Difference	t-statistic	Difference	t-statistic	Difference	t-statistic
Training for female respondent on leadership, advocacy and networking	0.294	0.162	0.131***	0.294	0.044	0.049	-0.004	-0.22
Training for female respondent on literacy skills	0.432	0.216	0.216***	0.432	0.054	0.042	0.011	0.59
Training for men on gender issues and women's property rights	0.355	0.156	0.199***	0.355	0.049	0.020	0.029*	1.88
Women's rights campaign (respondent participated)	0.447	0.205	0.242***	0.447	0.073	0.045	0.028	1.34
Women's property and rights campaign (male household members participated)	0.367	0.179	0.188***	0.367	0.025	0.016	0.008	0.66
<b>Observations</b>			<b>503</b>				<b>515</b>	

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

As shown in Table 5.3, there are similar patterns of differences in the number of times each respondent reported having participated in the type of activity between 2009 and the date of the survey. Among those who participated in each type of activity, there are no significant differences between the project and comparison communities in the number of times they participated. For example, those who received leadership training reported on average having participated in 3.4 such training sessions, a number that did not differ between the project communities and comparison communities.

Given the model of implementation, the fact that such large proportions in Koinadugu District reported having participated in most of these activities is more surprising than the corresponding low figures in Kailahun District. The project provided direct leadership training and training on the REFLECT methodology for adult literacy for only 130 women across the two districts (some of whom were based in the larger towns, which were not included in this Effectiveness Review). These women were then supported and encouraged in carrying out awareness raising, women's rights campaigns and literacy training in their own communities. These women were not themselves directly targeted for interview in the Effectiveness Review. It



**Table 5.3: Differences in the number of training or campaigning events respondents report participating in since 2009**

	Koinadugu District				Kailahun District			
	Intervention Mean	Comparison Mean	Difference	t-statistic	Difference	t-statistic	Difference	t-statistic
Training for female respondent on leadership, advocacy and networking	1.109	0.556	0.553***	2.76	0.102	0.139	-0.037	-0.51
Training for female respondent on literacy skills	1.447	0.970	0.477	1.51	0.766	0.228	0.538	1.06
Training for men on gender issues and women's property rights	0.875	0.328	0.547***	4.89	0.107	0.032	0.075**	2.20
Women's rights campaign (respondent participated)	1.214	0.493	0.720***	4.52	0.102	0.055	0.047	1.58
Women's property and rights campaign (male household members participated)	0.945	0.474	0.471***	3.91	0.049	0.026	0.023	0.91
<b>Observations</b>			<b>503</b>				<b>515</b>	

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

would be expected, therefore, that the typical woman sampled from the project communities (or male members of her household) may have participated in locally organised women's rights campaign events and received some informal literacy training, but is unlikely to have received anything that could be described as leadership training. However, this is not the pattern observed in either district.

### 5.3 Differences between the supported and comparison households on women's empowerment outcome measures

This section will examine the differences between women in the communities where the project was implemented and women in the comparison communities in terms of outcome measures relating to women's empowerment. The first subsection discusses the overall framework used for women's empowerment, and subsequent subsections discuss the results under each of the five dimensions of women's empowerment.

#### 5.3.1 Women's Empowerment Index

In order to assess a multi-dimensional concept, such as women's empowerment, Oxfam GB has adopted and adapted an approach that assesses several dimensions of women's empowerment. This approach builds on the 'Women's Empowerment in Agriculture Index'<sup>3</sup> (WEAI) developed by the Oxford Poverty and Human Development Initiative with support from the United States Agency for International Development (USAID) and the International Food Policy Research Institute (IFPRI).

Using the WEAI approach, the index used in this Effectiveness Review assesses **five dimensions of women's empowerment**. The dimensions relate to women's involvement in household decision-making, access to and control over resources, public engagement and self-perception. Several indicators have been specified for each of these five dimensions (see Table 5.4).

The indicators within each of the dimensions are based on the following definitions:

- **Ability to make and influence decisions:** Involvement in household decisions related to production, use of income and other domestic activities, as well as influence on decision-making at a community level.
- **Self-perception:** Opinions on women's rights and women's economic and domestic roles; self-confidence and psycho-social wellbeing.

*Five dimensions of women's empowerment were considered in this Effectiveness Review, and various characteristics were identified under each dimension.*

<sup>3</sup> <http://www.ifpri.org/publication/womens-empowerment-agriculture-index>

- **Personal freedom:** Autonomy in work and personal life, literacy, attitudes towards and experience of violence.
- **Access to and control over resources:** Access to an independent income, savings and credit; access to and decision-making power over productive resources such as land, property, livestock and other assets.
- **Support from social networks:** Level of self-confidence in dealing with a range of situations and attitudes towards women’s rights, position and responsibilities.

The questionnaire used in the Effectiveness Review included questions relating to each of the characteristics listed in Table 5.4. For each characteristic, a benchmark was defined based on what it means for a women to be faring reasonably well in relation to the characteristic in question. The particular benchmarks used for each characteristic are described in the sections that follow, and are presented in summary form in Appendix 1. There is inevitably a degree of arbitrariness in defining such cut-offs. However, the results presented in subsequent sections also include some complementary measures, which act as a check on the robustness of the results obtained from applying the cut-offs.

**Table 5.4: Dimensions and characteristics of women’s empowerment used in the index**

Dimension	Characteristic
Ability to make or influence decisions	Involvement in household decisions on productive activities
	Involvement in household spending decisions
	Involvement in other types of household decisions
Self-perception	Influence in community decision-making
	Self-efficacy
	Psycho-social wellbeing
	Attitude towards women’s economic roles
	Attitude towards women’s domestic roles
	Opinion on women’s political rights
	Opinion on women’s property rights
	Opinion on women’s educational rights
	Opinion on early marriage
Personal freedom	Autonomy
	Literacy
	Time to pursue personal goals
	Support available in pursuing personal goals
	Opinion on gender-based violence
	Experience of violence
Access to and control over resources	Independent income
	Role in managing household’s cash
	Personal savings
	Ownership of land or property
	Ownership of or control over other strategic assets
	Access to credit
Support from social networks	Participation in community groups
	Support from groups to pursue personal goals
	Social connectivity

Aggregate measures of women’s empowerment are now constructed using a multidimensional measurement methodology known as the Alkire-Foster



*The results for the 27 different characteristics of women's empowerment were aggregated to produce three different measures of overall empowerment.*

Method.<sup>4</sup> Firstly (and mostly simply), a 'base empowerment index' is defined as the proportion of characteristics of empowerment in which each interviewed woman scores positively. The second measure to be used is to define an overall binary cut-off for the entire index, with the women above this cut-off considered to be empowered. For the purposes of measuring women's empowerment under the Global Performance Framework, a woman is defined as empowered if she scores positively on at least two thirds of the characteristics. Using this definition, the 'Alkire-Foster empowerment index' is defined to take a value of 1 (the maximum) for any woman who scores positively on at least two thirds of the characteristics of empowerment, and otherwise is equal to the proportion of characteristics in which she scores positively. In fact, in this case, only a small number (less than two per cent) of women scored positively in two thirds or more of the characteristics of empowerment, so the AF empowerment index is little different from the base empowerment index. Finally, the Oxfam GB global indicator for empowerment is based on whether each woman interviewed is doing better in terms of overall empowerment than a 'typical' woman in the area. This is defined by comparing the base empowerment index for each woman with the median of the comparison group. The global indicator takes the value of 1 if the base empowerment index is greater than the median of the comparison group, and zero otherwise.

In summary, the three key measures of overall resilience analysed are:

- The **base empowerment index**: the proportion of characteristics of empowerment for which each woman reaches the benchmark.
- The **Alkire-Foster (AF) empowerment index**: whether the woman reaches the benchmark in at least two-thirds of the characteristics, and otherwise is equal to the proportion of characteristics for which she does reach the benchmark.
- The **global indicator**, based on whether the base empowerment index is greater than the median of the comparison group or not.

These three measures contribute to generating an **overall picture of women's empowerment** in both the supported and comparison groups. A comparison of the intervention and comparison women in terms of these measures is presented in Table 5.5. The first three columns of Table 5.5 show the difference between women in project communities and women in comparison communities in terms of the base empowerment index. The top section of the table shows the average base empowerment index score for each group, and the differences before any adjustment methods are applied. The second section shows the differences after applying the two PSM techniques, while the bottom section shows the results from using three different regression models. It can be seen, in the top section of column 2, that women in Koinadugu District on average score positively on 39 per cent of the characteristics of empowerment. This figure is 41 per cent among women in the communities where the project was implemented, and only 37 per cent among women in the comparison communities, a difference of 3.5 percentage points. This difference between the women in the project communities and comparison communities remains significant once PSM and regression models are used, though most of the models estimate that the adjusted difference is around two percentage points.

