Supporting Rural Livelihoods and Employment in Western Georgia Project Effectiveness Review

Summary Report

Oxfam GB
Livelihoods Outcome Indicator

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Photo credit: Caroline Berger
Executive summary

Under Oxfam GB’s Global Performance Framework, mature projects are being randomly selected each year for a rigorous assessment of their effectiveness. The project ‘Supporting Rural Livelihoods and Employment in Western Georgia’ was one of those selected for an Effectiveness Review in the 2012/13 financial year. This project, implemented between 2007 and 2012 in partnership with the Civil Society Institute (CSI), aimed at strengthening incomes among smallholder producers by improving production and marketing techniques. One hundred and fifty households in two regions of western Georgia were directly supported with a programme of training, technical support, and the provision of capital and productive inputs over a three or four-year period. Another component of the project involved advocating for a more enabling policy environment for small producers in Georgia; the results of this advocacy work were not evaluated in this Effectiveness Review.

The Effectiveness Review adopted a quasi-experimental impact evaluation design, which involved comparing households that had been supported by the project with households in neighbouring communities that had similar characteristics at baseline in 2007. A household survey was carried out with 134 of the households directly supported by the project (including most of the households included in the livestock, tomato, potato and honey components of the project) and with 269 comparison households. 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 in terms of the various outcome indicators. The outcomes assessed included those related to the adoption of improved agricultural practices, production and sales of agricultural products, household income and wealth status, and measures of self-confidence and community involvement. The household expenditure data, in particular, informs Oxfam GB’s global livelihoods outcome indicator:

- Percentage of households demonstrating greater income, as measured by daily consumption expenditure per capita.

The survey data provide evidence that supported households have, on average, adopted improved production techniques at greater rates than the comparison households, and during 2012 produced and sold much larger quantities of the products supported under the project (tomatoes, potatoes, dairy products or honey) than comparison households. In three of the project components, this increase in sales appears to have led to a significant increase in overall household income. Among the tomato producers, household income is estimated to be around 40 per cent higher than it would have been without the project; the boost to income among the supported potato producers and beekeepers is smaller. However, in the case of those supported in cattle breeding, household income appears to be no higher than comparable households that did not receive such support. Similar variations in outcomes between the different components of the project are found in relation to other indicators of household wellbeing, such as the diversity of food types consumed in the household, or the ownership of assets.

Project participants expressed more positive opinions than comparison producers on their ability to influence affairs within their communities, as well as on their level of self-confidence and their ability to take initiative in improving their economic situation. The size of these differences varied between the different project components.

Although this project has now closed, the findings of this Effectiveness Review may be used to provide important lessons for future programming. Oxfam and the project partners are encouraged to consider the following:

- Investigate the reasons for the differences in impact on household wellbeing between the various components of the project.
- Use the quantitative estimates of impact on household income and other indicators of wellbeing to inform future decisions on the optimal intensity for livelihoods programming.
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. As part of this framework, modest samples of sufficiently mature projects are being randomly selected each year and rigorously evaluated. One key focus is on the extent they have promoted change in relation to relevant OGB global outcome indicators. For projects focusing on strengthening livelihoods, the global outcome indicator is the percentage of households demonstrating greater household income, as measured by daily household expenditure per capita.

In the 2012/13 financial year, the project ‘Supporting Rural Livelihoods and Employment in Western Georgia’ (GEOA45) was one of those randomly selected for an Effectiveness Review. This project, which was implemented from 2008 to 2012 in partnership with the Civil Society Institute (CSI), aimed to strengthen incomes among smallholder producers by improving production and marketing techniques. The project supported 150 producer households in the Adjara and Samegrelo regions of Georgia, focusing on the production of tomatoes, potatoes, honey, greenhouse vegetables, or cattle rearing, as appropriate to the local context and the experience of the participants.

The project Effectiveness Review aimed to assess the extent to which supported households were better off, in relation to OGB’s global indicator and other measures of livelihoods, than had they not received this support.

Evaluation approach

The project under review aimed to improve the livelihoods of producer households through interventions at the grassroots level. The best way to evaluate such an intervention would have been to restrict its implementation to randomly selected geographical areas, leaving others sites for comparative purposes, i.e. as controls. This impact evaluation design is known as a cluster randomised control trial. Such a randomisation process would ensure that the producers in the intervention and control groups were comparable in every way, so that the impact of the project could be assessed by directly comparing the data on outcomes between the two groups.

