



GEORGE MORRIS CENTRE

Social and Economic Return on Investment of the Advanced Agricultural Leadership Program

Final Report

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Rural Ontario Institute

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Executive Summary

The Advanced Agricultural Leadership Program (AALP) has been offered since the 1980's and has trained a large number of professionals working in the Ontario agriculture and food sector, and across rural Ontario. The process of continuous improvement for programs like AALP requires periodic evaluation of the benefits of the program.

The purpose of this study was to develop a framework to measure the social and economic return on investment in agricultural leadership and estimate that return for the AALP program in Ontario. This study was undertaken in four phases:

1. Literature Review, where we examined alternative approaches to model/estimate the social and economic ROI of rural leadership development;
2. Framework Development, where we identify criteria and methods for assessing the social and economic benefits of AALP;
3. Alumni Surveys, where we obtained in-depth information from AALP alumni regarding the benefits gained through the leadership course and respondent's experience and successes both pre and post AALP participation, specifically in their career progression and volunteer activities;
4. Interview Data Analysis, where we analyzed the results of the interviews and estimate the benefits of AALP to the larger society.

Social return on investment (SROI) is a principle-based methodology for measuring value of social, economic and environmental costs and benefits of various actions and activities performed by involved parties (stakeholders). The overall effect of AALP in terms of social value was estimated using both employment and volunteering work information gathered through a survey completed by AALP graduates. The SROI of AALP over 30-year period is 1.25, based on the following assumptions:

1. Length of period for SROI calculation is 30 years
2. The total cost during this time is \$30,616 per participant at net present value.
3. The total benefit of \$38,245 per participant is combination of both value gained in the career progression and value gained in the volunteer work, where
 - a. The career-related direct benefit is considered for 11 years only
 - b. The volunteering benefit is considered throughout the whole period

It is important to note that effects of AALP extend past the SROI of 1.25. AALP connects Alumni through new networks; AALP presents Alumni with new opportunities; AALP teaches Alumni to think and work strategically. AALP is improving the set of skills that are pivotal for improving the competitiveness of the agricultural sector and communities in general.

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1. Introduction

The Rural Ontario Institute (ROI) provides critical education and leadership training to the agri-food sector in Ontario through several initiatives including the Advanced Agricultural Leadership Program (AALP). AALP has been offered since the 1980's and has trained a large number of professionals working in the Ontario agriculture and food sector, and across rural Ontario. The process of continuous improvement for programs like AALP requires periodic evaluation of the benefits of the program. Measurement of these programs also relates to the resources used in offering the program. In the case of AALP this has not occurred for some time.

Improvement in leadership skills and management ability is the first line of defense for farmers and agribusinesses facing economic and financial challenges. Improvements in leadership also help facilitate growth in farm/agribusinesses and assist individuals in taking the initiative to develop and manage larger, more complex commercial businesses, as well as in the farm and food community through participation in agricultural, rural and community organizations. Finally, leadership education and information helps facilitate innovation. By gaining exposure to new ideas and others in the sector people are better able to translate creative ideas into strategies, and prudently assess and take risks in innovative new businesses, technologies and products and help to lead the sector and their communities.

1.1 Purpose and Objectives

The purpose of this study is to develop a framework to measure the social and economic return on investment in agricultural leadership and estimate that return for the AALP program in Ontario. The objectives of the study are to:

- Understand the alternative approaches to the measurement of educational/leadership programs that have occurred elsewhere
- Select an appropriate framework to evaluate AALP
- Apply the selected framework using information on AALP
- Provide an estimate of the social return on investment for AALP

1.2 Project Methods

This study was undertaken in four Phases:

Phase 1: Literature Review: The purpose of the literature review was multi-faceted:

- To examine alternative approaches to model/estimate the social and economic ROI of rural leadership development
- To identify other ROI initiatives for similar non-market/non-traditional analyses of public/private sector investments in research and leadership development where historically such analysis is not common, or easily available.

Phase 2: Framework Development: The appropriate framework (criteria and methods) to use in assessing the social and economic benefits of AALP was identified, based on the observations in Phase 1. The most suitable criteria will be identified based on the similarity of context between AALP and the literature reviewed in Phase 1. The methods observed will help define the structure and the nature of the survey instrument used to collect data on AALP, and in determining how best to extrapolate the estimate of benefits.

Phase 3: Alumni Surveys: The purpose of Phase 3 was to obtain in-depth information from AALP alumni regarding the benefits gained through the leadership course and respondent's experience and successes both pre and post AALP participation, specifically in their career progression and volunteer activities.

Phase 4: Interview Data Analysis: In Phase 4 the results of the interviews were used to estimate the benefits of AALP to the larger society. The data collected in the surveys was empirically analyzed; including measures of satisfaction with AALP and the results that participants have experienced since participating, as well as empirical measures of changed business performance and the value of leadership contributions in the rural community. The final SROI was aggregated from participant data.

2. Literature Review

The purpose of this section of the report is to develop a solid understanding of what has already been observed regarding the measurement of Social Return on Investment (SROI) for leadership training programs. This section reviews the literature that focuses specifically on training programs, as well as other enterprises.

The examination and measurement of Social Return on Investment is still broadly new and therefore many definitions, frameworks and initiatives exist to try and describe how SROI should be evaluated.

The literature review below focuses on the following areas:

- Definition of SROI
- Measurement of SROI
- The ROI of Training/Education/Leadership – what can be attributed?
- Valuation of Volunteer Activity and Community Participation

2.1 Definition of SROI

The terminology describing SROI can be confusing depending on the purpose of the SROI. SROI is a measure for non-profit organizations, foundations, private investors, government agencies, academics and other private social service agencies that was developed in the 1990's by the Roberts Enterprise Development Fund (Cummings and Murray, 2009; Pace and Basso, 2009; Gair, 2005). SROI attempts to track and capture the impact that an enterprise/program has on the lives of its stakeholders, namely individuals and their communities (Barker, 2003; Gair, 2005; UK Network, 2008). Cummings and Murray (2009) define SROI as “a framework for identifying in monetary terms the value generated through investment in social programs”.

The Roberts Enterprise Development Fund and Emerson et al. (2005) state that there are three aspects of value creation:

1. Pure Economic Value: the financial return on an investment, the economic value of the organization
2. Socio-Economic Value attempts to quantify the social activity- both priced and unpriced
3. Pure Social Value which is very difficult to monetize. It must be understood that SROI does not attempt to capture and quantify all of the value created from a non-profit program (Pace and Basso, 2009).

SROI is the social value (or impact) created by the activity divided by the costs of the activity on all stakeholders, including individuals and society (Gair, 2005). Gair (2005) differentiates between ROI and SROI by stating that SROI “broadens the ‘who’ a return may accrue to, and expands the ‘what’ that can be considered part of an activity’s return”. Social returns are benefits to society and the return in SROI can be the result of many changes both monetized and non-monetized, including (Gair, 2005):

- Community tax savings
- Decreased social services costs

- Individuals' increased income
- Participation in the community

SROI analysis tries to monetize those changes that previously were not monetized (Gair, 2005). Those changes that cannot be monetized can be described qualitatively. Olsen and Nicholls (2005) state that along with the monetary calculation, context behind the numbers must be given in order to accurately interpret the numbers as well as to provide some context around the non-monetized social value.

Social Ventures Australia Consulting (2012) defines SROI as telling a “story of how change is being created and places a monetary value on that change and compares it with the costs of inputs required to achieve it”. SVAC (2012) cautions that SROI is an important tool but it really can't be used to compare performances between organizations because the process is tailored to the specific organization or program. SVAC (2012) suggests that because of the tailoring required for each analysis, SROI should be considered an approach rather than a tool.

