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TESTING TOOLS FOR ASSESSING SYSTEMIC CHANGE: OUTCOME HARVESTING

THE ALCP PROJECT IN THE GEORGIAN DAIRY INDUSTRY

LEO
Leveraging Economic Opportunities

LEO REPORT #43

Photo Credit:Tim Sparkman, MSA

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ACRONYMS

AJ	Ajara
ALCP	Alliances Lesser Caucuses Programme
BEAM	Building Effective and Accessible Markets
DCED	Donor Committee for Enterprise Development
DFID	UK Department for International Development
FS&H	Food safety and hygiene
GEL	Georgian Lari
KK	Kvemo Kartli
LEO	Leveraging Economic Opportunities
M&E	Monitoring and evaluation
MFI	Microfinance institution
MRM	Monitoring and results measurement
NFA	National Food Agency
OH	Outcome Harvesting
SDC	Swiss Agency for Development and Cooperation
SJ	Samtskhe Javakheti
SSLP	Small-scale livestock producers
USAID	United States Agency for International Development
USD	United States Dollar

EXECUTIVE SUMMARY

Outcome harvesting (OH) is a qualitative evaluation technique that gathers (aka "harvests") narratives from an array of key stakeholders about intended and unintended changes related to an intervention, then verifies and analyzes those changes through a highly consultative and iterative six-step process.

In May and June 2016, a researcher with the Leveraging Economic Opportunities (LEO)[1] activity, in collaboration with the BEAM Exchange, used OH to identify and analyze unintended outcomes arising at least partially from the Alliances Lesser Caucasus Programme's (ALCP's) successful efforts to facilitate an improvement in the dairy industry in Kvemo Kartli, Georgia. In so doing, we also evaluated the OH approach as a technique for understanding systemic change related to a market systems program.

There is growing recognition among market systems development practitioners of the need to capture the deeper changes that are occurring in the systems in which they work. LEO has been investigating practical ways to measure indications of systemic change; this started with a literature review and synthesis of efforts to evaluate systemic change for inclusive market development. The synthesis paper identified the growing interest among practitioners to measure indications of systemic change, but also the lack of well-recognized tools and frameworks for doing so.

To support this, LEO explored the utility of four tools – **Standard Measurement Tools, Outcome Harvesting, SenseMaker, and Social Network Analysis**, conducting trials of each on field-based projects. Full reports from those tool trials are available at www.microlins.org/leo, along with a synthesis report.

The research team found that the province of Kvemo Kartli had witnessed a broad increase in prosperity with several fundamental changes to quality of life and the perception of opportunity. By looking at the timing and patterns of behavior associated with these changes, the evaluation can confidently find that ALCP made a significant contribution to bringing them about. In the course of the analysis, we also explored numerous other contributing factors, including the employment generated by a large pipeline project and the government's construction of a new road from the Marneuli-Tbilisi highway to Tsalka town.

The analysis found several instances of systemic changes[2] among the 16 outcomes 'harvested'. Two systemic changes – change in *expectations of quality of life*, and changes in *business diversity* – do not easily fit into existing systemic change frameworks but are clearly important. Additionally, we noted a manifest change in *women's agency over revenue from milk collection* (contributing to a change in expectations of quality of life and women's self-esteem), as well as a change in *institutional biases around milk collectors'* solution-seeking versus extractive practices.

[1] For more information on LEO, visit www.microlinks.org/leo.
[2] There are many definitions of systemic change – this paper uses the term to indicate a shift in underlying norms that influence the behaviors of actors in a market system.

This activity also looked at the utility of OH itself as a tool for market systems practitioners and evaluators[3]. The evaluation yielded a fruitful trial with several useful points market systems practitioners should consider if attempting to apply it. OH yields a collage of many images, a tapestry woven together by the testimony of the individuals, documents and other sources consulted during the process. The research team found it to be a very useful tool for helping mature programs understand the range of unintended consequences to which their work has contributed. It is also a very useful tool for identifying (and ideally evaluating the significance of) other contributing factors to observed outcomes.

However, OH is not a sufficiently rigorous tool to make conclusive statements about the specific extent to which its findings are representative of an entire population – a quantitative follow-up survey would be useful. As such, it would not be appropriate as the centerpiece of a program's M&E regime, but should be included as a regular scan of the environment, giving insights into broader trends. It should also probably be applied by more mature market systems programs, with a significant volume of both intended and unintended outcomes.

In sum, we found it to be quite relevant to collecting and analyzing intended and unintended outcomes for market systems program. An additional step to assess the systemic nature of outcomes is required, as there is nothing inherently systemic about the process, itself. During the process, ALCP staff learned the methodology and have already started to apply it in several other regions where its programming had already run for several years, lending weight to the idea that it is not so technically challenging as to require expert support. They have also used insights gleaned from the survey to enrich the questionnaire of upcoming impact assessments.

[3] In all, LEO evaluated the utility of four tools, doing field trials of three. A synthesis report is available at www.microlinks.org/leo.

I. INTRODUCTION

A. THE ALLIANCES LESSER CAUCASUS PROGRAMME

The Alliances Lesser Caucasus Programme (ALCP) is a Swiss Agency for Development and Cooperation (SDC) market development project implemented by Mercy Corps Georgia. ALCP works in the dairy, beef, sheep and honey sub-sectors in the Kvemo Kartli (KK), Samtskhe Javakheti (SJ) and Ajara (AJ) regions in Southern Georgia, regions all highly dependent on livestock production. The program has been audited according to the Donor Committee for Enterprise Development (DCED) Standard[4] and is committed to the successful implementation and measuring of women's economic empowerment.

The program began in March 2014, building off of several smaller predecessor programs that began in 2008, and is set to run until February 2017. ALCP's goal is to contribute to poverty alleviation and the transition to a durable market economy for the livestock sector in the selected regions of KK, SJ and AJ, by creating sustainable changes in the dairy, beef, sheep and honey market systems for the ultimate equitable benefit of small, poor farmers, regardless of gender or ethnicity. The program is run according to a market systems development approach which facilitates key market players in the relevant value chains to address key constraints in core markets and supporting functions to exploit pro-poor opportunities for growth. Sustainability is encouraged through a minimum co- investment of 35 percent from the market players with whom the program invests.