In fact, there was no random element to the selection of beneficiaries for the project. Households were deliberately selected for participation in the project. Consequently, an alternative impact assessment design was pursued, which attempts to ‘mimic’ what a randomised controlled trial does by statistically controlling for measured differences between intervention and comparison groups.

To implement the evaluation design, communities were identified which were located close to, and had similar characteristics to, those where the project activities were implemented. The Effectiveness Review team made efforts to replicate as far as possible the project’s targeting mechanism, which aimed to identify the most vulnerable households in the project communities which had the resources (in terms of access to cultivable land) or the experience necessary to benefit from the project activities. No comparison group could be identified for those supported in the production of greenhouse vegetables, and so this group was excluded from the Effectiveness Review. It is possible in some cases that comparison households may have had some indirect exposure to the technical support provided under the project, either through informal contact with participants or through farmer-to-farmer training held in 2011/12. In the livestock component of the project, the households selected for comparison purposes in fact participated in a short-term project carried out by Oxfam and CSI in 2008, in which households received some technical support and agricultural inputs. The effects on the supported cattle breeders estimated in this Effectiveness Review should therefore be interpreted as the additional effect of the three- or four-year intense programme of support, compared to the short-term intervention carried out in 2008.
A questionnaire was designed and administered to all households that had participated in the project and which were available to be surveyed (a total of 134 households), as well as to 269 comparison households. At the analysis stage, propensity-score matching (PSM) and multivariable regression were used to control for measured differences between the supported and comparison producers interviewed. Differences controlled for include the household composition, as well as the livelihood activities in which the household was engaging and the welfare benefits they were receiving at baseline in 2007.

It should be stressed that the results found in this Effectiveness Review represent the average effect on the beneficiary population as a whole. The effects of the project on particular participants may vary widely from these averages.

**Outcomes evaluated**

The outcomes of the ‘Supporting Rural Livelihoods and Employment’ project that were assessed as part of the Effectiveness Review included:

- **Outcome 1**: Adoption of improved agricultural techniques
- **Outcome 2**: Increased revenue generated from sales of products
- **Outcome 3**: Improved household income and nutrition
- **Outcome 4**: Increased asset wealth
- **Outcome 5**: Improved self-confidence and community participation
Supporting Rural Livelihoods and Employment in Western Georgia – Summary Review

Impact assessment summary table

The following summary table provides a snapshot of the key findings of the Effectiveness Review. A short narrative description related to each outcome then provides further information on each key finding. A separate technical report is also available, which provides a more detailed description of the evaluation design, process, and results. The table below summarises the extent to which there is evidence that the project realised its targeted outcomes in the form of a simple five-point ‘traffic light’ system. The key to the right shows what the traffic lights represent.

<table>
<thead>
<tr>
<th>Outcome/Impact</th>
<th>Rating</th>
<th>Short Commentary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outcome 1 – Adoption of improved agricultural techniques</td>
<td>G</td>
<td>Rates of adoption of improved production techniques were generally higher among the participants than among comparison producers.</td>
</tr>
<tr>
<td>Outcome 2 – Increased revenue generated from sales of products</td>
<td>G</td>
<td>Considerably larger proportions of the project participants made sales of the products supported under this project in 2012 than did the comparison households, resulting in significantly greater revenue being generated by the average participant household.</td>
</tr>
<tr>
<td>Outcome 3 – Improved household income and nutrition</td>
<td>A</td>
<td>Household income was considerably higher among supported tomato producers than in comparison households, with a smaller difference among the potato producers and beekeepers. There was no detectable effect on household income among households supported in cattle breeding.</td>
</tr>
<tr>
<td>Outcome 4 – Increased asset wealth</td>
<td>A</td>
<td>There is evidence of a significant increase in asset ownership since 2007 among the supported tomato and potato producers, relative to comparison households. There is no evidence of a corresponding increase among households in the livestock and beekeeping components of the project.</td>
</tr>
<tr>
<td>Outcome 5 – Improved self-confidence and community participation</td>
<td>G A</td>
<td>Project participants demonstrated significantly higher scores on measures of community participation, self-efficacy and self-reliance than comparison respondents. The size of these changes varies between those in the different components of the project.</td>
</tr>
</tbody>
</table>
Impact assessment findings

Outcome 1 – Adoption of improved agricultural techniques

A major focus of project activities was in providing training and technical support to participant households in order to improve their productivity and the quality of their production. One indicator of the success of these activities is the adoption of improved production techniques.