2.2 Measurement of SROI

The Roberts Enterprise Development Fund (REDF) is known as one of the first developers of an SROI methodology. When developing their methodology, REDF asked, “for each dollar invested, what is the resulting benefit to individuals and society” (REDF, 2001). REDF acknowledges that its methodology is not applicable to all social enterprise initiatives because it was specially designed for “social purpose enterprises run by non-profit organizations to provide employment and training to disadvantaged persons” (REDF, 2001). However, there are lessons to be learned from the methodology.

REDF (2001) acknowledges that the SROI framework is based on the historic approach to cost-benefit analysis (CBA). However, social impacts are difficult to quantify and monetize, unlike traditional CBA. Gair (2005) describes the methods used to estimate SROI in a step-by-step process based on REDF methodology:

- Step One: Measuring Value: Enterprise value and social purpose value (public savings, new taxes, improved income, financial improvement of enterprise) must be calculated, each separately. Once these are calculated, a blended rate of the two values described above must be calculated.
- Step Two: Calculate the Indices of Return. Both the Enterprise Index of return (financial performance of the organization vs. the investment made) and the Social Purpose Index Return must be calculated. Once these are calculated, a blended Index of Return is calculated.

As in all indices, an index of 1.0 or greater means that the social purpose enterprise generates enough value to satisfy all investor's expectations. An index greater than one shows that excess value is generated, whereas, as is different from a financial ROI, an index of less than one does not necessarily mean it is a bad investment. Enterprises can create value that cannot be monetized and not all leadership results are quantifiable, therefore not all value may be captured, and therefore SROI requires the calculation plus a qualitative discussion, since without context SROI metrics can be meaningless (REDF, 2001; new economics foundation, 2004; Gair, 2005; and MSH, 2008).

Barker (2003) examined the application of ROI analysis on international education and training programs. In Barker's paper three methods of ROI calculations were discussed:

1. For One-time only programs: $\text{Program Returns} / \text{Costs} \times 100 = \text{ROI}$ (expressed as a ratio)
2. For prepared programs: $\text{Costs (design, development, duplication, delivery and support)} / \text{\# of students over the life of the course}$
3. For a range of results: $\text{ROI} = (\text{Value of benefits} - \text{cost of training}) / \text{cost of training}$ (expressed as a %)

Barker (2003) lists what to account for in the training and delivery costs, including:

- Curriculum development and purchase
- Institutional materials
- Equipment and hardware
- Facilities
- Marketing or promotions
- Evaluation
- Salaries (both instructors and support staff)
- Administration costs
- Student costs: Fees, time away from work (opportunity cost), travel, lodging and meal costs

Barker (2003) also lists the steps for ROI analysis that were taken in the study:

1. Identify program to be studied
2. Determine stakeholder perspective; e.g. student, institute, society. Returns to investing in training are experienced differently depending on the stakeholder.
3. Determine the unit of analysis to be used; e.g per student, per year, per offering
4. Determine all costs of the program, separated by tangible and intangible costs. The intangible costs should be used as additional considerations.
5. Determine which returns are probable and those that can be measured financially. Intangible benefits will be used as additional considerations.
6. Determine data to be gathered and method to obtain it.
7. Isolate, where possible, the returns or effects.
8. Connect costs and returns to monetary values.

At a presentation made to the Association of Leadership Educators in 2003, Rohs discussed two evaluation calculations for leadership programs, described below:

1. Benefit Cost Ratio: $\text{Program Benefits} / \text{Program Costs}$
2. Return on Investment: $\text{Net Program Benefits (Benefits} - \text{Costs)} / \text{Program Costs} \times 100$; this returns net benefits.

Rohs (2003) also cautions that "many leadership programs are less conducive to assigning monetary values to outcomes"; therefore putting benefits into context is also required.

The new economics foundation (2004) defines the measurable(s) used in calculating social value creation:

1. Inputs: resources required to run the program, measured as a cost
2. Outputs: direct and tangible products of the activity; e.g. people trained
3. Outcomes: a change that has occurred over the long-term; e.g. value of increased income or increased government taxes.
4. Impacts: Outcomes less an estimate of what would have happened anyway.

Emerson et al. (2005) list the general process for calculating SROI (taken from Cummings and Murray, 2009):

1. Determine timeframe and scope of analysis
2. Identify investment required to operate and deliver the program, included capital structure
3. Identify cost savings and benefits from program
4. Estimate the economic value of savings and related benefits
5. Discount the savings back to the start of the investment
6. Identify socio-economic value created by the program over the timeframe in terms of net present value and SROI ratios

Olsen and Nicholls (2005) detailed ten activities required in calculating SROI, described below:

- **Phase I: Construction**
 - Understand Goals for Analysis
 - Objectives of SROI analysis
 - Identify the subject organizations' stakeholders
 - Who is affected by the program?
 - Engage with stakeholders to determine impacts
 - Determine Scope of the Analysis
 - Analyze Income and Expenditure of Organization
 - Map the Impact Value Chain
 - Understand the effects of the programs in terms of outputs and outcomes
- **Phase II: Content**
 - Set Indicators and Collect Data
 - Identify indicators of outputs and outcomes
 - Determine data collection method: MSH (2008) and Psacharopoulos (2009) suggest that responses be random.
 - Estimate % attributable to program
 - Do relevant proxy data exist?
 - Create Projections
 - Over what timeframe have you projected the financial values?
 - What rationale for the timeframes?
- **Phase III: Credibility**
 - Calculate Social Return
 - What calculations have you used?

- Rationale for discount rate used?
- Sensitivity analysis required
- Reporting
 - Put the numbers in context
 - Results verified by a third party: MSH (2008) also states that “it is useful to triangulate several data sources for the same question to verify the information collected”.

Cummings and Murray (2009) calculate SROI using the following steps:

1. Estimate Social Value Created: Estimate the total value of the social objectives of a program and translate them into financial measures
2. Calculate Total Program Investment: what is the total cost to operate and deliver the program?
3. Calculate SROI Ratio: Social Value Created / Total Program Investment. Calculate this annually over the life of the program.

Cummings and Murray (2009) also provide a list of a number of social value categories to account for in the calculation, depending on the program including: public cost savings from services provided, changes in personal well-being, changes in personal income, changes in taxes paid to any level of government.

Black and Earnest (2009) conclude that there are three primary domains where leadership development has an impact and can be included in the SROI measurement. The domains are:

1. The individual domain: this is “where most of the direct benefits of leadership development occur and where the most results should be expected” (Black and Earnest, 2009).
2. The organizational domain: when participants take leadership skills such as improved networking, communications and management skills, back to their place of work, organizations are affected.
3. Community-level domain: the community is impacted by leaders using their skills in volunteer activities at the municipal, provincial or national arenas.

Psacharopoulos (2009) examined returns to investment in higher education in Europe. The study defined social returns as the costs and benefits of education as those realized by society as a whole, not just the student. As a result, the costs must be all inclusive and refer to what education really costs not just what a student pays. Psacharopoulos (2009) suggests that SROI should be based on productivity differentials rather than earnings. Psacharopoulos (2009) shows that private returns to the individual are usually greater than social returns since social costs are higher. Costs and benefits to include in the calculation include: gross earnings (before taxes and other deductions), foregone earnings while students are in school, and non-monetary benefits must also be included.

According to ‘A Guide to Social Return on Investment’ developed by the Office of the Third Sector (Cabinet Office of the Scottish Government, 2009) and used extensively (including by SVAC, 2012) there are seven principles of SROI:

1. Involve Stakeholders: stakeholders will help to inform what is important to measure and how it is valued.
2. Understand what Changes: need to be able to articulate how change is created and evaluate this.
3. Value the things that Matter: financial proxies will need to be used in order to value the outcomes.
4. Only include what is material
5. Do not over claim: only claim the value that the program is responsible for creating.
6. Be transparent and lay out assumptions and calculations
7. Verify the result, as best as possible.