The figures in column 3 show that in Kailahun District the difference between the project and comparison communities in the proportion of characteristics in which women score positively is smaller. The various PSM

<sup>4</sup> Alkire, Sabina and Foster, James, (2011) 'Counting and multidimensional poverty measurement', *Journal of Public Economics* . 95: 476–487: <http://www.sciencedirect.com/science/article/pii/S0047272710001660>

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**Table 5.5: Comparison of women in project and comparison communities in terms of overall indices of women’s empowerment**

	1	2	3	4	5	6	7	8	9
	Base empowerment index			Alkire-Foster empowerment index			% of women above median WEI score for comparator women (global outcome indicator)		
	Overall	Koinadugu	Kailahun	Overall	Koinadugu	Kailahun	Overall	Koinadugu	Kailahun
<b>Unadjusted</b>									
Sample mean:	0.374	0.387	0.347	0.378	0.389	0.355	0.484	0.503	0.447
Intervention group mean:	0.393	0.408	0.363	0.401	0.413	0.376	0.554		
Comparison group mean:	0.361	0.373	0.336	0.362	0.373	0.340	0.437		
Unadjusted difference:	0.032***	0.035***	0.027**	0.039***	0.040***	0.036**	0.117***	0.114**	0.121***
	(0.008)	(0.009)	(0.013)	(0.009)	(0.010)	(0.015)	(0.033)	(0.045)	(0.045)
<b>Observations:</b>	1017	505	512	1017	505	512	1017	505	512
<b>PSM</b>									
Post-matching difference:	0.020***	0.022*	0.005	0.025***	0.027**	0.008	0.064**	0.045	0.062
(kernel)	(0.007)	(0.012)	(0.016)	0.008	(0.014)	(0.019)	0.027	(0.064)	(0.053)
<b>Observations:</b>	960	488	472	960	488	472	960	488	472
Post-matching difference:	0.042***	0.035***	0.014	0.047***	0.039***	0.016	0.159***	0.099*	0.111*
(no replacement)	(0.010)	(0.012)	(0.016)	0.012	(0.013)	(0.020)	0.041	(0.058)	(0.063)
<b>Observations:</b>	903	453	450	903	453	450	903	453	450
<b>Multivariable regression</b>									
MVR coefficient:	0.013*	0.022**	0.018	0.015*	0.023**	0.026*	0.077*	0.082	0.149**
(with robust standard errors)	(0.008)	(0.011)	(0.012)	(0.009)	(0.011)	(0.014)	(0.105)	(0.154)	(0.160)
<b>Observations:</b>	889	461	428	1013	502	511	889	460	427
MVR coefficient: (robust regression)	n/a	0.023**	0.015	n/a	0.022**	0.015	n/a	n/a	n/a
		(0.011)	(0.012)		(0.011)	(0.012)			
<b>Observations:</b>		460	428		502	511			
MVR coefficient:	0.013*	0.020*	0.020*	0.016*	0.024**	0.027*	0.078*	0.075	0.152**
(with control functions)	(0.007)	(0.011)	(0.012)	(0.008)	(0.011)	(0.014)	(0.101)	(0.149)	(0.157)
<b>Observations:</b>	1013	501	507	1013	501	507	1013	501	507

Standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

PSM estimates bootstrapped 1000 repetitions

Coefficients for covariates used not presented.

and regression models estimate this difference to be between 0.5 and 2.0 percentage points, and this is not statistically significant – meaning that it cannot be concluded with confidence that there is a systematic difference between the project and comparison communities.

Column 1 of the table shows the overall results for all the women surveyed, with the results weighted to reflect the greater population from which the sample was drawn in Koinadugu District. These overall results show a positive difference between women in the project and comparison districts, which is probably statistically significant overall.

Columns 4 to 6 of Table 5.5 report the corresponding results for the Alkire-Foster women’s empowerment index. As described above, the fact that only a small number of women reached the benchmark for overall empowerment means that these results are little different from those of the base empowerment index presented in columns 1 to 3.

Finally, columns 7 to 9 show the differences between women in the project and comparison communities in terms of the overall indicator for women’s empowerment. On this measure, the results in both districts are positive, though only marginally statistically significant.

Given the non-experimental nature of the data, it is of interest to explore how much unobserved bias would be needed to ‘explain away’ the positive effect estimates. In other words, how sensitive are the effect estimates to the possible presence of unobserved bias in favour of the intervention population?

Sensitivity analysis is an approach used for exploring this. It was implemented – for Koinadugu District only – using Rosenbaum sensitivity analysis with Stata’s *rbounds* command. Here, unobserved bias is assumed to exist in favour of the intervention population at different log odds ratios. How large can the log odds ratio be in order to render an effect estimate non-significant? Table 6.2 presents the results that were obtained from undertaking such analysis with the nearest-neighbour one-to-one matching effect estimate for the AF empowerment index. The table reveals that unobserved bias would need to be present at a log odds ratio of 1.15 in favour of the intervention population in order for the effect estimate to be rendered statistically insignificant with a 95 per cent level of confidence. Unfortunately, this suggests that the effect estimate is not particularly robust to the possible existence of omitted variable bias.

**Table 5.6: Results of Rosenbaum sensitivity analysis for base empowerment index in Koinadugu District, where unobserved, positive bias is assumed to exist a various log odds ratios among the intervention population**

Log Odds Ratio of Hidden Bias	p-value of effect estimate with bias	Estimated effect estimate with bias	95% confidence level – two tailed	
			CI+	CI-
1.00	0.010242	0.018519	2.70E-07	0.055556
1.05	0.0197	0.018519	2.70E-07	0.055556
1.10	0.034708	0.018519	-2.70E-07	0.055556
1.15	0.056687	0.018519	-2.70E-07	0.055556
1.20	0.086703	0.018519	-2.70E-07	0.055556
1.25	0.125255	0.018519	-2.70E-07	0.074074
1.30	0.172161	0.018519	-0.01852	0.074074
1.35	0.226557	2.70E-07	-0.01852	0.074074
1.40	0.287001	2.70E-07	-0.01852	0.074074
1.45	0.351647	2.70E-07	-0.01852	0.074074
1.50	0.418455	2.70E-07	-0.01852	0.074074

*Women in project communities in Koinadugu District were found to score positively in slightly more of the characteristics of empowerment than do women in comparison communities. This is not the case in Kaliahun District.*

### 5.3.2 Dimension 1: Ability to make and influence decisions

The first dimension of women’s empowerment considered in the Effectiveness Review focused on women’s influence in decision-making, at both household and community level. Results for the overall index of women’s empowerment and for each of the individual characteristics are shown in Table 5.7. These results are shown graphically in Figure 5.2. It can be seen that there is little sign of a difference either in the overall index or the individual characteristics between women in the communities where the project was implemented and women in the comparison communities, in either district. However, this is not surprising, since affecting women’s influence in decision-making was not among the project’s intended outcomes.

The results on women’s involvement in household decision-making are based on questions from the survey in which respondents were asked who

**Table 5.7: Comparison of women in project and comparison communities in terms of characteristics of ability to make and influence decisions**

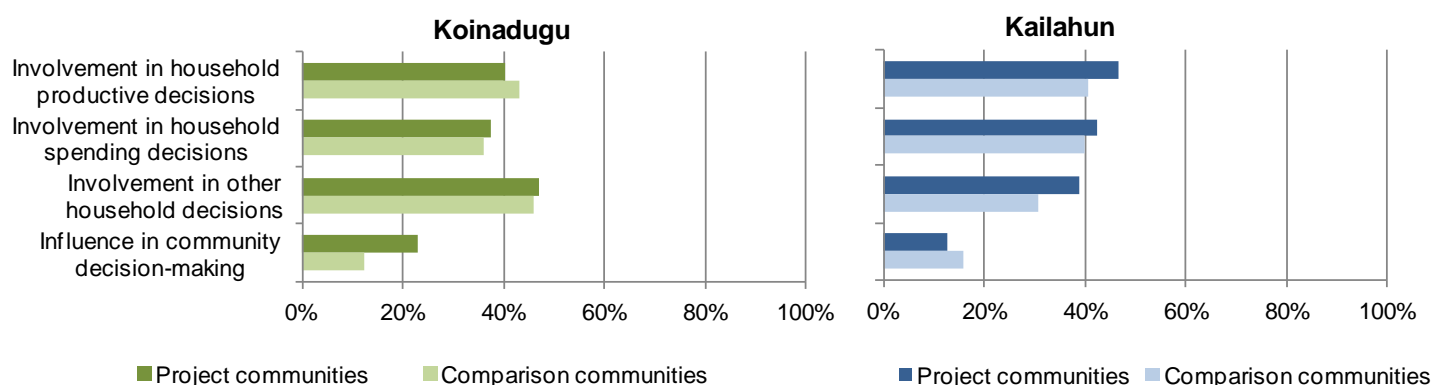
	1	2	3	4	5
	Index of ability to make and influence decisions	Involvement in productive decisions (binary)	Involvement in household spending decisions (binary)	Involvement in other household decisions (binary)	Influence in community decision-making (binary)
<b>Overall</b>					
<i>Unadjusted</i>					
Intervention group mean:	0.362	0.424	0.390	0.443	0.194
Comparison group mean:	0.335	0.422	0.373	0.406	0.134
Unadjusted difference:	0.026	0.002	0.018	0.037	0.060**
	(0.019)	(0.033)	(0.032)	(0.033)	(0.025)
<b>Observations:</b>	1024	1027	1027	1027	1024
<i>PSM</i>					
Post-matching difference: (kernel)	0.025	0.029	0.001	0.066**	0.007
	(0.015)	(0.027)	(0.027)	(0.027)	(0.022)
<b>Observations:</b>	<b>967</b>	<b>968</b>	<b>968</b>	<b>968</b>	<b>967</b>
<b>Koinadugu District</b>					
<i>Unadjusted</i>					
Intervention group mean:	0.367	0.403	0.374	0.471	0.229
Comparison group mean:	0.345	0.431	0.359	0.458	0.122
Unadjusted difference:	0.023	-0.028	0.014	0.013	0.108***
	(0.025)	(0.044)	(0.043)	(0.045)	(0.035)
<b>Observations:</b>	509	512	512	512	509
<i>PSM</i>					
Post-matching difference: (kernel)	0.041	0.049	0.017	0.100	0.007
	(0.034)	(0.057)	(0.057)	(0.062)	(0.058)
<b>Observations:</b>	492	493	493	493	<b>492</b>
<b>Kailahun District</b>					
<i>Unadjusted</i>					
Intervention group mean:	0.351	0.466	0.422	0.388	0.126
Comparison group mean:	0.317	0.405	0.398	0.307	0.159
Unadjusted difference:	0.034	0.061	0.024	0.081*	-0.032
	(0.029)	(0.045)	(0.044)	(0.043)	(0.031)
<b>Observations:</b>	515	515	515	515	515
<i>PSM</i>					
Post-matching difference: (kernel)	-0.001	-0.002	-0.029	0.036	-0.007
	(0.036)	(0.054)	(0.055)	(0.054)	(0.038)
<b>Observations:</b>	475	475	475	475	475

Standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

PSM estimates bootstrapped 1000 repetitions.

**Figure 5.2: Comparison of women in project and comparison communities in terms of characteristics of ability to make and influence decisions**



in their household is normally responsible for each of 12 different types of decisions. If the respondent stated that she was not the sole decision-maker in any particular area, she was also asked to what extent she would be able to influence a decision she disagreed with.

The 12 different types of decision were divided into the following three areas:

- **Decisions on productive activities:** Decisions relate to agricultural activities, livestock rearing, and other income-generating activities.
- **Spending decisions:** How income gained from each of the household’s income-generating activities is spent.
- **Other types of household decisions:** Decisions over household members’ travel, what to give as gifts during festivals, and what to do when a household members falls sick.

In each of these three areas, a woman was considered to score positively if she was either the main decision-maker or had a large amount of influence over at least half of the types of decisions made in the household. As shown in columns 2 to 4 of Table 5.7, around 40 per cent of women surveyed reached this benchmark in each of these the decision-making areas. There was no indication of a difference between women in the project and comparison communities in terms of involvement in productive or spending decisions. There is some indication that involvement in other types of household decisions is higher among the women in the project communities – but the statistical evidence for this is not conclusive, so this finding should be not treated with confidence.

*There is no clear evidence of any differences between women in the project and comparison communities in terms of ability to make and influence decisions.*

To evaluate women’s influence on **decision-making at community level**, respondents were presented with the following four statements, and were asked to state the level of their agreement or disagreement with each:

- There are real opportunities open to you to participate meaningfully in important decision-making bodies in your community.
- You are able to influence how your community is run, particularly on issues you think are important.
- When you feel it is important, you can influence the decisions leaders make in your community.
- You are in a position to change things in your community if you really wanted to.

Each respondent was deemed to have scored positively on community influencing if she agreed with at least three of these four statements. On that basis, only 16 per cent of women overall scored positively. Again, there is no

indication of a difference between the project and comparison communities on that basis.

### 5.3.3 Dimension 2: Self-perception

The ‘self-perception’ dimension includes an assessment of respondents’ attitudes and opinions towards women’s rights and traditional economic and domestic roles, as well as measures of self-confidence and ‘psycho-social’ wellbeing. Table 5.8 shows the results of the comparison between women in project and comparison communities in terms of the overall index and the individual characteristics, with the results shown graphically in Figure 5.3.

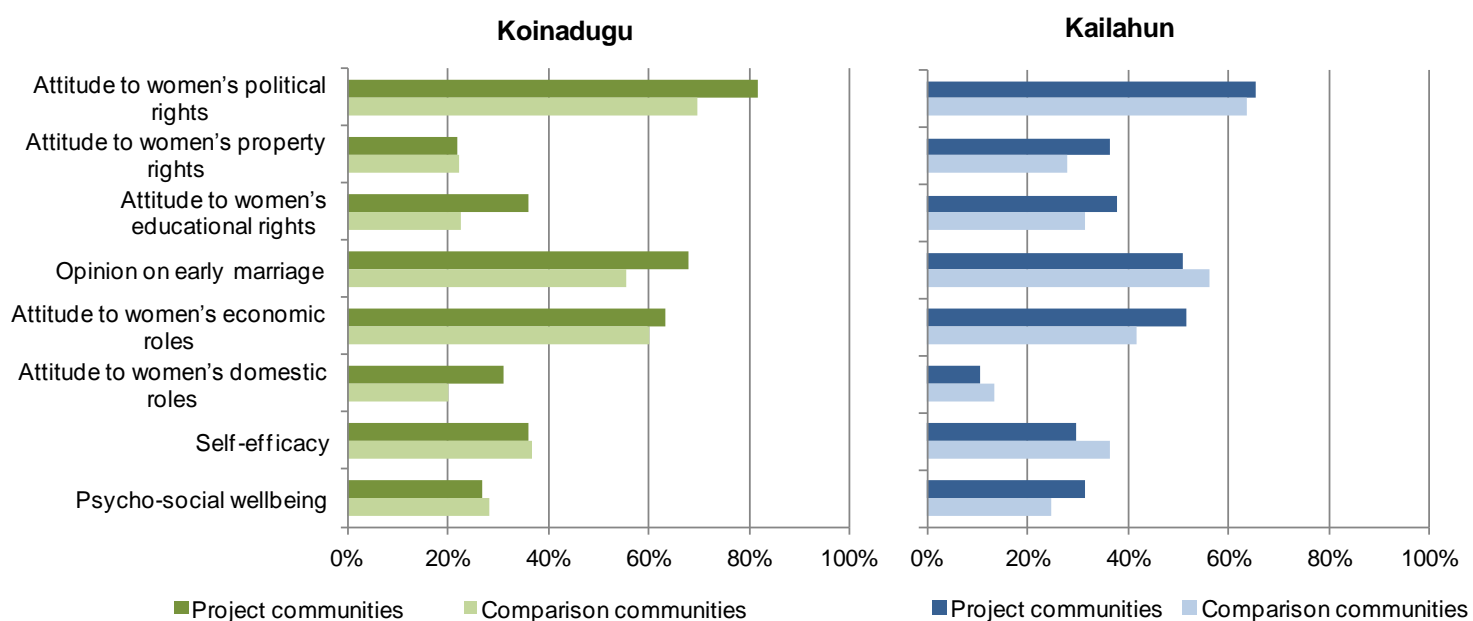
Each of the characteristics under this dimension were assessed, like that for community influencing discussed in the previous section, by presenting various statements to the respondents, and asking them about the extent to which they agreed or disagreed with each.

Firstly, a respondent’s **attitude towards women’s political rights** was assessed by examining her agreement or disagreement with the following statements:

- The leadership of a community should be largely in the hands of both men and women.
- During elections, it is better for wives to vote for the same candidates as their husbands, rather than voting for their own preferred candidates.
- Women should leave politics to men.
- During elections, a woman has the right to vote for her own preferred candidate, even if this candidate differs from her own husband’s preferred candidate.