B. LEO/BEAM TOOL TRIALS

The USAID-funded Leveraging Economic Opportunities (LEO) project is designed to support the capacity of donor staff and market systems development projects to design and implement evidence-based programs that facilitate inclusive market systems development. LEO's core research questions are the following:

1. How does one define and recognize significant, enduring, pro-poor change in market-systems resulting from the activities of development agencies? What are the defining features of these kinds of intermediate outcomes?
2. How can we identify early changes that reflect progress in a market systems facilitation project, before systemic changes and final project goals have had enough time to occur?
3. What practical methods and tools can we use to monitor systemic change and early change?
4. How can these results provide feedback to improve the management of facilitation activities?

LEO's effort to answer these questions includes the identification and testing of methods that can capture whether and how systemic change is occurring. These tools may include network mapping, results chains, causal loop diagrams, Sensemaker, most significant change, and OH. It is hoped that these trials will enable missions and implementing partners to understand whether the programming

[4] http://www.enterprise-development.org/measuring-results-the-dced-standard/

they are funding is leading towards expected results when still early in an activity's lifecycle, and to capture evidence that systemic changes are occurring.

The DFID-funded BEAM Exchange is a one-stop shop for sharing knowledge and learning about market systems approaches for reducing poverty. Its goal is to improve the impact and effectiveness of programs that use these approaches: creating jobs, raising incomes and improving access to basic services – sustainably and at scale. Following extensive consultation with implementers and other actors involved in market systems programs, BEAM identified 'Improved tools for evaluating systemic change' and 'identifying systemic change' as the two themes where the difference between the interest and the availability of information was largest. To bridge this gap, BEAM has identified a series of core questions that closely match LEO's focal questions. In combination, they are the following:

1. How does one define and recognize significant, enduring, pro-poor change in market-systems resulting from the activities of development agencies? What are the defining features of these kinds of intermediate outcomes?
2. How can we identify early changes that reflect progress in a market systems facilitation project, before systemic changes and final project goals have had enough time to occur?
3. What practical methods and tools can we use to monitor systemic change and early change?
4. How can these results provide feedback to improve the management of facilitation activities?

The LEO/BEAM-sponsored tool trials are intended to address the above questions through a series of tests with projects that are experimenting with tools for measuring systemic change, and profiles with projects that have already experimented with those tools.

C. LEO/BEAM AND ALCP COLLABORATION TO TRIAL OUTCOME HARVESTING

ALCP is a rigorously monitored program compliant with the Donor Committee for Enterprise Development (DCED) Standard for Results Measurement. It passed its first DCED audit in 2013 and was preparing for a second audit at the time of writing this report (mid-2016). In addition to its broader results measurement system, ALCP regularly conducts qualitative assessments to identify broader trends and systemically significant behaviors, such as crowding in by new actors.

Through these qualitative assessments, ALCP received anecdotal reports of broad knock-on effects in communities as a result of improved dairy production. These include changes in household investments, changes in household gender dynamics (dairy is a predominantly female activity), and increased household pressure on local government for improved services (such as clean water and childcare) that pertain to higher quality dairy and cheese production and women's preoccupation with more remunerative labor. The program was interested both in verification of these outcomes and an exploration of the factors that contributed to them – OH seemed a good choice for both goals.

BEAM and LEO saw this as an ideal application of OH, especially in combination with the other tool trials, as the ALCP trial would be focused on the identification and contribution analysis of unintended outcomes.

D. Report Structure: This report is organized as follows:

- This section**, Section I,** describes ALCP, the LEO/BEAM tool trials and the purpose of the OH trial.
- **Section II** describes the area in which ALCP works, laying out the context for the ensuing discussion of outcomes.
- **Section III** describes OH's six-step methodology as well as the process for adapting the tool to ALCP's needs.
- **Section IV** details the trial's findings, exploring each of the 16 unintended outcomes.
- **Section V** includes the trial finding's implications for ALCP and makes a series of recommendations the program might consider.
- Lastly, **Section VI** addresses the OH tool, itself, describing its uses and limitations and providing guidance for other market systems programs that might apply the tool, themselves.

II. CONTEXT

Since 2008, ALCP and its predecessor programs have sought to improve the ability of the Georgian media to provide useful agricultural information to small-scale livestock producers (SSLPs). At the same time, it has worked through other private actors, most notably service providers related to livestock production, to improve the quality and availability of embedded information provided alongside commercial transactions. The aim of both of these information channels is to improve SSLP productivity and regulatory compliance by means of improved information access.

The program also works to secure market access for SSLPs in the dairy, meat, wool and honey sectors. It clusters supporting functions in breeding, information provision via the media, veterinary support services and hay making machinery as well as local governance interventions related to facilitating access to public goods around the private entities providing this market access to small farmers. It has built up supporting functions to the core market in the form of the development of rurally appropriate business consultancy services in food safety and hygiene (FS&H), business development and environmental services. ALCP interventions are clustered to benefit from a synergistic effect. ALCP impact assessments measure the effects of all interventions together and potential synergies between them, with representative samples of beneficiary farmers drawn from the total population of livestock farmers. Program impact assessments are conducted to capture the effect of all interventions at once as the level of overlap in the populations is so high.

Of all the sectors in which the program works the dairy sector is the most mature. According to new cheese market research 53 percent of branded cheese in Georgian supermarkets is supplied from ALCP -supported entities. Of recent ALCP-facilitated video shorts on improved production methods designed for social media, a video on milking was one of the most popular. The pressure to

improve the sophistication of household dairy production and cheese processing is strong. The supply of clean unadulterated milk to compliant dairy entities increasingly regulated by the National Food Agency and a market increasingly driven by greater formalization and the development of supermarkets and packaged and branded cheese was the key constraint to the development of successful market access for SSLPs in the dairy sector. The formalization of the market meant that SSLPs relying on a complex web of intermediaries would eventually be forced from the market.

ALCP therefore designed interventions that would facilitate compliant small-to-medium-tier dairy factories sourcing from SSLPs. Previous dairy programs working on a cooperative based model centered on milk collection centers had failed to secure supplies of clean milk. One of the key aspects of this failure, the program realized, had been the transfer of information pertaining to milk quality to the men who as titular heads of households and traditionally public representative of the household in Georgia had mainly been members of the cooperatives. In Georgia women are responsible for the care of livestock as well as the milking and production of milk. It was imperative that information, appropriately packaged and transmitted, reached them. Key issues such as ethnicity also had to be addressed – previously Russian had been used when Armenian and Azeri communities were engaged, however many women in these communities could not speak Russian. The rather complex concepts of FS&H and livestock disease were developed into appropriate materials in appropriate languages in two tiers with a FS&H consultancy company (also facilitated by the program to develop services appropriate to rural businesses), a training for the managers of dairy factories and training for women suppliers of milk. In addition, women suppliers were able to access newspaper articles on FS&H, TV programs, embedded advice in local vet pharmacies, improved bulls and vote in community level meetings, through the clustering of interventions engineered by the program.