The Cabinet Office (2009) also provides six steps to conducting a SROI analysis:

1. Establish Scope and identify stakeholders
2. Mapping Outcomes: determine how resources (inputs) are used to deliver activities (outputs) and how these activities result in outcomes for stakeholders.
3. Evidencing Outcomes and Giving them Value: outcomes must be clearly identified and data must be gathered to determine if they are being achieved. Then a monetary value must be placed on this
4. Establish Impact: must determine what can be attributed to the program?
5. Calculating the SROI: Data is gathered and expressed in SROI ratio, financial figures must be expressed in NPV
6. Reporting: the report must include the SROI calculation as well as qualitative findings in order to tell the story of change.

Tuan (2008) provides a good list of technical issues and limitations to be aware of when conducting SROI analyses. All of the issues and limitations listed below reiterate the need for transparency when writing up the report:

- Many assumptions will be made, be clear about them.
- Discount Rates: clearly show what discount rate is used and the rationale for it.
- Timeframes: how long do the benefits of training (or another program) last? This is discussed further below.
- Shadow prices (Proxies): when costs and benefits must be used, proxies sometimes must be used to attach values to the outcomes.
- Interdependencies: Are there external factors at play that also play a part in the change that is created? How much can be attributed to the program. Must assign a 'share' of the projected SROI to the program. This is discussed further in Section 2.3.
- Value Judgements: there is usually little consistency in value judgements if they are used in the analysis or calculation. E.g. the value of a life.

The economic returns to AALP were assessed in 1996 by Rowley et al. (often referred to as "Brinkman study"). Rowley et al. (1996) conducted in-depth interviews with 75% of the graduates from Classes 1 -3 of AALP, used secondary data to describe the economic returns to programs in which alumni were involved and asked for expert opinion of the cumulative impact AALP alumni had on the agri-food sector in Ontario. Three categories of economic benefits were examined:

- Institutional benefits (a proxy for volunteerism and community participation) such as an improved ability to design goals and strategically implement plans in an organization
- Business benefits, which include any activities that increased income in the both the public and private sector such as the design and development of income stabilization programs, business and market opportunities, establishment of businesses, cooperatives and networks and an increase in earning potential of AALP alumni
- Activities that helped to enhance the environment such as pesticide reduction or investments in sustainable agriculture initiatives.

The alumni interviews gathered information on the activities that alumni were involved in since their graduation from AALP including community participation and career progression, the perceived contribution of the alumnus to the success of the identified activity and the perceived role that AALP had in the contribution of the alumnus. Overall, Rowley et al. estimated that the ratio of benefits to costs was 11:1 for the agricultural/rural sector and 8:1 for society. Rowley et al. also projected the return on investment to increase to 25:1 by 2005.

Choice of Timeframe for Analysis

Rowley et al. (1996) examined the returns to AALP over a 10 year period (1985 – 1995) and then projected out to the future for another 10 years, assuming that the effects of AALP calculated in 1995 would then diminish by 25% each year until 2005.

In 1998, when Johnson examined a number of agriculture-based leadership programs, the administrators of the Texas Agricultural Lifetime Leadership Program (TALL) had stated that the full results of a leadership program are not known for ten years after course completion (Carter and Rudd, 2000).

The costs of a program are known upfront, whereas the benefits may accrue over time (Barker, 2001). The issue is determining how much time should be allocated in the SROI calculation.

Development Guild/DDI Inc. (2002) evaluated the outcomes and impacts of 55 leadership programs across the United States. Although this study did not measure SROI, it does distinguish between outcomes and impacts and provides the estimated timelines for these changes. Development Guild/DDI Inc. (2002) state that “leadership is a process that happens over time and the learning available at the end of a program is not the same as the learning that is available 1, 2 or 5 years later; the study defines outcomes as “specific changes in attitudes, behaviour, knowledge, skills status or level of functioning expected to result from program activities”. Outcomes can be short term (1-3 years) or long term (4 – 6 years). Impacts are “the results expected 7 – 10 years after an activity is underway; the future social change a program is working to create” (Development Guild/DDI Inc. 2002). Development Guild/DDI Inc. (2002) concludes that “it takes time to be recognized and valued by others”. Impacts can be difficult to define and could include movement up a career ladder and/or changes in activity in the community (Development Guild/DDI Inc., 2002). Tuan (2008) cautions that actual outcome data will vary greatly based on the individual or the program.

A number of timeframes are used by various organizations in their SROI analyses:

- REDF: 10 year horizon for the calculation of benefits (Tuan, 2008)
- New economics foundation: 5 years (Tuan, 2008)
- Robin Hood Foundation: up to 30 years (Tuan, 2008)

- Barker (2001) states that training for specific tasks can last 1-5 years, other training could last longer.
- Nabisco estimated an ROI on a 2-day planning and training session, and then tracked the results of training over a 10-year period (Barker, 2001).

The timeframes used must be stated clearly upfront and it must be known that varying timeframes will result in very different results.

Development Guild/DDI Inc. (2002) suggest that “the dollars that individuals, organizations or communities have been able to leverage as a result of the program” are a proxy for impact. “The implication is that if dollars have been attracted then this testifies to improved leadership capacity” (Development Guild/DDI Inc., 2002).

2.3 The ROI of Training/Education/Leadership – what can be attributed?

Bandura (1986; found in Black and Earnest, 2009) found that “individuals change because the skills needed to be effective in their efforts to bring about change are demonstrated”.

Due to the number of external factors affecting a person’s leadership skills and their impacts, such as differential ability or personal behaviour, there must be a rate attributed to the impact of the improved skills from a specific program (Barker, 2001; Development Guild/DDI Inc., 2002; MSH, 2008; CAPD, 2008). Olsen and Nicholls (2005) similarly suggest that there is a “measure of the outcome that would have happened anyway” and define this as deadweight. Therefore the rate attributed to the impact of a program like AALP of improved skills and the changes that result from them must be established.

Gair (2005) agrees that it is difficult to determine causality since there are “many other influences and factors that contribute to a change in an individual’s life, including other training programs, years at work, etc...”. And therefore the challenge is to determine what percentage of change is a result of the program/training course.

Development Guild/DDI Inc. (2002) suggest that the “validity of the claims made by participants become more valid when other sources of information corroborate the findings”. CAPD (2008) suggest asking alumni the extent to which they attributed their career growth to being in the program. Rowley et al. (1996) did just that, and asked participants to assign a % based on their perception of the role that AALP played in their effectiveness in business and community participation. Answers ranged anywhere from 2% - 100%, but averaged 15-20%.

2.4 Valuation of Volunteer Activity

A review of how to value volunteerism is warranted as increased or improved civic and community (sector and non-sector activities) participation has been found to be a result of leadership development programs (Earnest, 1996) and improved networking skills (Dhanakumar et al. 1996). Dhanakumar et al. (1996) conclude that civic and community development studies have shown the importance of participation in the community as a means of strengthening rural leadership.

Rowley et al. (1996) asked participants to describe their volunteer activities, such as implementing a new process that saved an organization money and time, a new program that generates money or a donation campaign that raised revenue to build community infrastructure, then asked each alumnus about their specific contribution to that activity, and AALP’s

significance to their contribution. Rowley et al. (1996) included these calculations plus the number of volunteer hours alumni provided multiplied by Ontario's minimum wage at the time.