Responses to the second and third statements (which are expressed in a negative form) were inverted during analysis. Each respondent was then deemed to score positively for attitude to political rights if she expressed positive responses in at least three of the four statements. On this measure, respondents in project communities in Koinadugu District had clearly more positive scores than those in comparison communities. For example, 73 per

**Figure 5.3: Comparison of women in project and comparison communities in terms of characteristics of ability to make and influence decisions**



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**Table 5.8: Comparison of women in project and comparison communities in terms of characteristics of self-perception**

	1	2	3	4	5	6	7	8	9
	Index of self-perception	Attitude to women's political rights (binary)	Attitude to women's property rights (binary)	Attitude to gender equity in education (binary)	Opinion on early marriage (binary)	Attitude to women's economic roles (binary)	Attitude to women's domestic roles (binary)	Self-efficacy (binary)	Psycho-social wellbeing (binary)
<b>Overall</b>									
<b>Unadjusted</b>									
Intervention group mean:	0.435	0.761	0.268	0.366	0.622	0.592	0.242	0.339	0.283
Comparison group mean:	0.386	0.677	0.242	0.257	0.558	0.539	0.177	0.366	0.270
Unadjusted difference:	0.049***	0.084***	0.025	0.109***	0.064**	0.053	0.064**	-0.027	0.013
	(0.012)	(0.029)	(0.029)	(0.031)	(0.033)	(0.033)	(0.028)	(0.032)	(0.030)
<b>Observations:</b>	1023	1025	1025	1025	1024	1025	1025	1024	1025
<b>PSM</b>									
Post-matching difference: (kernel)	0.036***	0.071***	0.011	0.097***	0.157***	-0.006	0.026	-0.092***	0.028
	(0.010)	(0.024)	(0.024)	(0.027)	(0.027)	(0.028)	(0.024)	(0.027)	(0.024)
<b>Observations:</b>	<b>966</b>	<b>968</b>	<b>968</b>	<b>968</b>	<b>967</b>	<b>968</b>	<b>968</b>	<b>967</b>	<b>968</b>
<b>Koinadugu District</b>									
<b>Unadjusted</b>									
Intervention group mean:	0.456	0.816	0.218	0.359	0.680	0.631	0.311	0.361	0.267
Comparison group mean:	0.395	0.697	0.224	0.227	0.556	0.602	0.201	0.368	0.283
Unadjusted difference:	0.061***	0.118***	-0.005	0.132***	0.124***	0.029	0.110***	-0.007	-0.016
	(0.015)	(0.038)	(0.037)	(0.041)	(0.043)	(0.044)	(0.040)	(0.043)	(0.040)
<b>Observations:</b>	509	510	510	510	510	510	510	509	510
<b>PSM</b>									
Post-matching difference: (kernel)	0.051**	0.134**	-0.009	0.115*	0.225***	-0.030	0.072	-0.132**	0.034
	(0.020)	(0.057)	(0.051)	(0.060)	(0.060)	(0.058)	(0.054)	(0.063)	(0.054)
<b>Observations:</b>	492	493	493	493	493	493	493	492	493
<b>Kailahun District</b>									
<b>Unadjusted</b>									
Intervention group mean:	0.393	0.655	0.364	0.379	0.510	0.515	0.107	0.296	0.316
Comparison group mean:	0.369	0.638	0.278	0.314	0.562	0.417	0.133	0.362	0.246
Unadjusted difference:	0.024	0.018	0.086**	0.065	-0.052	0.097**	-0.026	-0.066	0.070*
	(0.017)	(0.043)	(0.042)	(0.043)	(0.045)	(0.045)	(0.029)	(0.042)	(0.041)
<b>Observations:</b>	514	515	515	515	514	515	515	515	515
<b>PSM</b>									
Post-matching difference: (kernel)	0.002	-0.049	0.036	-0.001	-0.010	0.070	-0.052	-0.019	0.038
	(0.022)	(0.050)	(0.050)	(0.051)	(0.057)	(0.055)	(0.041)	(0.051)	(0.051)
<b>Observations:</b>	474	475	475	475	474	475	475	475	475

Standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

PSM estimates bootstrapped 1000 repetitions.

cent of women in project communities agreed with the fourth statement (that women have the right to vote for their preferred candidates), against only 65 per cent of women in comparison communities. In Kailahun District, 73 per cent of women agreed with this statement, but with no significant difference between the project and comparison communities.

Two further statements included in the survey were intended to elicit respondents' **opinions on women's property rights**:

- The husband should not be favoured over the wife in the disposal of family property or income.
- Men are better placed to own land than are women.

A woman was deemed to have scored positively on this indicator if she agreed with the first statement and disagreed with the second statement. Approximately 22 per cent of women in Koinadugu District and 31 per cent of women in Kailahun District met that criterion – but these proportions did not differ significantly between the project and comparison communities.

Similarly, two statements about **gender disparities in education** were presented to respondents:

- Even in cases where a family only has enough money to send one child to school, boys should not be given priority over girls.
- It is more important to educate boys than girls.

Again, a woman scored positively on this indicator if she agreed with the first statement and disagreed with the second statement. More of the women interviewed scored positively in Kailahun District than in Koinadugu District – and in this case, there is a statistically significant difference between the women in project communities and comparison communities in Koinadugu. For example, 43 per cent of women in project communities in Koinadugu agreed with the first statement, and only 33 per cent of women in comparison communities. It is not clear that there is any such difference between project and comparison communities in Kailahun.

Another two statements in the questionnaire sought to elicit information about the respondent's **attitude to early marriage**:

- It is better for girls to be married soon after they have reached puberty.
- It is wrong for girls to be married before they reach the age of 18 years.

Respondents were scored positively in this characteristic if they disagreed with the first statement and agreed with the second. Again a higher proportion of the women in the project communities in Koinadugu District met these criteria than did women in the comparison communities, suggesting that the project activities may have had some effect on attitudes in this area. No such difference between project and comparison communities was evident in Kailahun District.

Two further characteristics considered under this dimension sought to assess respondents' attitudes to women's economic roles and domestic roles. These were again by means of asking about respondents' agreement or disagreement with various statements. For attitudes towards **economic roles**, the statements were:

- A man's job is to earn money; a woman's job is to look after the home and family.
- Wives should be more concerned with their duties of childbearing and housekeeping and leave most household income generation to men.
- Men are more important than women in ensuring that the food and

*Women in project communities in Koinadugu District expressed significantly more positive attitudes to women's political rights, to gender disparities in education, and to early marriage than did women in comparison communities.*



income needs of families are met.

- Women are less capable of contributing to household income and food security than are men.

Respondents were deemed to score positively in terms of this characteristic if they responded positively to at least three of the four statements. Sixty-one per cent of respondents in Koinadugu District met this benchmark, against only 46 per cent in Kailahun District. However, there are no clear indications of a systematic difference between women in project and comparison communities in either district.

To assess opinions on women’s **domestic roles**, another four statements were used:

- A wife should obey her husband, even if she disagrees with him.
- A husband, rather than his wife, should be the overall boss of the home.
- A wife should never question the decisions made by her husband.
- A man should have the final word about decisions in the home.

Once again, respondents were deemed to have scored positively if they responded positively to at least three of these four statements. As for the results on women’s economic roles, respondents in Koinadugu District general expressed more positive attitudes than those in Kailahun District, but there are no clear differences those in project and comparison communities.

Respondents’ **self-confidence** was assessed by means of four questions derived from the General Self-Efficacy Scale:<sup>5</sup>

- You are confident that you can deal effectively with unexpected events.
- If you are in trouble, you can usually think of a solution.
- You can always manage to solve difficult problems if you try hard enough.
- You can usually handle whatever comes your way.

Approximately a third of women interviewed responded positively to at least three of these statements. Strangely, the proportion responding positively was lower in project communities in Koinadugu District than in neighbouring comparison communities.

Finally under this dimension, another section of the questionnaire asked respondents whether they had experienced any of the following **psycho-social health** problems during the past two weeks:

- Lost much sleep over problems.
- Felt constantly under stress.
- Felt you couldn’t overcome your difficulties.
- Been feeling unhappy and depressed.
- Been losing confidence in yourself.

Respondents were scored positively if they did not respond ‘yes, often’ to any of these questions, and only responded ‘sometimes’ to one or two. On this basis, just over a quarter of respondents scored positively. Again there were no clear differences between women in the project and comparison communities.

### 5.3.4 Dimension 3: Personal freedom

The survey included questions relating to six characteristics of personal freedom. Again, Table 5.9 shows the results of the comparison of women in

*Unexpectedly, significantly fewer of the women in project communities in Koinadugu District scored positively the measure of self-efficacy.*