III. METHODOLOGY

A. OUTCOME HARVESTING

ALCP used OH to understand the range of outcomes to which its programming may have contributed – especially those which were not already on its radar (i.e. they were unintended). In addition to identifying and exploring the likely causes of outcomes, the trial also attempted to assess the degree to which identified outcomes may be systemic.

A Brief Background to Outcome Harvesting

OH draws from the research of Wilson-Grau and Britt, published by the Ford Foundation in 2012. In OH, the evaluation user (i.e. program staff) works with the evaluator (i.e. harvester) to define questions about outcomes that can be used to make decisions and take action. Outcomes may relate to behavior, relationships, practices or policies. For each outcome, the harvester uses a variety of data sources to assess the degree to which outcomes have occurred and the contribution of the implementer (change agent) to that outcome. The approach is retrospective in that it first describes outcomes and then seeks plausible explanations of how the outcomes occurred. OH can be used for

ongoing monitoring or ex-post impact evaluation, and can be used to examine intended and unintended outcomes.

BOX 1: SIX STEPS TO OUTCOME HARVESTING

1. **Design the Outcome Harvest**: Harvest users (i.e. program staff) and harvesters (i.e. the researcher) identify useable questions to guide the harvest. Both users and harvesters agree on what information is to be collected and included in the outcome description as well as on the changes in the social actors and how the change agent influenced them.
2. **Gather data and draft outcome descriptions**: Harvesters glean information about changes that have occurred in social actors and how the change agent (i.e. the program) contributed to these changes. Information about outcomes may be found in documents or collected through interviews, surveys, and other sources. The harvesters write preliminary outcome descriptions with questions for review and clarification by the change agent.
3. **Engage change agents in formulating outcome descriptions**: Harvesters engage directly with change agents to review the draft outcome descriptions, identify and formulate additional outcomes, and classify all outcomes. Change agents often consult with well- informed individuals (inside or outside their organization) who can provide information about outcomes.
4. **Substantiate**: Harvesters obtain the views of independent individuals knowledgeable about the outcome(s) and how they were achieved; this validates and enhances the credibility of the findings.
5. **Analyze and interpret**: Harvesters organize outcome descriptions in order to make sense of them, analyze and interpret the data, and provide evidence-based answers to the useable harvesting questions.
6. **Support use of findings**: Drawing on the evidence-based, actionable answers to the useable questions, harvesters propose points for discussion to harvest users, including how the users might make use of findings. The harvesters also wrap up their contribution by accompanying or facilitating the discussion amongst harvest users.

Source: Wilson-Grau and Britt. "Outcome Harvesting." Ford Foundation. 2012.

In addition to following these six steps, the ALCP trial included an additional examining of the degree to which outcomes identified in the process were in some sense systemic, owing to the fact there is nothing necessarily systemic about the OH process, itself. This examination was a subjective judgment made by the researchers, drawing on definitions of systemic change as articulated in the Springfield Centre's Adopt, Adapt, Expand, Respond framework[5] as well as ongoing research conducted under LEO.[6]

[5] http://www.springfieldcentre.com/wp-content/uploads/2016/04/Systemic-and-Systemic-Change-clarification-of-concept-V2-BT-260416.pdf

[6] Fowler and Sparkman, A Framework and Domains for Measuring Systemic Change, 2016; forthcoming.

OH exercises begin with the identification of a central question the harvest is intended to answer. At the same time, the assessment team must identify the informant population, the intended users of the outcome harvest, and the intended uses. The ALCP trial's questions, informant population, users and uses are detailed in the text box below.

BOX 2: APPLYING OUTCOME HARVESTING TO ALCP

The outcome harvesting question: *To what extent has the information disseminated through commercial channels led to behaviors that improved household dairy production, and what have been the additional effects of that improved production?*

The informant population: Households in Kvemo Kartli who have adopted improved dairy production behaviors, plus dairy industry service providers, collection point/factory managers, and local government officers.

Harvest users: ALCP staff, LEO and BEAM staff

Harvest uses:

1. To inform ALCP about additional, unintended outcomes that may have resulted, at least in part, due to improved dairy production at the household level
2. To inform LEO and BEAM about the uses and limitations of the outcome harvesting tool, including its ability to describe systemic change.

Our focus was on the second part of the OH question, since we intended to discover unintended consequences (both negative and positive) of ALCP's successful efforts to boost household dairy production by means of improved FS&H information access.

B. PROCESS AND MODIFICATIONS TO THE METHODOLOGY

In preparation for this exercise, email communications from OH experts emphasized the importance of tailoring the approach to the context and question to be answered. We found it necessary to make several modifications to the overall approach described in Box 1.

Table 1: ALCP Study Modifications to a Standard Outcome Harvest Approach

Action by the Research Team	Explanation/Comment
1. ALCP staff conducted 29 interviews of dairy farmers, cheese factory owners, an NFA rep and a local government representative. (Step 2)	OH typically interviews boundary partners or program staff, but given the need to find unintended outcomes, we needed to interview beneficiaries who had verifiably adopted the FS&H standards and seen a resulting income change.
2. We then reviewed interviews to identify general outcome areas. We identified 15 "outcome areas" from the interviews. We added one more (displacement of cheese traders), for a total of 16, to make sure we had at least one likely negative outcome area (though other areas were potentially negative, pending further investigation).	Because we were looking for unintended outcomes, we did not need to categorize outcomes according to ALCP's log frame or its dairy results chain. Instead, we grouped outcomes by general areas that emerged from reviewing interview records.