Brown (1999) discussed four methods of valuing volunteer activity including:

1. Hours of time X average hourly compensation rate paid for labour
2. Hours of time X average hourly compensation rate paid for labour including taxes
3. Hours of time X the value of the volunteer task
4. Opportunity cost of volunteer: volunteer wage X volunteer time that could have been spent earning money elsewhere.

As Pace and Basso (2009) note, the skills required for some volunteer activities may be drastically different than the skills that volunteers would otherwise get paid for, therefore either understating or overstating the value. Pace and Basso (2009) also note that this method cannot be used if an organization uses volunteers who are not in the job market, such as retirees.

Brown (1999) notes that valuing volunteerism is not exact. Brown states that estimating a monetary value will "overstate the value of volunteering to the recipients of the service and understate the value of volunteering to the actual volunteers". Anderson and Zimmerer (2004) agree and state that the actual value/output of volunteering is nearly impossible to estimate since it is "far more than hours X cost", there are significant qualitative benefits to the volunteers themselves and increased services received from taxpayers as a result of volunteer activity that cannot be calculated. However, calculating the value of volunteerism based on hours committed or cost of volunteer activity that organizations do not pay for, is meaningful. Anderson and Zimmerer review six methods for estimating the value of volunteerism:

1. Comparable Worth (using input costs to estimate value): This method "attempts to equate the work of paid employees to the work of volunteers" and uses comparable wages to value volunteer positions including fringe benefits. This method requires a description of each volunteer activity undertaken in order to make the comparison. This method also shows the added value of volunteers to organizations since volunteers can bring "specialist skills to an organization that they would otherwise not be able to afford" (Brewis et al. 2010).
2. Minimum Wage: This method would simply use the jurisdiction's (Ontario in this case) minimum hourly wage multiplied by the hours volunteered. The downside to this method is that it would not be reflective of volunteer activities.
3. Average Wage: Similar, to the minimum wage method above, this method would calculate the average wage (from Census data) of Ontario's labour force participants and multiply that by the hours volunteered to better reflect their value. This method still does not reflect the actual volunteer activities.
4. Living Wage: This method would value volunteer hours at the level required to subsist, again not reflecting the value of the volunteer work.
5. Independent Sector Formula: This method would calculate the value of volunteerism by using the average hourly earnings of all of the production and non-supervisory workers on private non-farm payrolls (including fringe benefits, approximately 12%). Anderson and Zimmerer suggest that this would result in a value above the average wage data method.

6. Person/Year: This method will not result in a monetary estimate of volunteer activity, but provides a meaningful account of volunteer activity by equating the number of hours of volunteer activity to the number of full time employed positions (# of volunteer hours / hours required for a FT position: ~ 37.5 hours per week).

In 2005, The Investigator, outlined a number of ways in which to place a value on volunteer time, described below:

1. Average Wage: This requires assigning a dollar amount to the number of hours donated by the volunteer, and uses the average wage paid to a worker as the value of the volunteer's time. As noted above, the weakness with this method is that it does not reflect the work performed or the skills of the volunteer.
2. Replacement Wage: This method values the volunteer's time as the amount that it would cost the organization to pay someone to perform the task.
3. Opportunity Cost: The value of the volunteer's time is based on the qualifications of the volunteer. Again, this method does not reflect the actual work done and could overstate the value.
4. Social Benefits: this method tries to capture the role that a volunteer plays in bettering society by including both direct and indirect outputs of a volunteer. It includes fees charged for comparable services that the volunteer organization is supplying and anecdotal evidence to describe indirect outputs.
5. Value to Volunteer: This method is anecdotal and describes the benefit that the volunteer receives in exchange for their time and efforts.

In 2011, Sajardo and Serra analyzed the complications of estimating the value of volunteer work. The authors examined two primary methods of valuing volunteerism:

1. The Output Method: This method attempts to value the goods and services generated by volunteer work. The issues with this method include that an accurate identification of the outputs is generally not possible, often there are no substitutes on the market for output generated by volunteers and it is also difficult to establish an estimated value for the outputs.
2. The Input Method: This method entails attributing a monetary value per unit of time of volunteer work. There are a number of ways in which this can be done, as described above, 1) one can use the value of the volunteer's time based on their work salary (opportunity cost) or 2) estimating the cost of replacing the volunteer with a paid employee based on their volunteer activities.

The UN Handbook uses the average wage of those working in social sciences, whereas John Hopkin's University uses the mean non-agriculture wage (Sajardo and Serra, 2011).

Anderson and Zimmerer (2004) and Pace and Basso (2009) agree that the most effective method for valuing volunteerism is the comparable worth method. However, Sajardo and Serra (2011) note that the issue with using this method is that the productivity of paid employees is likely higher than volunteers. Anderson and Zimmerer (2004) suggest using this method along with the person/year method.

3. A Framework for Social Return on Investment

Social return on investment (SROI) is a principle-based methodology for measuring value of social, economic and environmental costs and benefits of various actions and activities performed by involved parties (stakeholders). According to 'A Guide to Social Return on Investment' developed by the Office of the Third Sector (Cabinet Office of the Scottish Government, 2009) "*SROI measures change in ways that are relevant to the people or organisations that experience or contribute to it. It tells the story of how change is being created by measuring social, environmental and economic outcomes and uses monetary values to represent them. This enables a ratio of benefits to costs to be calculated.*"

As shown in Section 2, there are a range of ideas in terms of what is included, or not, in an SROI analysis, including how values are assigned. Section 2 observed that the Cabinet Office of the Scottish Government (2009) captures all of the requirements well and therefore followed closely its seven principles and calculations in the process of developing a SROI framework in order to examine AALP. The assumptions made in the framework development and subsequent calculations are explained below.

It is important to note that the development of a framework for SROI in this project must capture the perspective of the goals and objectives of AALP; hence the outcomes represent the expected effects of the program's objectives. The overall goal of AALP is to provide an opportunity for individuals to develop the skills, knowledge and broad perspective to effectively manage issues and trends in rural communities and the agri-food industry, where the objectives for participants are:

- to learn and practice leadership skills, such as communication, motivation, critical thinking, issue analysis, decision making, volunteer and group management
- to acquire knowledge of agriculture, agri-food and rural systems and the economic, political, social, cultural and physical environment in which they operate
- to broaden their perspective on local, national and international issues
- to provide effective leadership in a complex industry and diverse society

The development of a framework for SROI, which was a starting point of this project, consisted of two stages: i) establishing scope and identifying key stakeholders and ii) mapping outcomes (Cabinet Office of the Scottish Government, 2009). Both stages are described in detail in Sections 3.1 and 3.2.

3.1 Scope and Key Stakeholders

The purpose of the SROI analysis of AALP is to measure the value of the program in terms of the program objectives and expected outcomes at the level of agri-food sector and rural Ontario. Based on the assumption that direct effects of the program would most likely be felt during the first several years upon graduation and would diminish over time, the analysis includes five classes that graduated between 2001 and 2009. Thus, we allow for 2-10 years post-graduation in which benefits accrue. A survey tool was used to gather information required for the SROI analysis. We expect the minimum number of returned surveys to be about 50, which is based on the assumption of a 33% survey-completion rate (5 classes * ~30 participants * 33%).

For the purpose of further analysis, the term stakeholder needs to be defined. The primary concern of any SROI analysis is to estimate the net value created due to the activity that is being analyzed. With this in mind, a stakeholder in this project is defined as a person or an

organization that experiences change as a result of activities stemming out of AALP's objectives.