<sup>5</sup> See <http://userpage.fu-berlin.de/~health/selfscal.htm>

**Table 5.9: Comparison of women in project and comparison communities in terms of characteristics of person freedom**

	1	2	3	4	5	6	7
	Index of person freedom	Literacy (binary)	Personal autonomy (binary)	Spare time (binary)	Support from family members in achieving personal goals (binary)	Attitude to violence against women (binary)	Experience of violence (binary)
<b>Overall</b>							
<i>Unadjusted</i>							
Intervention group mean:	0.410	0.197	0.309	0.862	0.280	0.265	0.546
Comparison group mean:	0.362	0.151	0.197	0.788	0.238	0.237	0.565
Unadjusted difference:	0.047*** (0.012)	0.046* (0.026)	0.112*** (0.030)	0.074*** (0.024)	0.042 (0.030)	0.028 (0.029)	-0.019 (0.033)
<b>Observations:</b>	1022	1027	1027	1024	1027	1024	1023
<i>PSM</i>							
Post-matching difference: (kernel)	0.041*** (0.010)	0.040* (0.020)	0.099*** (0.025)	0.064*** (0.019)	-0.018 (0.025)	0.083*** (0.024)	-0.038 (0.028)
<b>Observations:</b>	<b>965</b>	<b>968</b>	<b>968</b>	<b>967</b>	<b>968</b>	<b>967</b>	<b>966</b>
<b>Koinadugu District</b>							
<i>Unadjusted</i>							
Intervention group mean:	0.436	0.243	0.413	0.898	0.301	0.239	0.522
Comparison group mean:	0.365	0.173	0.242	0.792	0.252	0.184	0.548
Unadjusted difference:	0.071*** (0.016)	0.070* (0.037)	0.171*** (0.042)	0.106*** (0.031)	0.049 (0.040)	0.055 (0.037)	-0.026 (0.045)
<b>Observations:</b>	507	512	512	509	512	509	508
<i>PSM</i>							
Post-matching difference: (kernel)	0.069*** (0.024)	0.086* (0.048)	0.173*** (0.053)	0.127*** (0.049)	-0.039 (0.064)	0.113** (0.044)	-0.038 (0.061)
<b>Observations:</b>	490	493	493	492	493	492	491
<b>Kailahun District</b>							
<i>Unadjusted</i>							
Intervention group mean:	0.358	0.107	0.107	0.791	0.301	0.316	0.592
Comparison group mean:	0.358	0.107	0.110	0.780	0.252	0.340	0.599
Unadjusted difference:	0.001 (0.016)	0.000 (0.028)	-0.003 (0.028)	0.011 (0.037)	0.049 (0.040)	-0.024 (0.042)	-0.006 (0.044)
<b>Observations:</b>	515	515	515	515	512	515	515
<i>PSM</i>							
Post-matching difference: (kernel)	-0.039** (0.019)	-0.062* (0.036)	-0.082** (0.038)	-0.085** (0.041)	-0.002 (0.047)	0.008 (0.048)	-0.013 (0.053)
<b>Observations:</b>	475	475	475	475	475	475	475

Standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

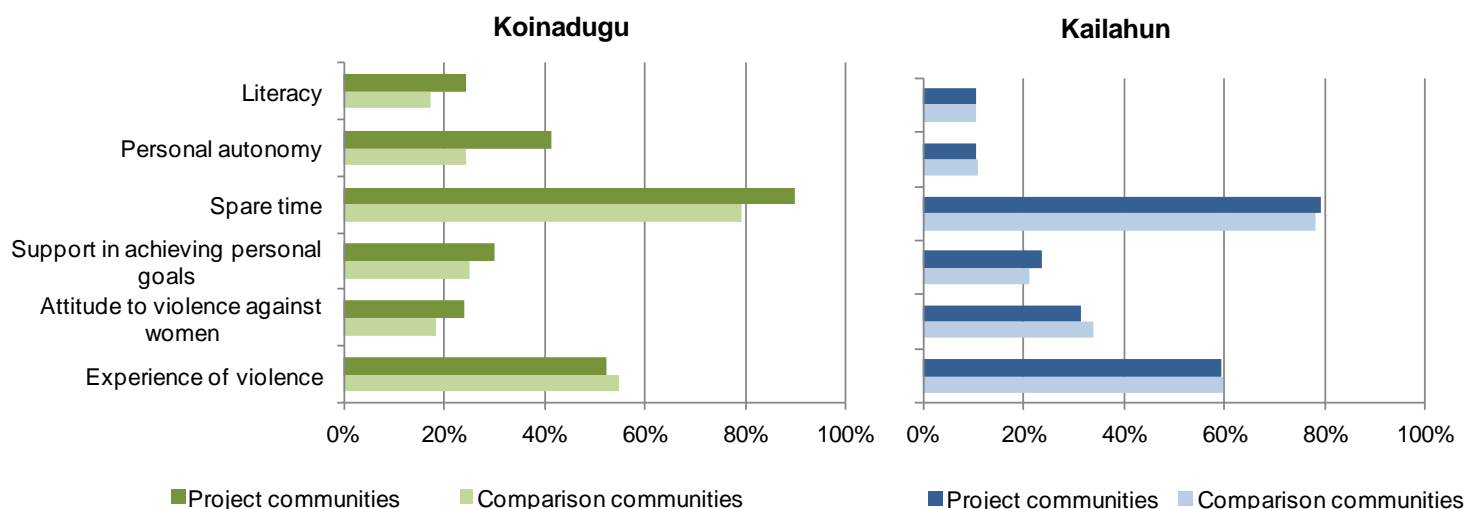
PSM estimates bootstrapped 1000 repetitions.

project and comparison communities in terms of the index and each of the individual characteristics, and Figure 5.4 shows the breakdown by characteristic graphically.

The first characteristic to be considered here is each respondent's level of **literacy**, defined as being whether the respondent is able to read and write a simple letter. In the communities where the project was implemented in Koinadugu District, the proportion of women who responded positively was approximately 22 per cent, compared to 13 per cent of the corresponding comparison respondents. In Kailahun District, there was no indication of a difference in women's literacy rates between the project and comparison communities.

The second characteristic considered is the degree of **autonomy** that the respondent has in her life and work. The indicator was again constructed by presenting three statements, and asking whether each of these was true for her:

Figure 5.4: Comparison of women in project and comparison communities in terms of characteristics of personal freedom



- It is up to you and you alone to decide how you do your daily work; nobody else controls how you do your own work.
- You do not need to seek approval from anyone to travel outside of your community.
- You do not need to seek approval from anyone to join a group in your community or participate in community-level activities.

Each respondent was scored positively on this characteristic if she said that all of these statements are at least partially true. On this indicator, there was a clear difference between the project communities in Koinadugu District (where 40 per cent scored positively) and the comparison communities (where only 23 per cent scored positively). Again in Kailahun District, it did not appear that women in project communities were any more likely to score positively than those in comparison communities.

*Women in the project communities in Koinadugu District were also more likely to score positively on several of the characteristics of personal freedom than were those in comparison communities.*

Another characteristic considered under this dimension was the **time** available to the respondent to pursue her own activities. This was evaluated by asking respondents to think about a typical day of the week and all the time they normally spend working or carrying out care duties or domestic duties. The respondents were then asked to estimate how many hours they have to themselves. Respondents were considered to have scored positively if they said that they had two or more hours available to themselves. On this basis, the majority of respondents scored positively. However, there again appeared to be a positive difference between those in project communities and comparison communities in Koinadugu District: 90 per cent scored positively in the project communities, but only 77 per cent in the comparison communities.

The fourth characteristic considered under this dimension was whether respondents can rely on **support from other household members** to achieve their personal goals. Respondents were considered to have scored positively if they reported that they receive a great deal of support from other household members, or if the level of support received had improved considerably since 2009. Around a quarter of respondents met this benchmark, with no apparent differences between those in project or comparison communities.

Respondents were also asked for their **opinion on the acceptability of violence against women**, as well as on their actual **experience of violence** in the 12 months prior to the survey. Overall, 75 per cent of respondents said that there are some situations in which they believe a husband has a right to hit his wife. However, this proportion was substantially lower in the project communities than in the comparison communities in Koinadugu District. Again there did not seem to be any significant difference between project and comparison communities in Kailahun District. Nearly half (44 per cent) of respondents reported having experienced some form of violence, insults or theft during the past 12 months, a proportion that did not differ significantly between the project and comparison communities.

**5.3.5 Dimension 4: Access to and control over resources**

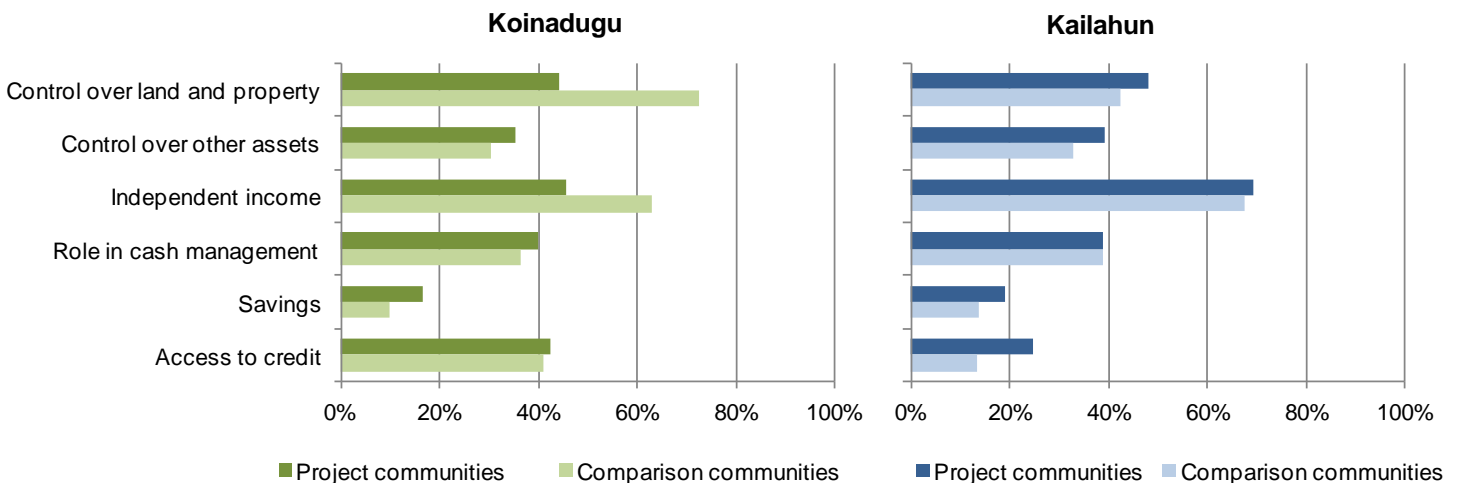
A further six characteristics were identified and measured corresponding to women’s access to and control over resources. The comparison between women in project and comparison communities for the characteristics making up this dimension are shown in Table 5.10 and Figure 5.5.