3. We went back to interviews to identify specific outcomes that fell under the 16 areas (see Section IV for list), identifying 80 specific outcome statements. We then built a table including the outcome areas, the specific statements, revised statements, a contribution hypothesis linking each outcome to ALCP, and a strategy for substantiating the outcome.	Revising outcome statements turned out to be superfluous, as we ended up starting with specific outcome statements but seeking, through the substantiation process, to ascertain the degree to which the outcome areas were generalizable to the larger population of milk producers. However, the contribution hypothesis and substantiation strategy were quite useful.
4. Met with knowledgeable ALCP technical staff (change agents) to discuss each outcome statement, ALCP's contribution and the substantiation strategy for each. (Step 3)	This was helpful for discussing the range of alternative contributions possible for each outcome, putting us in position to start substantiating each outcome area.
5. Interviewed more than 30 "substantiators" who could provide insight into specific outcome areas.	This step marked a significant departure from other OH trials, as we needed to infer the existence of each outcome through interviews with people who were unaware of ALCP's work (since ALCP was a facilitator, not a direct service provider). Discussed further below.
6. Analyzed and interpreted the data	This step was not a departure from OH's established process.
7. Supported use of the findings	The consultant and the ALCP team held a workshop on the final day to review all findings and discuss them at length, including potential negative outcomes and ALCP's likely next steps, based on this information.

Perhaps the most significant departure from the standard OH methodology was the use of individuals who were not familiar with ALCP for the substantiation process. As implied under Point 5 (corresponding with Step 4 in the OH process) in the table above, OH typically makes an explicit link throughout the data collection and analysis process between outcomes and the program seeking to understand them. Because of ALCP's facilitative nature, this was impossible - most people in the area did not know about ALCP because it purposefully maintained a low profile, eschewing the typical donor signs and other trappings of development projects. The research team thus sought people who might have insight into the unintended outcomes identified during the initial interviews, then tried to infer ALCP's contribution.

The element of timing thus became extremely important during the substantiation process (Step 4), helping the research team understand whether observed changes happened before or after ALCP investments. Other factors, such as the degree to which building materials and electronics sellers noticed significant changes in demand that corresponded with the milk production cycle, also served as clues toward deducing ALCP's likely contribution to outcomes such as home and durable goods purchases.

C. RESOURCES TO CONDUCT

The research team consisted of a consultant from MarketShare Associates leading the effort, with the full-time support of two highly qualified monitoring and evaluation experts from ALCP, plus five additional ALCP staff providing part-time support. Data collection took place over three weeks, with an additional two weeks required for drafting outcome descriptions, substantiating, analyzing and presenting the findings to the ALCP team. An additional two weeks were required to write the findings into this report.

IV. FINDINGS

The researchers identified 15 outcome areas from the 29 interviews. These outcomes were deemed to be unanticipated, likely linked to ALCP's work in the dairy market system, and of interest to the research team. However, none of the outcome areas were necessarily negative, so the team added a sixteenth outcome – displacement of cheese traders who had previously worked in Kvemo Kartli – to ensure that at least one outcome would speak to a negative unintended consequence of ALCP's work. The 16 outcome areas are listed below:

1. Women's control of revenue from dairy
2. Growth orientation to livestock business
3. Investments in children's education
4. House purchases
5. Increased demand for vet services
6. Cheese factories supporting supplier herd maintenance
7. Use of community funds for pasture water points
8. Change in grocery store offerings
9. Women's access to finance (as non-salaried workers)
10. Increase in business diversity in Tsalka town
11. Pasture purchases for hay production
12. Durable goods purchases for home improvement
13. Increased social network investment
14. Purchase of communication technology
15. Time for leisure and general sense of wellbeing
16. Cheese trader displacement

Below, we discuss each outcome in detail along three lines:

- what the outcome signifies
- the findings of the outcome harvest process related to each outcome; and
- the degree to which ALCP may have reasonably contributed to each outcome (along with other contributing factors).

Outcome Area 1: Women's control of income from dairy

Women's control of income from dairy concerns a change in women's agency over the revenue from their work. Milking cows is largely seen as women's work in Georgia. When it was still common for women to make cheese in the household in Kvemo Kartli which would be sold outside the household, men who tended to have agency over activities external to the household including the receipt of information would more heavily influence the use of revenue from cheese sales.

The switch to selling milk directly to local collectors, enabled by ALCP investments in cheese factories and the spread of improved FS&H information, does seem to have influenced a sharp change in agency over revenues. And it seems that the mechanism for women's control of revenue is their direct sale of milk to processors from the home which in turn leads from their direct receipt of information on how to produce the quality of milk which the collector requires. This is not a fundamental change in who gets to control what; rather it is a change in process that likely fits into existing gender dynamics, with a greater benefit to women. However, it probably does lead to increased agency because it gives women the opportunity to make decisions about what do to with the income. In other words, because men no longer have agency over the sale of milk, they're also not as involved in the decisions about what to do with the revenue and women are using the revenue to buy items they prioritize.

This mechanism was reported by several interviewees when asked directly about women's control of revenue from milk sales. But it was also noticeable in other ways, including the high percentage of milk revenues spent at grocery stores operated by some cheese factories (discussed in more detail under Outcome Area 8) and village women's steadily increasing patronage of new dentists in Tsalka town (discussed in more detail under Outcome Area 15).

Outcome Area 2: Growth orientation to livestock business

An increased growth orientation to livestock husbandry by households concerns the degree to which households view animal husbandry as likely to yield a higher return than other economic activities, as indicated by investments in herd size and facilities, such as cattle sheds.

There was ample evidence that this had happened on a large scale, and with a link to ALCP. Village herd sizes around each of the three cheese factories we examined had increased by more or less 100 percent since ALCP's initial investments. Moreover, the change was noticeable in interviews with non-milk-related actors. Credo Bank in Tsalka town, the most successful of Tsalka's four banks, stated that 60 to 70 percent of its borrowers used credit to purchase livestock, and a building supply business in Tsalka reported a sharp increase in demand over the last two years for material for cattle sheds.

Other contributing factors to this outcome likely include the unpredictable but always poorly remunerative performance of potato cultivation (the second primary agricultural product next to dairy) in the area, making dairy comparatively more attractive. One additional contributing factor must be salaries from workers building BP's latest pipeline, which runs from Azerbaijan to Europe

directly through Kvemo Kartli – it was begun in 2014 and provides regular, though temporary, employment to approximately 800 workers in the area of our investigation.

Outcome Area 3: Investments in children's education

Greater investments in children's education includes sending more of a family's children to school for longer periods, including university, and paying for ancillary services (especially tutors) that increase the likelihood of pupil success.