All stakeholders were classified in one of the five groups based on the type of engagement/role they had with the AALP program. The groups were:

- Participant related:
 - Participants
 - Families of participants
 - Employers of participants
- Program (AALP) related:
 - Rural Ontario Institute staff and board members
 - Instructors
 - AALP advisors
 - Hosts of educational tours
- Sponsors
- Associations:
 - Community
 - Professional
 - Political
- Others:
 - Travel companies
 - Hotels and Restaurants
 - Health unit (e.g., vaccination)

The anticipated effects of the objectives of AALP curriculum on each stakeholder were characterized (Table 3.1). Based on those effects, stakeholders were either included or excluded from further analysis. The stakeholders were excluded if AALP objectives did not directly affect their existence or performance. For example, hotels, travel companies and restaurants were excluded, because they are service providers that would exist regardless of AALP objectives (Table 3.1).

The final list of stakeholders includes: participants, employers and associations. Information about participants and associations will be collected through the alumni survey..

Table 3.1. List of potential stakeholders affected by AALP activities

Stakeholders	How stakeholders affect or are affected by the activity	What we think happens to them, positive or negative	Included/excluded	Method of involvement
Group 1: Participant related				
Alumni	- skills, knowledge, network, awareness, community involvement	- improvement	- included	- survey
Families of Alumni	- financial situation	- positive (job promotion) and negative (program fees, new associations' fee)	- excluded* and most of the information can be captured through the alumni surveys	-N/A
	-time away	- negative		
Employers of Alumni	- employee improvement, application of skills, potential for new business, government/policy network	- positive	- included	- interview
	- time lost to attend the course, program fee (or partial)	- negative		
Group 2: Program (AALP) related				
ROI staff and board	- part of their job	- positive	-included	-N/A
Instructors	- monetary value, network, new business	- positive		
AALP advisors	- influence	- positive		
Hosts of tours (curriculum)	- monetary value, network, new business	- positive		
Group 3: Sponsors	- exposure, network, new business	- positive	- excluded*	-N/A
Group 4: Associations				
Community	- increased participation	- positive (monetary value and/or time value)	- included	- indirectly (via alumni survey)
Professional				
Political				
Group 5: Others				
Travel companies	- monetary value	- positive	- excluded *	-N/A
Hotels				
Restaurants				
Health unit (vaccination)				

*Either the costs are part of AALP delivery costs or the values represent services that are not directly related to program objectives. Without AALP, these services would be provided to some other group(s), thus the overall social impact would not be lost.

3.2 Mapping outcomes

Mapping outcomes is a process that consists of three main logical, ordered stages: identifying and valuing inputs, clarifying outputs and describing outcomes.

3.2.1 Identifying and Valuing Inputs

At this stage the stakeholders' contributions (inputs) in making the activity possible are identified.

- The activity was directly tied to AALP objectives.
- The value of the inputs was either monetary or time, where time will later be translated into monetary value.
- Individual salaries are used as the conversion factor for time to monetary value.

Table 3.2: AALP stakeholders and their inputs

Stakeholders	Intended / unintended changes	Inputs
Who is affected by AALP activities? Who has an effect on AALP?	What will change for stakeholders?	What do stakeholders invest?
Participants	Leadership skills (e.g., communication, motivation, critical thinking, issues analysis, decision making, public speaking, presenting)	In-course time Travel time Study time Registration fee (partial)
	Knowledge and awareness	
	Network	Time
	Community participation	Time
Employers	Business	AALP registration fee (partial)
Community / Sector Associations	Membership Participation	None None

3.2.2 Clarifying outputs and describing outcomes

In the process of clarifying the outputs, the level of an output was associated with each intended activity (change). For example, we expected that AALP objectives would have a positive effect on networking skills (activity) and we determined that the output in this case would be that participants have broadened their networking base and that they are working actively with new contacts to improve their business or organization in which they work (Table 3.3).

In the process of describing an outcome we needed to develop an economic proxy for each. This proved to be challenging for the activities and outputs at the participant level. In particular, the level of detail required in order to obtain an estimate of outcome value was very intricate. At the same time, the amount of error that would accumulate in amalgamating the information from individuals to the sector level was large, threatening to inflate the value of the outcome.

In order to develop a meaningful estimate of SROI, the effect of AALP at the participant's level was estimated using two components: i) the change in participant's salaries or business revenue during 2-10 years after AALP and ii) percentage of AALP's contribution "perceived" by each participant. Further, we anticipate evaluating these percentages by comparisons against existing literature as well as employers and their opinions.

Lastly, the increased value to the community is measured by participation and role in community organizations, including both sector associations and non-sector associations in which the alumni are involved and provide time and resources to.

Table 3.3: AALP stakeholders and their inputs linked with outputs and outcomes

Stakeholders	Intended / unintended changes	Outputs	Outcomes/Impacts (Change Required)		
			Description	Indicator	Financial proxy?
Who do we have an effect on? Who has an effect on us?	What do you think will change for them?	Summary of activity	How would you describe the change?	How would you measure it?	What proxy would you use to value the change?
Participants	Leadership skills (communication, motivation, critical thinking, issues analysis, decision making, public speaking, presenting)	Participants are proactive in their everyday work/activities;	Proactivity - initiatives	Proactivity -# of initiatives and time spent on the initiatives;	Time;
		Their communication is clear and effective;	Communication - effectiveness of their emails; meetings	Communication - self-evaluation	Difficult to establish;
		Their issues analysis skills are strong and lead to effective decision making;	Issues analysis - information gathering follows a logic model Decision making - supported by facts and issues analysis	Issues analysis - process description	Difficult to establish;
	Knowledge and awareness	Participants are comfortable public speakers with strong presentation skills.	Public speaking and presentation skills - effective	Process description	Difficult to establish;
		Participants knowledge about agriculture is broaden;	Knowledge - increased quantity and improved quality of agricultural knowledge	Self-evaluation (pre-post knowledge level)	Time spent on activities that require the use of knowledge obtained through AALP;
		They are more informed about different issues affecting both domestic and global agricultural sector	Awareness - close monitoring (following) of development of various issues affecting agricultural sector	Self-evaluation (pre-post)	Time spent on activities related to following of development of issues affecting Ag. sector

Stakeholders	Intended / unintended changes	Outputs	The Outcomes of what changes		
			Description	Indicator	Financial proxy?
Who do we have an effect on? Who has an effect on us?	What do you think will change for them?	Summary of activity	How would you describe the change?	How would you measure it?	What proxy would you use to value the change?
Participants (continued)	Network	Participants are broadening their network base;	Increased number and type of new relationships;	Quantity (number) and quality (type) of new engagements	Time spent networking
		They are actively interacting with new people in order to improve their business	New contacts are engaged in improvement of business and/or community.	Level (frequency) of engagement	
	Community participation	Participants are actively engaged in their community	Increased level of responsibility in community based groups/associations	Number of community groups that participants work with and type of roles that they have in each group	Time
Program (AALP) related	None	N/A	N/A	N/A	N/A
Employers	Business	Employers are broadening their business clientele/partners;	Increased number of business recipients and/or business partners;	Number and type of new clients/partners	Best estimate of business improvement (% of revenue)
		Employers are engaged in new relationships with governments' offices/agencies	Increased number of contacts with governments' organizations		
Associations	Membership	Outreach of these organizations is widening and/or diversifying	Increased awareness of benefits of these organizations and their activities in rural communities	Number and type of associations that participants are involved in	\$ for membership fees/subscriptions; Time for reading different material(s) regarding given associations; Time spent on boards or other functions re given associations

4. AALP Alumni Survey Results

The overall effect of AALP in terms of social value was estimated using both employment and volunteering work information gathered through a survey completed by AALP graduates.

4.1 General

A survey was developed for five AALP classes: classes 8 to 12. Values of both employment and volunteering work were estimated at the level prior to enrolment in AALP, as well as 2-year intervals after completion of AALP. Each class had a different number of intervals, depending on the start and finish year (Table 4.1). For example, Class 8 graduates were asked to provide employment and volunteer work information for five 2-year intervals, whereas Class 12 graduates could only provide information for one 2-year interval. In addition to employment and volunteering work information, participants were asked some general questions, as well.