The first two of these characteristics were related to women’s **ownership or control of land and property**, and ownership of other kinds of strategic assets. For all the land, property and other major assets owned by their household, respondents were asked which household members have control over that asset – meaning who would make the decisions to sell or dispose of the asset if necessary. Just over half of the respondents (56 per cent) reported that they have at least joint control over some land or property, a figure that was higher in Koinadugu District than in Kailahun District. Surprisingly, women in the project communities in Koinadugu District were considerably *less* likely to report that they have control over some land or property than women in comparison communities – that is, they were more likely to report that other household members would make decisions over control of those assets without consulting them. It is possible that this result reflects that the project activities have resulted in women becoming more aware that they lack control over these assets. Women in the comparison communities may have been less likely to think critically about ownership of property within the household, and so potentially more likely to state by default that they have joint ownership with their husbands.

*In Koinadugu District, women in the project communities were less likely to report that they have at least joint control over some land or property. It seems likely that this reflects them thinking more critically about their level of decision-making control and influence than women in comparison communities.*

In terms of **ownership of other types of assets** (including livestock and

**Figure 5.5: Comparison of women in project and comparison communities in terms of characteristics of access to and control over resources**



valuable productive equipment, such as a plough, threshing machine or sewing machine), a third of women in each district reported that they have at least joint decision-making control over at least two livestock or asset types. There were no differences between women in project and comparison communities in this regard.

Whether a woman has **access to some independent income** was another characteristic considered in this dimension. Each respondent was considered to score positively on this basis if she reported that she personally contributes more than a third of total household income through her work. Approximately 56 per cent of women in Koinadugu and 68 per cent of women in Kailahun met this benchmark – a difference largely due to the higher proportion of female-headed households in Kailahun District. In Koinadugu District, significantly fewer women in project communities scored positively than in comparison communities on this indicator.

**Table 5.10: Comparison of women in project and comparison communities in terms of characteristics of access to and control over resources**

	1	2	3	4	5	6	7
	Index of access to and control over resources	Control over land and property (binary)	Control over other strategic assets (binary)	Independent income (binary)	Role in household cash management (binary)	Personal savings (binary)	Access to credit (binary)
<b>Overall</b>							
<b>Unadjusted</b>							
Intervention group mean:	0.357	0.455	0.368	0.537	0.396	0.174	0.363
Comparison group mean:	0.366	0.623	0.312	0.644	0.371	0.111	0.314
Unadjusted difference:	-0.010 (0.017)	-0.169*** (0.033)	0.056* (0.032)	-0.107*** (0.033)	0.025 (0.033)	0.063*** (0.023)	0.049 (0.032)
<b>Observations:</b>	1021	1026	1027	1027	1026	1026	1024
<b>PSM</b>							
Post-matching difference: (kernel)	-0.015 (0.015)	-0.143*** (0.028)	-0.026 (0.027)	-0.075*** (0.027)	0.023 (0.027)	0.035* (0.021)	0.016 (0.028)
<b>Observations:</b>	<b>964</b>	<b>967</b>	<b>968</b>	<b>968</b>	<b>967</b>	<b>967</b>	<b>967</b>
<b>Koinadugu District</b>							
<b>Unadjusted</b>							
Intervention group mean:	0.350	0.442	0.354	0.456	0.400	0.166	0.422
Comparison group mean:	0.393	0.725	0.304	0.627	0.363	0.098	0.408
Unadjusted difference:	-0.043* (0.023)	-0.284*** (0.043)	0.050 (0.042)	-0.171*** (0.044)	0.037 (0.044)	0.068** (0.031)	0.014 (0.044)
<b>Observations:</b>	508	512	512	512	511	511	510
<b>PSM</b>							
Post-matching difference: (kernel)	-0.045 (0.034)	-0.239*** (0.063)	-0.078 (0.064)	-0.158** (0.063)	0.075 (0.058)	0.039 (0.046)	-0.019 (0.062)
<b>Observations:</b>	491	493	493	493	492	492	493
<b>Kailahun District</b>							
<b>Unadjusted</b>							
Intervention group mean:	0.370	0.481	0.393	0.694	0.388	0.189	0.248
Comparison group mean:	0.314	0.425	0.327	0.676	0.388	0.136	0.133
Unadjusted difference :	0.055*** (0.021)	0.055 (0.045)	0.066 (0.043)	0.018 (0.042)	0.000 (0.044)	0.053 (0.034)	0.114*** (0.036)
<b>Observations:</b>	513	514	515	515	515	515	514
<b>PSM</b>							
Post-matching difference: (kernel)	0.037 (0.027)	-0.001 (0.055)	0.084 (0.052)	0.024 (0.052)	-0.042 (0.055)	0.032 (0.041)	0.128*** (0.040)
<b>Observations:</b>	473	474	475	475	475	475	474

Standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

PSM estimates bootstrapped 1000 repetitions.

Respondents were also asked who in their household is plays the main role in **keeping and managing the family’s cash**. Thirty-eight per cent of women reported that the responsibility is theirs or is shared with their husband or another household member. This proportion did not differ significantly by district or between the project and comparison communities.

The existence of **personal savings** and access to credit are two additional characteristics that indicate whether a woman has some degree of autonomy in accessing financial resources. Survey respondents were not asked directly about the amount of their savings, but were instead asked to estimate how long their household would be able to manage in an emergency, using only those savings. Just under half of respondents reported that they have some personal savings, and approximately 14 per cent reported that their household could survive for at least two weeks from those savings. To evaluate their **access to credit**, respondents were also asked if they would be able to borrow 250,000 Leones if necessary, from any source. The number who responded positively was much greater in Koinadugu District (41 per cent) than in Kailahun (18 per cent). Women in project communities in Kailahun were significantly more likely to respond positively on access to credit than women in comparison communities, but it is not clear why this should be the case: this is presumably not connected with the project activities.

### 5.3.6 Dimension 5: Support from social networks

The final set of characteristics included in the Effectiveness Review attempted to evaluate the strength of respondents’ social networks. The results of the comparison for women in project and comparison communities in terms of these characteristics are shown in Table 5.11 and Figure 5.6.

The first characteristic attempted to evaluate each woman’s degree of social connectivity by presenting four further statements, and asking respondents the extent to which these apply to them:

- You are regularly invited to attend festivities in the communities (e.g. weddings, cultural rituals).
- You are regularly invited to participate in important meetings in your community.
- You are regularly consulted for advice by members of your community, and are able to seek their advice and support when you need it.
- You regularly eat and drink with your neighbours and other friends in your community.

Each respondent was scored positively on this indicator if she agreed strongly with at least three of these four statements. Between a fifth and a quarter of respondents scored positively, and this did not differ significantly between project and comparison communities.

Respondents were also asked which **community groups they participate in**, such as savings or credit groups, religious groups, or producers’ associations. Respondents were considered to have scored positively if they reported participating in at least two different community groups, and are involved to some extent in decision-making in at least one of them. Further, they were also asked to what extent membership of those groups enabled them to **realise their personal goals**. There were no detectable differences between women in project and comparison communities in terms of either of these characteristics.

*None of the characteristics of support from social networks differed significantly between women in project and comparison communities in either district.*

**Table 5.11: Comparison of women in project and comparison communities in terms of characteristics of support from social networks**