We found significant evidence that families in Tsalka, Sakdrioni and Gumbati were making greater investments in education, particularly around preparation for, and attendance at, Georgian universities in Batumi and Tbilisi. More investigation would be required to understand how much additional investment has been made, and the degree to which ALCP has contributed to this by boosting the dairy income households spent on these investments.

However, there were certainly other contributing factors. In the opinion of the Sakdrioni School Superintendent, this included improved support from the central government over the last few years, and the general development of the area, which carried with it changes in pupil preferences over the type of career they wanted. Nonetheless, he also pointed out that "financial stability from [the] cheese factory" made it much easier for dairy sellers to invest in education for their children.

Outcome Area 4: House purchases

House purchases are significant in this context owing to the area's unique history. Many dairy-producing households are tenant farmers who relocated to Kvemo Kartli in the past 10 years, mostly from the Ajara region of southwestern Georgia. At the same time, Kvemo Kartli (and Tsalka in particular) was host to a large ethnic Greek population that had immigrated back to Greece following the collapse of the Soviet Union. New migrants were to live in houses owned by the departed Greeks, based on informal caretaking agreements, but had difficulty buying the houses for lack of money and, in many cases, the challenge of simply finding the absentee landlords to negotiate a sale. The lack of registered home ownership, in turn, served as a significant disincentive to investment in facilities such as cattle sheds, and so an increase in house purchases would mark a positive step for the region's dairy producers.

The picture of house purchases that emerged from the OH exercise was both promising and complex. On one hand, there was evidently a large increase in house purchases in the time since ALCP began working on dairy in Kvemo Kartli, and the steady and increasing income from milk sales to ALCP-facilitated cheese factories played a substantial role. Credo Bank reported that home ownership in the area had increased from 10 to 40 percent in the last four years. This was substantiated by building material retailers, who commented on an increasing level of renovations following transfers in home ownership. On the other hand, there were multiple other contributing factors at play, and moreover the region's development (also partly ALCP-facilitated) had led to a massive increase in housing prices.

Estimates of the increase in housing prices varied, but it is reasonable to conclude that the Tsalka region has witnessed a 300 percent increase in house prices over the last 10 years. The increase in

housing prices would sensibly make it more difficult for dairy producing households to purchase the homes they lived in – presenting a picture wherein ALCP's very success accidentally created a barrier to its beneficiaries' continued prosperity.

But, as mentioned above, there are many contributing factors to both house purchases and the house price increase in Tsalka. For one, BP employees from outside Georgia had reportedly approached some Greek home owners about renting their houses for higher than normal prices – this in turn prompted the home owners to demand high purchases prices from current residents. We also received reports of Georgians from other areas buying homes in Tsalka for holidays at the nearby lake. These local factors are also part of a national trend of rising prices.

Outcome Area 5: Increased demand for vet services

We found evidence of increased demand for veterinary services plausibly attributed to ALCP. However, the program already knew about this (indeed, had tracked it quite closely), so we should not have included this outcome area in the exercise, given that we were focused on unintentional (or at least barely understood) outcomes.

Outcome Area 6: Cheese factories supporting supplier herd maintenance

Cheese factory investment in the health of their suppliers' herds marks a change in the degree to which buyers are willing to support the performance of business partners – an indication of a solution-seeking institutional bias,[7] or a systemically significant change in norms. Many market facilitation programs strive to foster this kind of behavior, but few can demonstrate success. Two of the three ALCP-facilitated cheese factories in the Tsalka area had made such investments.

The factory in Tsalka town, JTA, periodically hired veterinarians to check on the health of suppliers' cattle, and in 2015 had paid to test 60 cows for brucellosis (in response to an isolated outbreak of the disease in the rural area). The Gumbati factory, nearer to the outbreak, had also invested in brucellosis tests for its suppliers. However, we caught some embellishment on the part of the Gumbati factory's owner – he claimed to have taken 500 blood samples to a laboratory in Marneuli, when in fact (according to the laboratory) he had only brought 80 samples. At 7 GEL (about USD 3.5) per sample, 80 samples make more financial sense than 500… but the discrepancy highlights the importance of checking gathered data with as many sources as possible.

As livestock biosecurity was a key component of ALCP's FS&H information campaign, and there was little if any involvement of dairy product buyers in supplier herd maintenance prior to ALCP, it is reasonable to conclude that ALCP contributed significantly to this behavior.

Outcome Area 7: Use of community funds for pasture water points

Georgia's government structure makes available "community funds," which are used at the local government level for investments of a community's choosing. The use of community funds for productive assets conducive to dairy production would be of obvious interest to ALCP, as it would

[7] See Derks and Field (2016), and Markel and Getliffe (2016)

indicate the degree to which the larger community was actively prioritizing dairy, and possibly also provide insight into whether women (who were more likely to favor these investments) were able to influence the use of community funds.

We found evidence that this had happened at least once, in Sakdrioni village in 2015. No other evidence of this kind emerged. Other actors, including BP, were also active in building water points in pasture areas.

Outcome Area 8: Change in grocery store offerings

Many milk collectors/cheese factories also sell groceries and various sundries to their suppliers and other village residents. For the Sakdrioni cheese factory, its grocery business actually preceded its milk collection business, but the two are closely linked. The Gumbati cheese factory also operates a relatively large store, selling everything from detergent and clothing to food and wine.

We detected a significant change in the volume and variety of products on offer at cheese factory grocery stores, with a plausible contribution made by ALCP because the changes occurred after ALCP helped each cheese factory significantly expand their production capacities. The changes give insight into the development at the village level. Notably:

- A move to luxury consumption (e.g. black olives)
- Changes in tastes for basic staples – 4 GEL cakes to 8 GEL cakes
- Washing machine detergent in higher demand (not hand washing detergent – demonstrating household investments)
- Prepared meals are in her demand (requiring less cooking time – demonstrating a willingness to pay extra for convenience)
- Generally, higher demand for well-packaged, brand-name products
- Salt for livestock

The difference between the Sakdrioni and Gumbati groceries is also worthy of note. The Gumbati cheese factory owner claimed that about 70 percent of the money he paid for milk was spent by milk suppliers at his grocery store (this is the same man who claimed to have tested 500 cows for brucellosis, so there's likely a kernel of truth here surrounded by a layer of prideful embellishment). He has also forced almost all other shops in his village to close by out-competing them on price, including roving vendors who previously visited Gumbati weekly. However, it is important to note that no farmers interviewed complained about the prices in the shop and are well enough informed of general prices.