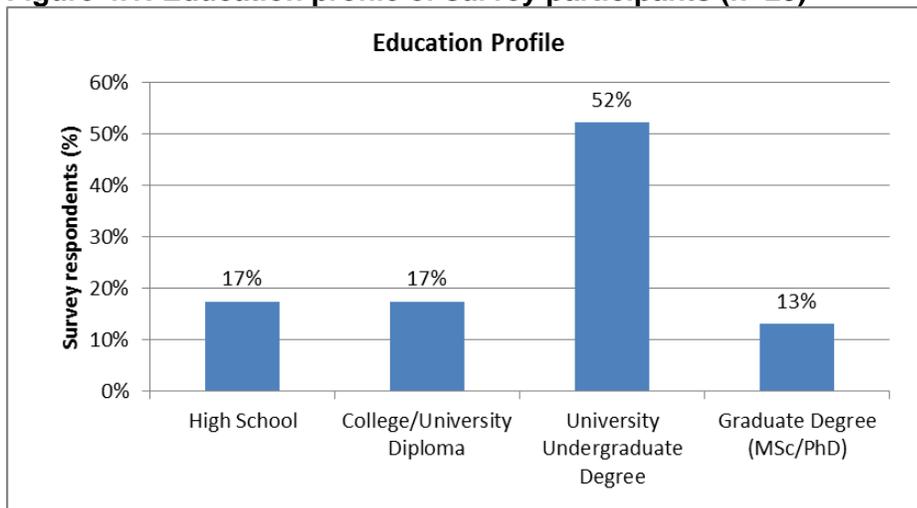
The survey completion rate was 15.4% with 23 completed surveys out of the total of 149 surveyed participants (Table 4.1).

Table 4.1: Number of expected and completed surveys by class and number of 2-year intervals per each class

AALP class	Year	Number of 2-year intervals	Number of graduates	Number of completed surveys
Class 8	1999-01	5	30	4
Class 9	2001-03	4	30	2
Class 10	2003-05	3	30	5
Class 11	2005-07	2	30	5
Class 12	2007-09	1	29	7
Total			149	23

The average age of AALP graduates prior to enrolment was 37 years. The education profile of AALP graduates is presented in Figure 4.1.

Figure 4.1: Education profile of survey participants (n=23)



The most critical information for the calculation of SROI was employment changes due to AALP as well as volunteering work changes due to AALP. The details about data collection and calculations are shown in sections 4.2 and 4.3.

4.2 Benefit calculation

The Advanced Agricultural Leadership Program focuses on the development of leadership skills, which in turn, if improved, would result in potential career improvement or job progression on one hand and more vibrant and active community, on the other hand. We assumed that improvements in career path could be measured through salary changes, whereas improvement in a community could be measured through the value of the volunteering work.

Career changes as well as volunteering work are affected by many factors, not only AALP. It is important to obtain a reasonable estimate of a change directly attributable to AALP (%). After that, the overall social benefit of AALP could be estimated by combining values of both professional career and volunteer activities.

4.2.1 Annual AALP contribution rate observed in employment and/or business

Step 1: Data

The following questions were used to obtain information for the calculation of the employment benefit due to AALP:

1. Employment status
 - a. Employee
 - b. Business Owner
 - c. Both Employee and Business Owner
2. Financial Information
 - a. Salary (\$5,000 range), provided by those participants who were employees at given time
 - b. NET business value (open-ended question), provided by participants who were business owners at given time
 - c. Both salary and NET business value, provided by participants who were both employee and business owners at the given time
3. AALP contribution
 - a. All participants were asked if there was a change in their career path and/or business performance (yes/no)
 - b. If there was a change (yes), then how much of the change was due to skills gained through AALP (percentage)

Step 2: Calculate average AALP contribution in 2-year intervals

The average AALP contribution was estimated using the individual AALP contribution percentages provided by each participant. Because these percentages are individual perceptions of AALP contributions and not actual measurements, an overall average of individual percentages is a better (more objective) estimate of AALP effects. The survey results suggest that the contributions of AALP are the greatest immediately after the graduation and tend to diminish over time (Table 4.2).

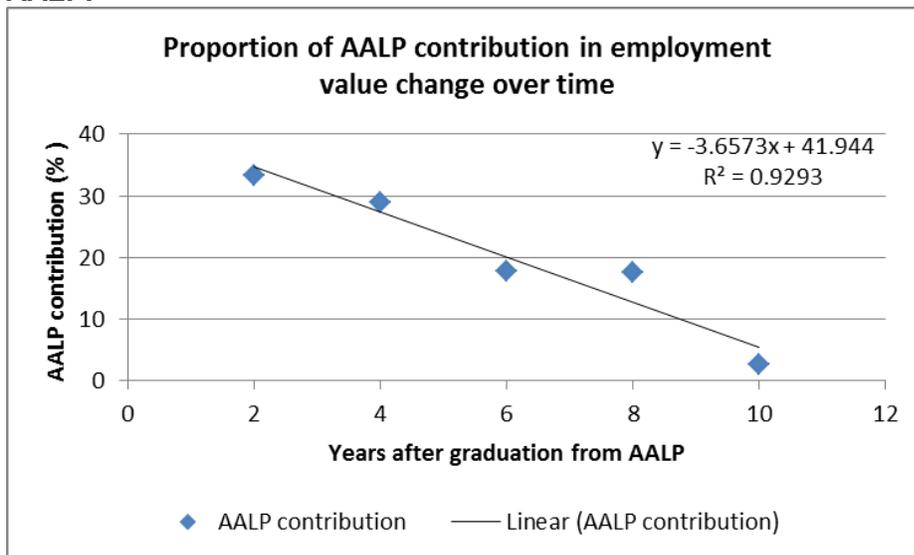
Table 4.2: Summary statistics for AALP contribution by 2-year intervals

	Years after graduation from AALP				
	+2	+4	+6	+8	+10
Average (%)	33.4	28.9	17.7	17.5	2.5
Minimum (%)	0	0	0	0	0
Maximum (%)	100	100	75	75	10
No. of observations	23	16	11	6	4

It was estimated that direct effect of AALP on changes in career progression would completely diminish about 11 years after graduation (Figure 4.2). This does not imply that participants would stop using skills gained through AALP. More likely, the skills gained through AALP would already be incorporated in participants day-to-day jobs by that time (11 years after graduation) and treated as new “normal”; just like any other skills humans learn at one point and continue to use for the extended time (e.g., reading, writing, etc.).

It is important to take this trend into consideration when estimating the SROI over time, especially if the length of the period for which the SROI is being estimated exceeds 10 years (Section 4.4).

Figure 4.2: Direct AALP contribution in employment value change after graduation from AALP.



Step 3: Calculate net value change in 2-year intervals for employment and/or business

The net value change (career/business progression) for each participant was derived by obtaining the differences in salary/business value between adjacent intervals (Table 4.3). For example, the employment value two years after graduation from AALP was estimated as a difference between the employment value at “+2 years” and the employment value at “0 year”. In the example provided in Table 4.3, this difference is \$20,000 (i.e., difference between \$62,500 two years after AALP and \$42,500 prior to enrollment in AALP).

Table 4.3: An example of career/business progression calculation for a Class 8 participant (Note: The actual values were modified to simplify the calculation)

Intervals	0	+2	+4	+6	+8	+10
Salary/Net business values	\$42,500	\$62,500	\$72,500	\$77,500	\$82,500	\$87,500
Differences	-	\$20,000	\$10,000	\$5,000	\$5,000	\$5,000

For the participants that were employees, salary progression was used; for the business owners, the NET business value was used; for participants that were both employees and business owners, the salary and NET business values were added to estimate the employment value at any given interval.