In Figure 1a, the darker shaded bars represent the rate of adoption of specific agricultural techniques by the households that participated in the project. The lighter-coloured bars represent the rate of adoption among the appropriate comparison households. It can be seen that most of these techniques were adopted by a larger proportion of the supported households than of the comparison households. Statistical analysis confirms that the households that participated in the project adopted these improved techniques at a greater rate than the comparison households, especially among the tomato and potato producers in Adjara Region.

It is important to note that these results may be affected by ‘spillover’ effects, as the benefits of technologies are diffused. If some of those in the comparison communities were encouraged to adopt improved technologies after seeing them being successfully used by the project participants, then the effects of the project implied by Figure 1a would be under-estimates. In particular, this may apply to the technique of yarovization, which was originally introduced to Adjara Region by Oxfam and CSI, but was reported to have been adopted also by 16 per cent of the comparison households in this survey. Honey extractors were also thought to have been first introduced in these areas by Oxfam and CSI, but were being used by the time of the survey by the majority of those producing honey in both project and comparison communities.

As shown in Figure 1b, the supported tomato and potato producers also applied larger quantities of both artificial and natural fertilizer to their fields in 2012 than did the corresponding comparison producers. Some of the potato producers had, in fact, received a
distribution of fertilizer from this project during 2012. However, the additional use of fertilizer is not confined to those who received the distribution: the other households supported in tomato and potato production, which had received fertilizer from the project in previous years, have continued applying fertilizer (presumably purchased themselves) in 2012.

**Outcome 2 – Increased revenue generated from sales of products**

Survey respondents were asked about their production and sales of the various products supported under the project. There were very clear differences between the supported and comparison households in the numbers producing these products at a commercial level. As can be clearly seen from Figure 2a, much larger proportions among the supported households than among the comparison households made sales of the respective products during 2012. (The darker shading again represents the households supported under the project, while the lighter shading represents the corresponding comparison households.) It is therefore not surprising that, on average, these households received considerably more income from these sales; this comparison is shown in Figure 2b.

It will be observed from Figure 2a that significant minorities of the supported producers did not report having made any sales of the relevant products during 2012. This applies in particular to more than 40 per cent of the supported tomato and potato producers. However, it should be noted that these figures do not account for production that was bartered with other households, rather than being sold. In addition, it is a common practice for households to save some production for sale later in the year – such saved production may not have been fully captured in the survey. Finally, sales may have been under-reported to some extent, perhaps due to respondents’ concerns about tax liability and eligibility for state benefits.

In any case, there are clearly large differences between the supported and comparison households in sales of the products supported under this project. It is important to examine
whether the concentration on these products has had any effect on households’ other livelihoods activities. For example, it is possible that, if producers have become more efficient in production of one crop or product, they will have diverted resources (including their time) to that activity, potentially to the detriment of other livelihoods activities. In fact, as far as agricultural production is concerned, this does not appear to have happened to any significant extent. The increase in production of the products encouraged by the project has displaced production or sales of other crops only very slightly, if at all. This means that the overall revenue generated by sales of all agricultural produce (including all crops, dairy products and honey) during 2012 was considerably higher for the average supported household than the average comparison household. This comparison for overall agricultural sales is shown in Figure 2c above.

Outcome 3 – Improved household income and nutrition

The measure examined under Outcome 2 – the revenue generated through the sales of crops, dairy products and honey – is an imperfect measure of the impact of the project on livelihoods because it does not take account of either costs of production or produce that was consumed within the household. To collect detailed data on both of these factors would be complicated and prone to error. Instead, the survey used for the Effectiveness Review collected various alternative indicators of households’ overall economic situation.

One of the key measures of a household’s overall economic situation is the level of household consumption: in most low-income contexts, consumption is normally found to be closely correlated with household income. The survey asked households to make estimates of their recent food consumption and non-food expenditure, including:

- The value of all food that had been consumed in the household in the previous seven days.
- The amount spent on the most common types of regular expenditure (including transport, communications and cosmetics) in the month prior to the survey.
- The amount spent on less-common expenditure types, such as health costs, school costs, and investments over the 12 months prior to the survey.

This information was aggregated and divided by the number of household members (with adjustments made for children and some allowance for economies of scale) in order to calculate per-person per-day consumption for the household.

The household consumption figures for the supported producers were then compared to the comparison producers. The results, shown in Figure 3, indicate that household consumption is significantly higher among the supported households than among the comparison households in the tomato-producing area, the potato-producing area and among the

![Figure 3: Total household expenditure per adult equivalent per day (lari; figures after PSM kernel matching)](image)
beekeepers. The size of this difference in household consumption between the supported and comparison tomato producers is estimated to be around 40 per cent; the effect is smaller among the potato producers and the beekeepers. By contrast, the households supported by the livestock component of the project do not appear to have household expenditure that is any higher, on average, than that of corresponding comparison households.