The Sakdrioni store, on the other hand, is probably too close to Tsalka town to achieve any monopolistic aspirations. Far from out-competing roving vendors, its managers reported providing cash to milk suppliers so that they could buy from roving clothing retailers, to be paid back later with milk.

Again, Gumbati's distance from Tsalka town likely plays a large role in the cheese factory's ability to control grocery sales in Gumbati (ALCP's 2012 informal economy study found that distance from

large population centers influences the frequency of barter trade). He outcompeted other shops by price and quality, which may be good in the short term, but nothing prevents him from raising prices now that the other shops closed – a potential significant negative outcome ALCP would do well to monitor.

Outcome Area 9: Women's access to finance (as non-salaried workers)

Women's access to finance refers to women's ability to gain access to credit in their own names, without borrowing under their husbands. Since salaried jobs are few and far between in the area, women's abilities to borrow on the strength of their dairy businesses adds a further dimension to the empowerment of female milk sellers.

The picture that emerged from substantiating this outcome is both affirmative and complex. On the one hand, there is definitely a significant increase in women livestock owners borrowing either directly from financial institutions (mostly Credo Bank) or via "zero interest" finance for durable goods purchases (really, a slightly more expensive purchase, with the difference in cost accounting for the cost of finance). On the other hand, there is cause for concern that loose lending has inundated Tsalka households with debt, leading to a potentially unsustainable situation of over-leveraged households. While Credo Bank claims a historically low default rate, the two other banks in Tsalka town had much higher default rates – and one of them, Liberty Bank, reported that half of its clients are women. In addition, a few of the retailers and other businesses interviewed in Tsalka town mentioned that high levels of indebtedness were starting to hurt consumers' ability to pay for goods.

It is fair to say that ALCP bears some responsibility for both the positive and negative aspects (if substantiated) of this outcome, since the steady payments and increasing value of livestock businesses enable the increase in borrowing (either the right amount or too much – also see the discussion of Outcome Area 12) in the first place. However, none of the farmer interviews yielded negative statements regarding borrowing or mentioned indebtedness as a concern, neither did the most successful MFI Credo with the lion's share of business from rural producers. In addition, the businesses mentioning indebtedness were those struggling in amongst the general economic development of Tsalka and losing out to competitors.

What this issue does highlight, however, is the need for further investigation into the matter to differentiate between a potentially serious developing situation in the market and 'sour grapes' statements from competitors in a cut-throat and saturated lending market. The investigation's goals would be to produce a more nuanced picture of household indebtedness and to flag potential problems in the future.

Outcome Area 10: Increase in business diversity in Tsalka town

An increase in business diversity in Tsalka town denotes an increase in the types and number of business serving customers in the town and surrounding villages. It would be notable for several reasons. For one, a more diverse business community is more robust to changes in markets – establishing a stronger economic base for local labor and investment, as well as a larger tax base for

local government. A second reason is that a more diverse business community is more likely to provide Tsalka consumers with a higher quality, more affordable and more diverse range of products and services than were previously accessible. From a complex systems perspective, an increase in business diversity enables the local economy to build on itself more quickly, creating novel opportunities for new entrepreneurs simply by virtue of the new unique combinations that are possible (and for that reason, it would qualify as a systemic change).[8]

Figure 1: Map of Business Starts in Tsalka Town

The Tsalka micro-economy has blossomed in business diversity since ALCP starting working with the dairy industry there. Figure 1 (above) is a map of Tsalka town, showing the various shops (groceries, cafes, electronics sellers, dentists, furniture stores, building materials sellers, etc), along Tsalka's two main roads. The red pins denote businesses that were open before ALCP began investing in cheese factories and FS&H information in 2012. The light green pins denote businesses that started that year or the year afterward. The dark green pins denote businesses that were opened since 2014. From a quick glance, it is easy to see the massive changes in Tsalka over this short time period.

The larger challenge is deducing ALCP's likely contribution to this explosion in microeconomic diversity. The research team attempted to make this judgment by asking businesses about the sources of investment in business startup, and the patterns of demand for their products and services.

A Credo Bank representative argued that "if not for agriculture, [businesspeople] would not be able to invest in business [in Tsalka town]." While that proved to be true for a few of the businesses we interviewed, most of them actually came from outside of Tsalka, opening up shop because they were

[8] See Hidalgo (2012).

attracted to the growing market. But that market, in turn, is essentially the purchasing behaviour of dairy and potato producing households, along with the 800 jobs provided by the BP pipeline project.

The seasonality of demand proved to be more insightful, as almost all shops reported that demand closely follows the milk production cycle (i.e. falling significantly in the winter). Since dairy earnings took off following ALCP support, it is quite reasonable to conclude that ALCP made a significant contribution to this outcome.

However, simply increasing incomes may not be sufficient to foster business diversity, and there were other contributing factors. Perhaps the biggest alternative contributor appears to have been the road, finalized in 2010, which linked Tsalka to the Tbilisi/Marneuli highway and reduced the travel time to Tbilisi to 2.5 hours, from more than 5 hours.

Outcome Area 11: Pasture purchases for hay production

Pasture purchase by dairy producing households for hay production demonstrate an investment that cuts the cost of milk production, as hay is the single largest input for dairy producers.

The research team encountered several reports of pasture purchases. Most notably, 92 families in Sakdrioni village purchased a 200-hectare plot on auction, paying cash. The fact that they could pay in cash is itself notable, and a clue to ALCP's contribution as the largest promoter of the dairy industry.

Outcome Area 12: Durable goods purchases for home improvement

Durable goods include items like washing machines, refrigerators and other large household investments. They are a store of value at the same time that they improve the productivity of household labor.

As with the patronage of other stores in Tsalka, durable goods sellers noted that demand for their products closely follows the milk production calendar – one retailer commented that he could only sell blenders, mixers and other small items during the winter. At the same time, demand had increased significantly over the last four years, and had followed a pattern whereby village households first demanded washing machines, then refrigerators, and some were even buying air conditioning units as of the time of this research.

However, as discussed under Outcome Area 9, many of these purchases seem to be backed by loans, mainly through Credo Bank's partnerships with retailers. While Credo currently has an extremely low default rate, this should be closely monitored. Farmer's interviews revealed no hint of default or trouble with indebtedness. However, two other banks reported that they had had significant trouble with repayments in the past. It could be possible that the increase in wealth is leading to spending, backed by easy credit, which could prove unsustainable in the long run. This area is further discussed in the implications and recommendations for the ALCP in Section V.