Step 4: Adjust the net value changes for the average AALP contribution proportions (2-year intervals)

The average AALP contributions were used to adjust career/business progression at individual level (Table 4.4). Thus, financial changes for each participant (Step 3) were adjusted for the average AALP contributions (Step 2). For example, even though the net increase in employment value two years after graduation from AALP was \$20,000, only 33.4% of this value can be attributed to skills gained through AALP.

Table 4.4: An example of net value changes adjusted for average AALP contribution proportion at each 2-year interval

Intervals	0	+2	+4	+6	+8	+10
Differences	-	\$20,000	\$10,000	\$5,000	\$5,000	\$5,000
Estimated AALP contributions (%)	-	33.4	28.9	17.7	17.5	2.5
Differences adjusted for AALP contributions	-	\$6,680	\$2,890	\$885	\$875	\$125

Step 5: Adjust 2-year interval differences to the net present value (year 2011)

Due to the time span of 2 to 10 years after graduation from AALP, we cannot simply add all the benefits to obtain an average benefit per participant. It is necessary to adjust each of the differences to a present value. For publicly supported projects, it is commonly assumed that the cost of capital is relatively low due governments' power to tax. As such, the consideration of a discount rate for publicly supported projects has focused on risk and pure time preference. The rate in doing so has commonly been taken as 5%; this is applied here. This adjustment brings all differences to a comparable level as illustrated in the Table 4.5.

Table 4.5: An example of benefit adjustment to the net present value

Time elapsed from the base year (2011)	R	-8	-6	-4	-2	0
Differences adjusted for AALP contributions	D	\$6,680	\$2,890	\$885	\$875	\$125
Adjustment factor	$1/1.05^r$	1.477	1.340	1.216	1.103	1
Benefits due to AALP adjusted to net present values	$d/1.05^r$	\$9,866	\$3,873	\$1,076	\$965	\$125

In the example above, the career/business progression due to AALP was initially estimated to be \$6,680 two years after graduation. After its adjustment to the net present value, this contribution equated to \$9,866.

The overall AALP contribution was obtained by adding the present value of all 2-year interval benefit increments (i.e., \$9,866; \$3,873; \$1,076; \$965 and \$125), which in this example amounted to \$15,905 for 10-year period, or \$1,591 per year.

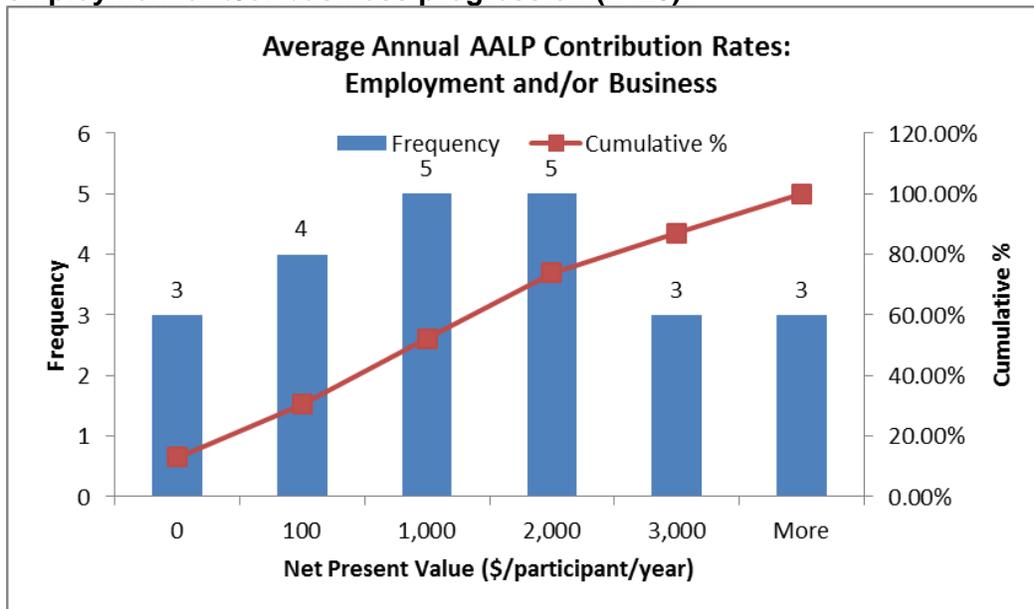
Step 6: Calculate the average annual AALP contribution rate in employment and/or business progression

The procedure described in steps 4 and 5 was completed for each participant. The overall average of all individual net AALP contributions was computed, to estimate the present value of average annual net AALP contributions in employment and/or business progression. This value is **\$1,699** per year per participant (Table 4.6 and Figure 4.3).

Table 4.6: Summary statistics: Average annual AALP contribution rate in employment and/or business progression (\$/participant/year)

Statistic	Value
Mean (\$)	1,699
Standard Error (\$)	558
Median (\$)	899
Mode (\$)	0
Minimum (\$)	0
Maximum (\$)	12,514
Count (No.)	23

Figure 4.3: Frequency distribution of average annual AALP contribution rate in employment and/or business progression (n=23).



The average annual AALP contribution rate is one of the two components that are used to determine the value of the overall social benefit of AALP. The other component is the value of the volunteering work, which is often seen as one of the key elements of community leadership. The estimation of the value of volunteering work is discussed in the next section.

4.2.2 Net Volunteering benefit as a result of AALP

The estimate of volunteering benefit per participant is derived as a product of “number of volunteering hours” and “hourly rate”. In principle, this is a simple calculation, however, quite challenging in practice. Because all individual volunteering benefits are at the end averaged across the entire sample, any major over- or under-estimation of the benefit at the individual level can lead to a substantial error at the aggregate (overall average) level. In order to obtain an estimate of volunteering benefit at the individual level as accurate as possible, a significant amount of information was gathered at the participant’s level.

Step 1: Data

The following questions were used to obtain information for the calculation of the volunteering benefit due to AALP:

1. List of volunteering organizations per participant
2. Descriptions of volunteering roles per participants per volunteering organization
3. Number of volunteering hours per month per role per participant.

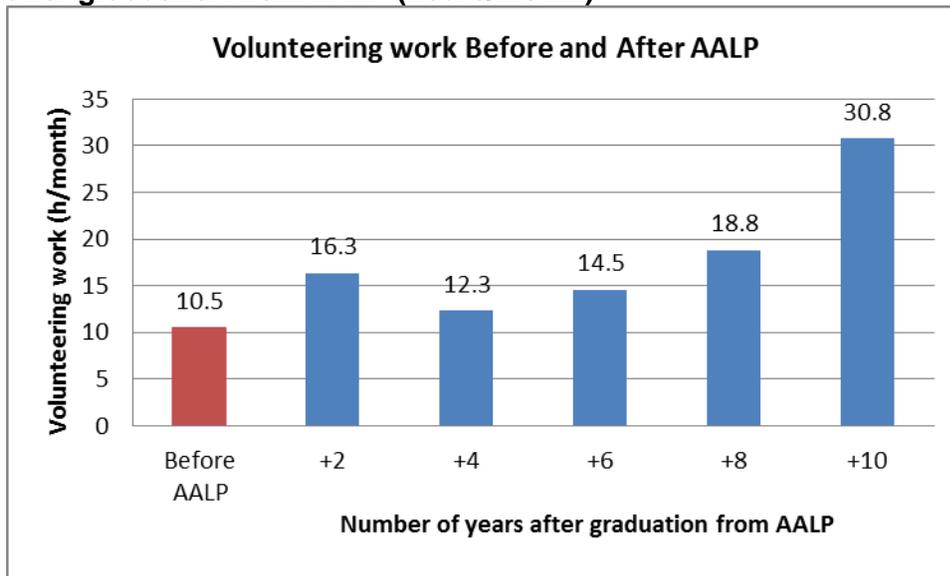
All the above information was collected for the time before enrolment in AALP and after graduation from AALP (for each 2-year intervals applicable to each class).