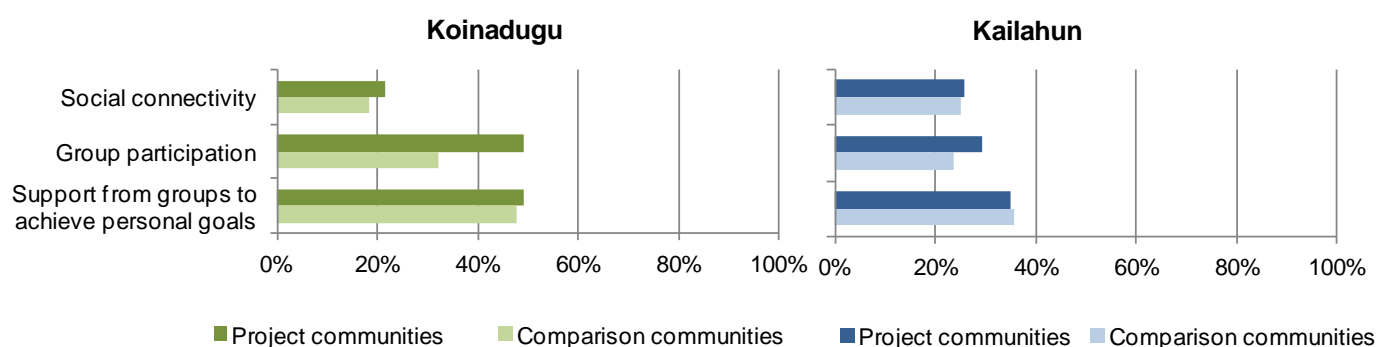
	1	2	3	4
	Index of support from social networks	Social connections (binary)	Group participation (binary)	Support from groups in achieving personal goals (binary)
<b>Overall</b>				
<b>Unadjusted</b>				
Intervention group mean:	0.366	0.229	0.423	0.443
Comparison group mean:	0.312	0.206	0.292	0.436
Unadjusted difference:	0.053**	0.023	0.131***	0.007
	(0.021)	(0.027)	(0.032)	(0.033)
<b>Observations:</b>	1023	1024	1026	1027
<b>PSM</b>				
Post-matching difference: (kernel)	-0.008	-0.014	0.022	-0.034
	0.019	0.023	0.028	0.028
<b>Observations:</b>	966	967	967	968
<b>Koinadugu District</b>				
<b>Unadjusted</b>				
Intervention group mean:	0.400	0.215	0.490	0.490
Comparison group mean:	0.329	0.184	0.320	0.477
Unadjusted difference:	0.071**	0.030	0.170***	0.013
	(0.028)	(0.036)	(0.044)	(0.045)
<b>Observations:</b>	509	509	512	512
<b>PSM</b>				
Post-matching difference: (kernel)	-0.042	-0.059	-0.014	-0.057
	(0.036)	(0.057)	(0.064)	(0.063)
<b>Observations:</b>	492	492	493	493
<b>Kailahun District</b>				
<b>Unadjusted</b>				
Intervention group mean:	0.299	0.257	0.291	0.350
Comparison group mean:	0.280	0.249	0.237	0.356
Unadjusted difference:	0.019	0.008	0.054	-0.006
	(0.028)	(0.039)	(0.040)	(0.043)
<b>Observations:</b>	514	515	514	515
<b>PSM</b>				
Post-matching difference: (kernel)	0.040	0.019	0.070	0.029
	(0.035)	(0.047)	(0.046)	(0.051)
<b>Observations:</b>	474	475	474	475

Standard errors in parentheses

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

PSM estimates bootstrapped 1000 repetitions.

**Figure 5.6: Comparison of women in project and comparison communities in terms of characteristics of support from social networks**



## 6 Conclusions and programme learning considerations

### 6.1 Conclusions

This Effectiveness Review finds some evidence that the community-level activities of this project have resulted in significant positive effects on some characteristics of women’s empowerment in Koinadugu District. In particular, women in communities where the project had been implemented expressed more positive attitudes towards women’s political rights and gender equity in education and stronger opinions against early marriage and violence against women than did women in the comparison communities. Women in the project communities were also significantly more likely to describe themselves as able to read and write a simple letter, and expressed more positive statements about the amount of control they have over their work and their time. It should be noted that the positive result on the index of women’s empowerment in Koinadugu District is not particularly robust to the potential existence of omitted variables, so the results should only be treated as tentative. However, the fact that the characteristics showing positive outcomes can be plausibly linked to the project interventions – while characteristics which are not connected with the project mostly did not show positive results – does add weight to the attribution of this positive change to the project activities.

*It is important to note that the impact of one of the key activities of the project – the radio discussions on women’s property rights – could not be assessed in this Effectiveness Review, and that this activity may have reduced the potential for detecting impact from the other activities.*

Unexpectedly, fewer of the women in the project communities in Koinadugu said that they had ownership of or control over some land or property than did women in the comparison communities. A potential explanation for this may be that the project activities have resulted in women becoming more aware that they lack control over these assets.

In Kailahun District, it is not clear that there is any difference in overall women’s empowerment between the communities where the project was implemented and the comparison communities. A key question arising from these results, therefore, is why the project activities should have resulted in some significant change in Koinadugu District but not in Kailahun District. While the model of implementation was the same in both districts, there are some important differences between the two environments. For example, radio coverage in Kailahun District is more effective than in Koinadugu, meaning that more people (including in the comparison communities) will have been exposed to the radio discussions on women’s property rights. Potentially this may have made it more difficult to detect any incremental effect from the community-level activities in Kailahun. Differences in political control of the two districts may have affected respondents’ perceptions of their ability to influence decision-making processes. In addition, Oxfam’s work is better known in Koinadugu District because a recent cholera response and a water, sanitation and hygiene governance project strengthened relationships with leaders across the district. This may have facilitated Oxfam’s ability to achieve positive results in this project. Importantly, it should also be noted that the district capital and two other market centres were excluded from the Effectiveness Review in Kailahun District. A relatively high proportion of the women community leaders trained are thought to come from these larger towns rather than from the rural areas, so the results may not reflect the full effect of the project activities in the district.



## 6.2 Programme learning considerations

- ***Ensure that mechanisms are in place to monitor the extent to which literacy training and campaign messages are disseminated by leaders trained under a project such as this to other community members.***

In a project with a model such as this one – where the intervention involves building the capacity of selected community leaders to carry out training and awareness-raising among their neighbours – it is particularly important to monitor to what extent that dissemination is taking place. This should at least take the form of periodic visits to a sample of community members, to understand what contact they had with the training and campaign messages being promoted under the project, and whether these messages had been understood. Such feedback will allow the implementers to test for what the optimum number of people to train in each community would be, and what level of follow-up support and encouragement is necessary in order to maximise the value of their work.

- ***Continue following up on progress with women’s property and literacy rights in the project districts, to understand what effects this project has in the longer term.***

Although this Effectiveness Review was carried out during the final stages of implementation of the project, it is possible that in many cases there had been only limited time for the training and campaign messages to be disseminated throughout communities. Certainly whether women are able to assert their property rights and to what extent this leads to increased women’s control over valuable assets are changes that will take longer to become clear. It will be interesting to continue following up to track whether the women trained under the project continue to promote women’s property rights and to provide literacy training locally, as well as to what extent these activities result in longer-term changes in women’s ability to assert their property rights. Even if carrying out further formal impact assessments is not feasible, if Oxfam continues to work in Koinadugu and Kailahun districts in other projects during the coming years, then this should allow opportunities for informal monitoring of changes taking place a district and community level. Such monitoring may well provide valuable insights into the long-term impacts of this project.

## Appendix 1: Summary of definitions of women’s empowerment characteristics

<b>Dimension</b>	<b>Characteristic</b>	<b>Cut-off: respondent scores positively if...</b>
Ability to make or influence decisions	Involvement in household decisions on productive activities	Respondent is the sole decision-maker or has a large amount of influence over at least half of the decision-making areas in which the household is involved.
	Involvement in household spending decisions	Respondent is the sole decision-maker or has a large amount of influence over at least half of the decision-making areas in which the household is involved.
	Involvement in other types of household decisions	Respondent is the sole decision-maker or has a large amount of influence over at least half of the decision-making areas in which the household is involved.
	Influence in community decision-making	Respondent agrees with at least three of the four statements about her ability to influence community decisions.
Self-perception	Opinion on women’s political rights	Respondent agrees with at least three of the four positive statements about women’s political rights.
	Opinion on women’s property rights	Respondent agrees with both of the positive statements about women’s property rights.
	Opinion on gender equity in education	Respondent agrees with both of the positive statements about gender equity in education.
	Opinion on early marriage	Respondent agrees with both of the positive statements about early marriage.
	Attitude towards women’s economic roles	Respondent agrees with at least three of the four positive statements about women’s economic roles.
	Attitude towards women’s domestic roles	Respondent agrees with at least three of the four positive statements about women’s domestic roles.
	Self-efficacy	Respondent agrees with at least three of the four statements derived from the General Self-Efficacy Scale.
Psycho-social wellbeing	Respondent reports that she has not experienced any of the five psycho-social health problems ‘often’ over the past four weeks, and has only ‘sometimes’ experienced at most two of them.	
Personal freedom	Literacy	Respondent reports that she can read or write a simple letter.
	Autonomy	Respondent reports that all three of the statements about personal freedom are at last partly true for her.
	Time to pursue personal goals	Respondent reports having two or more hours of time to pursue her own interests, on a typical day.
	Support available in pursuing personal goals	Respondent reports receiving a great deal of support from other family members in pursuing her personal goals, or that the level of this support has increased considerably since 2009.
	Opinion on gender-based violence	Respondent does not agree that a husband has a right to hit his wife in any of the seven situations mentioned.
	Experience of violence	Respondent reports not having suffered from any form of violence, insults or theft during the 12 months prior to the survey.
Access to and control over resources	Ownership of land or property	Respondent reports having at least joint decision-making control over some land or property.
	Ownership of or control over other strategic assets	Respondent reports having at least joint decision-making control over at least two types of livestock or productive assets.