The same pattern was found when a more subjective indicator of household wellbeing was used. When asked to rate their household’s ability to meet its basic needs, a much larger proportion of the households supported by the tomato, potato and honey components of the project responded positively; this was not true of the supported cattle breeders. In another survey question, households were asked to judge subjectively whether their household income had increased or decreased since 2007. In response to this question, 60 per cent of the reported households responded positively, against only 21 per cent of the comparison households. This difference was similar in size among the participants in the tomato, honey and livestock components, but markedly lower among the supported potato producers. It may appear strange that so many of the supported cattle breeders responded positively to this question. It is possible that they subjectively feel themselves to be better off than they were five years ago (perhaps as a result of the donations of cattle which they received under this project), or it may simply be that they felt that Oxfam would expect a positive response to such a direct question.

It should be noted that the original aim of the livestock component of the project was to improve household nutrition, rather than household income. From the survey questions about households’ food consumption during the seven days prior to the survey, various indicators of nutrition and dietary diversity were constructed:

- Number of different food types consumed in the household.
- Number of types of fruit and vegetables consumed in the household.
- Number of days on which the household had eaten meat.

On each of these measures, the participants in the tomato, potato and honey components were again found to have a better diet than the corresponding comparison households, but participants in the livestock component did not. Not surprisingly, a different pattern is observed when investigating the consumption of dairy products. Participants in the livestock component were found to have consumed a larger volume of dairy products in the seven days prior to the survey than had the corresponding comparison households. This suggests that the primary aim of the livestock component, to improve the nutritional status of participant households, was achieved. These households increased the volume of dairy products they were consuming, even if broader improvements in diet or household income were not observed.

**Outcome 4 – Increased asset wealth**

While differences in household income and expenditure are likely to show short-term effects from project activities, examining the material assets owned by the household is generally recognised as a better indicator of sustained long-term change.

To this end, the survey included questions about the conditions of respondents’ homes and about the material assets they owned, including land, productive equipment, livestock, vehicles, furniture, and household goods. Details on these indicators were collected both for 2007 and for the date of the survey. There were particular concerns that ownership of assets may have been under-reported in this survey: indeed, a comparison with monitoring data collected by CSI a few months before the survey suggests that there may have been systematic under-reporting of numbers of cattle owned. However, there are no reasons to
believe that under-reporting affected households supported by the project differently to comparison households, so this is not thought to have introduced bias into the outcome estimates.

Analysis was carried out on the distribution of the various wealth indicators and asset types across the surveyed population. Some types of assets were found not to be positively correlated with the others, so were assumed not to be good indicators of wealth status and were excluded from the analysis. Notably, the asset types that did not appear to be indicators of wealth status in the context of western Georgia included most kinds of livestock other than cattle. However, most of these livestock types (with the exception of chickens) were reported to be owned by only small numbers of respondents, with no discernable differences between the supported and comparison households. The project participants, particularly those in the livestock component of the project, did report owning significantly more chickens than comparison households.

A statistical technique known as principal component analysis was used to generate an indexed score for the change in wealth indicators of each household since 2007. In Figure 4, zero represents the change in wealth indicators for the average respondent in each region between 2007 and the date of the survey: positive figures represent an above-average change (relative to other households in the same region), and negative figures represent a below-average change. Again, the darker-coloured bars represent the supported households in each component of the project, and the lighter bars the comparison households.

![Figure 4: Index of relative change in wealth indicators since 2007 (figures after PSM kernel matching)](image)

The results show a similar pattern to those for the indicators of household income: there is a positive difference between the supported and comparison households overall. It appears that this improvement in wealth indicators occurred mainly among those who were supported in the production of tomatoes and potatoes; it is not clear that there was any corresponding effect on wealth indicators among the participants in the livestock or beekeeping components of the project. It should be noted that these results apply in spite of the fact that the supported cattle breeders were given a number of animals during the course of the project. As a result of these distributions, the supported cattle breeders were found to own significantly more cattle at the time of the survey than the appropriate comparison households. However, when cattle are aggregated with other asset types and wealth indicators, there are no overall differences between the supported and comparison households.
Outcome 5 – Increased self-confidence and community participation

The Effectiveness Review attempted to evaluate not just whether the project had a positive effect on participants’ material wellbeing, but also whether it had brought any changes in how participants see their ability to take control of their lives or their involvement in community life.