Outcome Area 13: Increased social network investment

Increased social network investment indicates that households have disposable income for weddings and other important social events. It showed up in a few places in the initial interviews.

The research team was unable to make any conclusive judgment on this outcome, but it is likely. The Sakdrioni cheese factory/grocery store manager commented that villagers often make advance orders for wedding and birthday presents through the store. However, we did not feel we were able to gain sufficient additional information to evaluate its generalized presence or a link to ALCP. It should be a subject of further inquiry, if ALCP is interested to learn about it.

Outcome Area 14: Purchase of communication technology

Purchase of communication technology speaks to many things: household investments in productive assets, the prioritization of communication with distant family members, and even a burgeoning appreciation for luxury items.

The research team found a surprising wealth of evidence of sharply increasing investments and increasingly sophisticated consumers. The best source of this information turned out to be mobile phone repair and retail shops in Tsalka town. One of these vendors recounted how even elderly women from the villages are starting to approach him with well-informed questions about smartphone characteristics, including memory size and camera pixel count.

The availability of high quality telecommunications networks is certainly a contributing factor to this outcome, but cash availability from dairy sales also plays a large role, providing a plausible link to ALCP. In addition, the numerous comments by dairy producers in the initial interviews about the enjoyment they derive from "Skyping" with family and school friends speaks to Outcome Area 15, below.

Outcome Area 15: Time for leisure and general sense of wellbeing

Time for leisure and general sense of wellbeing indicates a perception among female dairy producers that the transition to milk sales from cheese making has brought a larger change in quality of life, as indicated by the availability of daily free time for socializing with neighbors.

This was obviously difficult to confirm. The research team gathered evidence from hair salons, milk processors, dentists and other sources in the effort to substantiate expressions from interviewees about this outcome. In the end, however, it seems unnecessary to question too deeply a woman's testimony that the shift from the "torture" of cheese making, permitting little if any free time and low earnings, has dramatically improved her quality of life – especially when faced with multiple statements about the joy one derives from "having a coffee" with friends in the afternoon, between the morning and evening milking periods.

ALCP's role in contributing to this outcome seems relatively straightforward – were it not for its investment in cheese factories and the work to improve FS&H practices, female dairy producers would have had little opportunity to access the more lucrative fresh milk market.

Interestingly, this outcome speaks to a broader change in expectations, owing to a fundamental shift in quality of life. As stated above, many survey respondents said they thought cheese making was "drudgery" and "torture," and far preferred not only the increased income from milk sales, but also the additional free time. Many women use this time to take public buses into Tsalka town to shop, have their hair done at the salon, and even receive cosmetic treatment for their teeth at one of Tsalka's new dentists. It is likely that a return to cheese making, with lower income and the requirement that women work at home all day, each day, would be fiercely resisted by the newly empowered women among the village's dairy producing households.

As this marks a fundamental shift in women's expectations of what their lives should include, it fairly qualifies as a systemic change – but what type of systemic change?

Outcome Area 16: Cheese trader displacement

Cheese trader displacement refers focuses on the situation of traders who are no longer able to access cheese produced in villages, now that most household have shifted to fresh milk sales.

The research team contacted one known cheese trader who traded second hand clothes for cheese, who recounted that some cheese sales persist at the village level, but that the practice has largely subsided. For her part, she no longer trades in cheese and is now simply taking cash for clothing sales.

This seems predictable and not tremendously illuminating – the population of cheese traders was miniscule compared to the population of milk producers benefitting from the intervention, in addition to the larger benefit to consumers who now access more sanitary cheese. The link to ALCP is also quite clear. Again, this outcome was included simply to ensure that the evaluation did not fail to include any negative information whatsoever. Given the insights into housing prices, debt burdens and the capture of a village's grocery market by a program-facilitated cheese trader, that concern is no longer as significant.

V. IMPLICATIONS FOR ALCP PROGRAMMING

The OH exercise carries with it a number of useful recommendations for ALCP. To start with, there is robust evidence that ALCP's interventions to improve the performance of the dairy industry in Tsalka have had a significant effect on economic growth in the province at large. Evidence for this includes outcomes such as increased home ownership, an increasingly commercial view of livestock husbandry, and (most intriguingly) a huge increase in microeconomic diversity, among other indications. That said, in order to specifically quantify the extent to which households have experienced these outcomes, ALCP would need to conduct a follow-up quantitative study.

As far as systemic change, we found that ALCP has achieved a fundamental shift in underlying norms and networks along the following lines:

- A change in norms (institutional biases) toward solution-seeking behavior by milk processors.
- A more complex, dynamic local economy, as illustrated by a sudden burst in business diversity and the more complex economic network it indicates.
- A change in the way women influence household purchases.
- A change in women's expectations of their quality of life.

That said, every intervention has the potential to generate unintended, and even negative, consequences. The OH exercise allowed us to evaluate some of the possible negative consequences to which the positive impact of the ALCP could contribute, flagging issues which the program can further investigate, seek to mitigate and integrate in programming for further impact. However, it must also be stated when looking at the outcomes listed below that there are many other contributing factors that must be considered external to the control or remit of a program. For example, increasing house prices are a national trend across Georgia, partly owing to the saturation of the market with credit institutions targeting small, rural households.

Possible Negative Outcomes:

1. Given information from some bank representatives and businesses regarding debt levels in households pertaining to household over-leveraging, it is worth investigating whether the area is experiencing a level of growth that could exceed sustainability. If that were the case, ALCP might consider:

- Closely monitoring lending patterns, household debt and default rates amongst the beneficiary population.
- Including the issue in the market research to be undertaken as part of ongoing phases/interventions including: the levels of household indebtedness, its potential effect on the target beneficiaries and the capacities of local financial institutions to mitigate over indebtedness

Note: It is worth noting that the statements of two bank representatives were in acute contrast to the Credo representatives, who reported the lowest default rates to date, and that the statement from business tended to be from those who were struggling. No farmers mentioned struggling with indebtedness in the initial interviews. This contrast emphasizes the need for further substantiation of levels of indebtedness and the degree to which it may be distressing households, or simply a perception.