**Strengthening and Linking Women-Led Efforts in Sierra Leone – Effectiveness Review**

<b>Dimension</b>	<b>Characteristic</b>	<b>Cut-off: respondent scores positively if...</b>
Access to and control over resources	Independent income	Respondent reports contributing more than a third of total household income from her own work.
	Role in managing household's cash	Respondent reports having at least joint responsibility in keeping and managing the household's cash
	Personal savings	Respondent reports that her household could survive for at least two weeks in an emergency, using only her personal savings.
	Access to credit	Respondent reports that she would be able to borrow 250,000 Leones if necessary for a business opportunity.
Support from social networks	Social connectivity	Respondent strongly agrees with at least three of the four statements about her social connections.
	Participation in community groups	Respondent reports that she is a member of at least two types of community group, and that she is involved to some extent in decision-making in at least one of them.
	Support from groups to pursue personal goals	Respondent reports that at least one of the community groups of which she is a member helps her to achieve her personal goals to a great extent.

## Appendix 2: Construction of wealth index

A reputable way of measuring a household wealth status involves capturing data on various household assets, as well as other locally relevant wealth indicators, followed by the construction of a household wealth index.

Depending on the context, relatively more wealthy households may, in particular, be more likely to own greater numbers and varieties of livestock, as well as have more material possessions and better housing conditions than their poorer counterparts.

Data were collected on the ownership of various assets (including livestock, productive assets, agricultural tools and household goods), as well as on the conditions of the family's house. The respondent was first asked to provide details about various items currently owned by their household (e.g. number of radios or the material of their roof). They were further asked to recall this information for the baseline period, i.e. 2009. After examining the data on each wealth indicator and for each time period, scores of zero, one or two points were allocated. For example, for 2009, the number of goats reported to be owned by the interviewed households ranged from zero to 30. Households that did not own any goats were given a score of zero, those that owned one to four goats were given a score of one, and those that owned five or more goats were given a score of two.

*An index of each household's material wealth was created by means of principal component analysis.*

Given that the various wealth indicators are intended to measure household wealth status, they should be significantly correlated with one another. That is, a household that scores favourably on one particular wealth indicator should be more likely to do so for other wealth indicators. In other words, these indicators should have a high degree of inter-item correlation. Cronbach's alpha is a measure of this interterm correlation.<sup>6</sup> The Cronbach's alpha obtained for all the indicators for the recalled 2009 data was 0.85. This is satisfactory, but a higher alpha was obtained by removing those items that were negatively correlated with the others, or with an inter-item correlation of less than 0.1 (based on either the 2009 or the current data). The final list of 68 wealth indicators used in the analysis is presented in Table A2.1.

Principal component analysis (PCA) was then run on this list, both for items owned in 2009 and those owned at the time of the survey. PCA is a data reduction technique that was used to narrow in on the variation in household asset ownership, which is assumed to represent wealth status. The more an asset is correlated with this variation, the more weight it is given. Hence, each household's weighted index score is determined by both a) the number of assets it owns; and b) the particular weight assigned to each asset. This enables the relative wealth status of the households to be compared. The index created for 2009 was used in the analysis of the data to control for differences in wealth status among the households of the various treatment groups.

<sup>6</sup> When items are used in a scale or index, they should all measure the same underlying latent construct (e.g. household wealth status). The items, then, must be significantly correlated with one another. The more the variables are correlated, the greater is the sum of the common variation they share. If all items are perfectly correlated, alpha would be 1 and 0 if they all were independent from one another. For comparing groups, an alpha of 0.7 or 0.8 is considered satisfactory. See: Bland, M. J. and Altman, D. G. (1997) 'Statistics notes: Cronbach's alpha.' *BMJ* 314: 572.

**Table A2.1: Inter-item correlations of household wealth indicators, used to construct wealth index for 2009**

Item	Obs	Sign	item-test correlation	item-rest correlation	average inter item covariance	Alpha
Tiller	1027	+	0.1286	0.1209	0.015388	0.8605
Tractor	1027	+	0.1581	0.1522	0.015389	0.8605
Generator	1027	+	0.3990	0.3810	0.015131	0.8587
Sewing machine	1027	+	0.1928	0.1722	0.015290	0.8600
Bicycle	1027	+	0.2396	0.2094	0.015183	0.8596
Motorbike	1027	+	0.4087	0.3805	0.014970	0.8578
Kiosk	1027	+	0.3509	0.3240	0.015070	0.8585
Cookshop	1027	+	0.1520	0.1326	0.015328	0.8603
Market table	1027	+	0.3140	0.2734	0.014990	0.8587
Grinding machine	1027	+	0.2085	0.1997	0.015356	0.8603
Dehusker	1027	+	0.1660	0.1584	0.015378	0.8605
Television	1027	+	0.3919	0.3752	0.015158	0.8588
Television cabinet	1027	+	0.2869	0.2767	0.015312	0.8599
Satellite dish	1027	+	0.1527	0.1459	0.015386	0.8605
CD/cassette/MP3 player	1027	+	0.4311	0.3982	0.014861	0.8572
DVD player	1027	+	0.3685	0.3473	0.015119	0.8587
Radio	1027	+	0.5597	0.5078	0.014157	0.8539
Walkman	1027	+	0.1383	0.1251	0.015362	0.8604
Speakers	1027	+	0.2735	0.2503	0.015198	0.8594
Pressing iron	1027	+	0.5628	0.5312	0.014584	0.8551
Hot-water flask	1027	+	0.5847	0.5369	0.014137	0.8533
Kerosene lamp	1027	+	0.3731	0.2956	0.014524	0.8595
Wall mirror	1027	+	0.2319	0.2187	0.015313	0.8600
Dresser mirror	1027	+	0.2984	0.2786	0.015206	0.8593
Wardrobe	1027	+	0.2764	0.2594	0.015251	0.8596
Cupboard	1027	+	0.3954	0.3610	0.014907	0.8577
Dining table	1027	+	0.3406	0.3176	0.015128	0.8588
Fridge/freezer	1027	+	0.2073	0.1979	0.015352	0.8603
Kerosene stove	1027	+	0.1762	0.1704	0.015385	0.8605
Coal pot	1027	+	0.3407	0.3141	0.015087	0.8586
Fan	1027	+	0.2268	0.2187	0.015355	0.8603
Cash box	1027	+	0.4283	0.3979	0.014904	0.8574
Watch or clock	1027	+	0.4653	0.4241	0.014656	0.8563
Glass bowl	1027	+	0.1715	0.1571	0.015339	0.8603
Suitcase	1027	+	0.4283	0.3834	0.014696	0.8569
Rug	1027	+	0.2504	0.2344	0.015278	0.8598
Floor mat	1027	+	0.4573	0.4311	0.014920	0.8573
Wheelbarrow	1027	+	0.2971	0.2717	0.015153	0.8591
Gold jewellery	1027	+	0.1254	0.0970	0.015322	0.8606
Tarpaulin	1027	+	0.4371	0.3951	0.014715	0.8568
Saw	1027	+	0.1710	0.1472	0.015292	0.8602
Hammer	1027	+	0.2119	0.1840	0.015230	0.8599
Goats	1027	+	0.3095	0.2380	0.014774	0.8603
Sheep	1027	+	0.3343	0.2849	0.014870	0.8585
Cows	1027	+	0.1521	0.1142	0.015263	0.8607
Poultry	1027	+	0.2022	0.1139	0.015055	0.8647
Mobile phone	1027	+	0.4753	0.4270	0.014518	0.8559
Fishing net	1027	+	0.1767	0.1226	0.015179	0.8613
Non-agricultural land	1027	+	0.3822	0.3029	0.014476	0.8594
Building not used for sleeping	1027	+	0.2698	0.2424	0.015167	0.8593
Glasses	1027	+	0.4934	0.4649	0.014813	0.8566
Wooden chair	1027	+	0.5617	0.5001	0.013962	0.8539
Plastic chair	1027	+	0.3945	0.3646	0.014968	0.8579
Electric bulb	1027	+	0.3601	0.3377	0.015114	0.8587
Torch	1027	+	0.4338	0.3704	0.014449	0.8571
Chinese lamp	1027	+	0.3268	0.2717	0.014840	0.8589
Bed	1027	+	0.5093	0.4479	0.014196	0.8552
Mattress	1027	+	0.4889	0.4240	0.014228	0.8559
Glass window	1027	+	0.2461	0.2281	0.015266	0.8598
Curtains	1027	+	0.3289	0.2978	0.015055	0.8586
Coleman	1027	+	0.3879	0.3644	0.015065	0.8583
Imported pot	1027	+	0.2911	0.2364	0.014929	0.8595
Jerry can	1027	+	0.4640	0.3883	0.014191	0.8571
Material used for walls of house	1027	+	0.2291	0.1775	0.015080	0.8603
Material used for roof of house	1027	+	0.2960	0.2142	0.014763	0.8617
Material used for floor of house	1027	+	0.4288	0.3482	0.014284	0.8584
Type of toilet	1027	+	0.4542	0.3902	0.014371	0.8566
House has electricity connection	1027	+	0.2864	0.2699	0.015248	0.8596
<b>Test scale</b>					<b>0.0149688</b>	<b>0.8606</b>