Most of these measures in this area were constructed by presenting the respondent with various statements, and asking them to say the extent to which they agreed or disagreed. For example, the ability of respondents to influence community affairs was assessed by these statements:

- My friends and neighbours often come to me for advice on how to improve their production methods.
- If I wanted to give my opinion in community meetings, there would be an opportunity for me to do so.
- It would be very difficult for me to achieve a position of influence in this community.
- I’ve seen that my neighbours have been copying the production methods I use.
- If there is a problem in my community, people would consider my advice in order to find a solution.
- There are real opportunities for me and my household to influence important decisions which are taken in this community.
- My opinion is always considered in the community when taking decisions on new initiatives.

The responses were then aggregated to produce an overall score for each respondent’s ability to influence those around them in the community. (One other statement was excluded from this aggregate because the responses were found not to be correlated with the responses to the seven statements listed above.) Households which had been supported by the project – particularly among the tomato and potato producers – were found generally to have higher scores on this measure than the comparison households.

Two agree/disagree statements included in the survey were intended to assess respondents’ attitudes to innovation:

- I prefer to wait and see how others are doing with new technologies before I decide whether to use them myself.
- It is better to continue using our traditional production techniques, rather than taking a risk with new methods.

There was little indication of a difference between the supported and comparison households in terms of responses to these two statements.

Another module included in the questionnaire was adapted from the General Self-Efficacy Scale, a tool used in psychological research to evaluate respondents’ self-confidence and belief in their ability to solve problems and cope with challenges. The nine statements presented to respondents were:

- I can always manage to solve difficult problems if I try hard enough.
- Thanks to my resourcefulness, I know how to handle unforeseen situations.
- If someone opposes me, I can find the means and ways to get what I want.
- I can remain calm when facing difficulties because I can rely on my coping abilities.
- It is easy for me to stick to my aims and accomplish my goals.
- When I am confronted with a problem, I can usually find several solutions.
- I am confident that I could deal efficiently with unexpected events.
- If I am in trouble, I can usually think of a solution.
I can usually handle whatever comes my way.

Again, respondents were asked to state the extent to which these statements were true for them. These responses were used to generate an aggregate self-efficacy score for each respondent. There was a clear, positive difference between supported and comparison producers in this measure. This effect was particularly strong among the potato producers, but was observable among the tomato producers and livestock breeders as well.

Finally, respondents were asked to state the extent of their agreement or disagreement with the statement that ‘The most important person in making an improvement in my household’s living conditions is me. We can’t wait for the government to solve all our problems.’ Approximately three quarters of the respondents agreed with this statement. Again, more of the supported producers expressed agreement with this statement than the comparison producers. However, the effect was smaller among the participants in the livestock component of the project than among the participants in the other three components.

Programme learning considerations

- Investigate the reasons for the differences in impact on household wellbeing between the various components of the project.

The quantitative methods used for the Effectiveness Review are valuable in assessing whether the various project activities were successful in bringing about positive changes to the targeted households. However, there are limitations on how much these methods can reveal about how and why these outcomes arose.

It appears from the results presented in this report that households engaged in the tomato and honey components of the project were particularly successful in increasing their household income (although there is little evidence of increases in asset wealth among the honey producers). The effect on household income among the supported potato producers is smaller, and among the supported cattle breeders there is no detectable effect at all. We recommend that Oxfam and CSI conduct a follow-up assessment to probe the reasons behind the apparent poorer results in certain components of the project. In-depth interviews with a range of participants in the cattle and potato components could provide understanding on how engaging in the production of these specific products (dairy products, honey, tomatoes or potatoes) interacts with households’ decisions on how to allocate their time and resources between other livelihoods activities, and on what limitations households face in generating greater gains.

- Use the quantitative estimates of impact on household income and other indicators of wellbeing to inform future decisions on the optimal intensity for livelihoods programming.

This project involved providing each household with an intense programme of training, mentoring and distributions of productive inputs, over three or four years. In this respect it differs from the majority of Oxfam livelihoods projects, which typically provide a shallower package of interventions to a larger number of participants. It would therefore be of interest to use the quantitative estimates of impact in combination with data on the project implementation costs to make some assessment of the cost-effectiveness of this approach. The estimates of the increase in household income achieved among the supported honey and tomato producers (in the order of 15 to 20 per cent above appropriate comparison households), combined with an understanding of the broader impacts of the project activities on material and psychological wellbeing, can be used to make a judgement of the potential gains from future projects of this kind.