2. Although this outcome is clearly part of a national trend, local prices are also being affected by local market buoyancy and increased demand for housing in Tsalka. House price increase can dis-incentivize investment and lock the poorer segments of the population out of home ownership. ALCP might look more closely at this as a factor in the development of rural regions and include it in the market research underpinning further programming.

3. If the example of the Gumbati cheese processor is not a one-off, supporting such enterprises in remote areas could unintentionally lead to the development of monopolistic positions, even though there is at present no evidence of exploitation (none of the Gumbati interviewees expressed dissatisfaction with the shop or its prices).

   ALCP will consider, in successive programming, further emphasis on deepening function and sustainability in what is now a vastly transformed sector (fast moving consumer goods), a sustainability that could include the governance surrounding the empowerment of suppliers as well as enterprises in the market and include the development of product and enterprise peer controlled industry norms.

However, it must be said that the above outcomes are good problems to have. Isolation and hopeless, miserable poverty are bad problems. ALCP's success likely means trading extremely difficult, acutely immediate problems for slightly less difficult, more generalized problems – perhaps that is the most any successful program can hope to achieve. In that sense, OH turned out to be a useful tool for flagging the next set of difficult problems likely to emerge.

The OH trial also provided some substantiation and produced excellent material for use in the existing monitoring of intended outcomes of interventions such as women's increased participation in community meetings. In reviewing interviews, the research team found six references to attending community meetings and voting for local governments to use public funds to invest in household water systems, land, water points in pastures, village roads and kindergarten. The ALCP team will feed this into their monitoring of the outcome, providing better nuanced and wider capture than might have hitherto been done. It might also do well to investigate this outcome further by subjecting it to the same substantiation process by which we evaluated the other 16 outcome areas.

Additional reflection on the utility of outcome harvesting from the ALCP leadership team's perspective is presented below in Box 3.

BOX 3: OBSERVATIONS FROM THE ALCP TEAM ON OH

1. The OH tool showed a broader picture of how the programme influences not only target groups (farmers) but also other market players and the general business situation within the villages as well as in the nearby town.
2. OH reflects well the unintended and intended effects of the programme while representative/quantitative surveys give us an opportunity to measure to what extent changes occurred. However, the OH tool can show a precise picture only when it is supported with representative quantitative surveys,
3. The OH tool gives us information that is useful for adding additional research topics and improving questionnaires for the upcoming surveys with more nuanced questions and positive and negative topics that may not have been fully considered before.
4. OH methodology is quite easily transferable to other team members and its results simple to present and understand. One OH-based study on dairy sector outcomes has already been conducted by another part of the ALCP team in another region the programme works in, resulting in simple, easy-to-process results which will considerably augment the impact assessment soon to be conducted in the region.
5. During the stand by phase (between programme phases) when the programme halts monitoring of some interventions, the OH is very good tool to use for following the trends of the intervention's development.
6. In picking up potential negative outcomes OH allows the programme to incorporate these issues into market research and monitoring to develop appropriate ongoing programming. Questions on household borrowing have already been included in the upcoming Impact Assessment for Kvemo Kartli

VI. USES AND LIMITATIONS BY THE BROADER MARKET SYSTEMS COMMUNITY

LEO and BEAM sought to test OH as a tool for understanding systemic change fostered (at least partly) by market systems programs. The trial showed conclusively that it is a very useful tool for this purpose, despite the fact that there is nothing inherently systemic about outcomes collected by the tool. That limitation was easily remedied by adding a step to the process that evaluated outcomes for their systemic impact.

Additionally, outcome harvest seems to offer two unique strengths:

1. *Identifying unintended outcomes*. Given the focus market systems programs give to results chains and the serendipitous nature of tracking important behaviors, such as new actors 'crowding in' to take advantage of new opportunities, unintended outcomes can be easy to miss. OH

offers a relatively low-cost and non-technical approach for gathering robust data about outcomes no one might expect (though they seem perfectly sensible in retrospect).

2. *Exploring other contributions to outcomes*, whether intentional or unintentional. The market systems field has pushed hard to shift the debate from "attribution" to "contribution," but contribution assumes multiple influencing factors.[9] OH has proven to be a useful way to identify other contributing factors that may have influenced an outcome to which a program has also contributed.

Lastly, some points of guidance on the use of OH in market systems programs related to duration, facilitation, results measurement regimes, and the generalizability of findings:

1. *Duration*: OH is likely most useful for mature programs, for the relatively obvious reason that mature programs will have more (intended and unintended) outcomes to explore.

2. *Facilitation*: Given that the bulk of interventions in a market systems program aim to be facilitative, including a light footprint and reduced (or eliminated) public branding, the methodology needs to be adjusted:
    - It requires using results chains to tie outcomes back to program interventions, since most people do not know, for example, that ALCP was key to the improvement of the dairy sector in Kvemo Kartli.
    - For the same reason, knowing the timeline for interventions and outcomes becomes extremely important during the OH and verification steps.

3. *Results Measurement Regimes*: ALCP has an extraordinarily robust monitoring and results measurement (MRM) regime, and therefore a very clear idea of what it has intentionally achieved. This made it easier to tie outcomes back to contributions by interventions and other ALCP achievements, such as household income changes owing to dairy production. Some corollaries:
    - OH should never be the central tool of an MRM system, nor the central impact argument. Recognizing this, ALCP also wants to use it to add 'meat' to what it already knows.
    - It does not duplicate or contradict the DCED Standard, which establishes a set of guidelines for the structure and function of a robust MRM system for market development programs. Rather, it helps develop a deeper understanding of the environment in which a program is operating. In this sense it should be seen as complementary to the DCED Standard, particularly in terms of supporting the identification of unintended consequences.

4. *Generalizability*: OH is fundamentally an exercise in collecting anecdotes and it is difficult to quantify how generalizable the findings are. The substantiation process ideally helps

[9] See Fowler et al. "Reconsidering the Concept of Scale in Market Systems Development," USAID, January 2016. Also, Stern et al. "Broadening the Range of Designs and Methods for Impact Evaluations," DFID, April 2012.

researchers move from the purely anecdotal to the "reasonably generalizable," but realistic concerns persist:

- It is appropriate to do some qualitative follow-up to ascertain the frequency with which beneficiaries experience outcomes identified during an OH exercise.
- More work should be done to obviate the difficulty of understanding how generalizable its findings are.
- Similarly, the process of pulling outcomes out of initial data collection lends itself to strong selection bias. More work should be done to develop techniques for de-biasing the outcome identification process.