Participants were asked to estimate their AALP contribution percentage for the overall change in their individual level of volunteering engagement after graduation from AALP. Participants were asked to provide one percentage, rather than for 2-yr intervals. This was based on the

assumption that the AALP's influence on volunteer leadership occurs almost immediately after the graduation and remains relatively constant for an extended time.

This assumption appeared to be validated in the data collected in the survey. The data showed that after graduation from AALP the average number of volunteering hours increased within first 2 years (from 10.5 h/month to 16.3 h/month) and remained relatively constant up to 8 years post AALP (Figure 4.4). The number of volunteering hours seemed to increase significantly about 10 years after graduation (30.8 h/month). This could be a result of small number of participants with 10 years of post AALP experience (only 4) or it could mean that as participants approach retirement age, their volunteering work load increases.

Figure 4.4: Average volunteering hours per participant before enrollment in AALP and after graduation from AALP (hours/month)



Step 2: Determining hourly wage for different volunteering roles

Selected hourly rates were used to estimate the volunteering benefit (Table 4.7). These hourly rates were obtained from the most recent information of the wages provided by the Government of Canada¹ and the Ontario Ministry of Labour². Each volunteering role was given corresponding proxy wage in order to calculate the volunteering value.

¹ <http://www.workingincanada.gc.ca/report-eng.do?lang=eng&noc=0111&area=27236&titleKeyword=treasurer®ionKeyword=Kitchener,+Ontario&source=2&action=final>

² <https://www.labour.gov.on.ca/english/es/pubs/guide/minwage.php>

Table 4.7: Wage equivalents for different volunteering roles

Volunteering role	Proxy	Wage (\$/hour)	Source
Board President Board Member Committee Chair	NOC 0014: Senior Managers – Health, Education, Social and Community Services and Membership Organizations	\$ 39.00	Government of Canada
Board Treasurer	NOC 0111: Financial Managers (this includes treasurers in their description)	\$ 36.06	Government of Canada
Committee Member Active Member Volunteer	General Minimum Wage	\$ 10.25	Ontario Ministry of Labour

Step 3: Calculation of the average annual AALP contribution rate for volunteering work

The average annual AALP contribution rate for volunteering work is calculated using individual AALP contribution rates. For each participant, the individual AALP contribution rate was estimated as a weighted average of volunteering hours and proxy wage (Table 4.8). This was done for both before the enrollment in AALP and after graduation from AALP. The difference between the two values represented an overall change in volunteering value for a given participant. Since the proxy wage was always the same for a given volunteering position regardless of the year, there was not a need to adjust the values to the net present value. That is, the values were already comparable to one other.

The individual contribution rates were then averaged in order to obtain the average contribution rate across participants. The average AALP contribution rate represented 31% of the overall change. This was based on the survey results where participants indicated that direct AALP contribution in terms of volunteering was about 31% of the overall change.

Table 4.8: An example of calculation of an individual contribution rate (class 12)

Volunteering position	Organization				
	1	2	3	4	5
	Board member	Committee Chair	Volunteer	Active member	Treasurer
BEFORE					
Proxy wage (\$/h)	39.00	39.00	10.25		
Hours	2	3	5		
Value (wage*hours) (\$)	78.00	117.00	51.25		
Total value BEFORE (\$)	246.25				
AFTER					
Proxy wage (\$/h)	39.00	39.00	10.25	10.25	36.06
Hours	2	3	5	5	3
Value (wage*hours) (\$)	78.00	117.00	51.25	51.25	108.18
Total value AFTER (\$)	405.68				

Results for Volunteering Work

The overall impact of AALP on volunteering engagement was evaluated in several components:

- change in number of volunteering organizations per participant
- change in type of volunteering role held by participants
- change in hourly wages and overall contribution value

In general, the effect of on the participants volunteering work was positive and significant (Table 4.9). The number of volunteering hours per participant increased about 60% after the graduation. The participants volunteered in more organizations: 1.8 organizations per participant after graduation from AALP in comparison to 1.3 organizations per participant before the enrollment in AALP.

AALP participants tended to accept more responsibilities in volunteer organizations after graduation from AALP. This is observed through higher average hourly rate after graduation from AALP (\$32.04/hour) in comparison to the hourly rate of \$28.20 before the enrollment in AALP. The increase in average wage is solely a result of change in volunteering roles. For example, participants tend to be more involved in some kind of board activities after graduation from AALP in comparison to more general volunteering roles before the enrollment in AALP.

The increased number of volunteering hours, increased level of responsibility (i.e., greater hourly rate) and increased number of organizations per participant lead to an overall greater value of volunteering work after graduation from AALP in comparison to the initial values prior to the enrollment. The average annual AALP contribution rate for volunteering work is estimated to be about **\$870** per participant per year (i.e., \$72.55 per month * 12 months) (Table 4.9).

Table 4.9: Volunteering work profile per participant (number of organizations volunteered for, number of volunteering hours, wage and total value) before the enrolment in AALP and after graduation from AALP

Per participant per month	Volunteering			
	Organization (No./month)	Hours	Wage (\$/hour)	Total value \$
Before enrolment	1.3	10.5	\$28.20	\$297.32
After graduation*	1.8	16.6	\$32.04	\$530.97
Difference	0.5	6.0	\$3.84	\$233.64
AALP contribution**	0.15	1.87	\$1.19	\$72.55

*The “after graduation” value is 10 year weighted average

**This value is a flat rate of 31% of the overall difference

The SROI calculation requires two components to be determined before the ratio can be developed: one is the benefits (derived in Section 4.2) and the other one are the costs (discussed in section 4.3).

4.3 Cost calculation

The calculation of the expenses was driven by the question: “What is the total cost per participant of AALP course?” The annual reports of the Rural Ontario Institute provide the essential information for the calculation of average cost. The value of the overall annual expenses was used as a starting point. For each year (from 2000 to 2009) the annual expenses were reduced for the expenses related to any type of fundraising.

It is important to understand that annual expenses were not adjusted for any type of revenue. This is essential when dealing with SROI calculation, because it is the cost to run the course that needs to be evaluated against the overall social return. Adjusting annual expenses for revenue would inflate the SROI ratio.

After the expenses were adjusted for fundraising costs, the adjustment to net-present value was required in order to bring cost from different years to a comparable base (Table 4.10). A 10-year average of costs adjusted for net present value was used for the calculation of SROI ratio.

Table 4.10: Calculation of costs related to AALP (per participant)

Class	Year		Number of students	Expenses (\$ per year)				
	Enrollment	Expenses reported		Actual (\$)	Adjusted*	1/1.05 ^r **	NPV	Per student
8	1999-2001	2000	30	304,263	279,860	1.551	434,155	14,472
8	1999-2001	2001	30	347,218	321,237	1.477	474,613	15,820
9	2001-2003	2002	30	277,353	254,272	1.407	357,786	11,926
9	2001-2003	2003	30	443,851	412,293	1.340	552,512	18,417
10	2003-2005	2004	30	377,858	332,980	1.276	424,976	14,166
10	2003-2005	2005	30	460,715	428,667	1.216	521,047	17,368
11	2005-2007	2006	30	353,444	328,703	1.158	380,515	12,684
11	2005-2007	2007	30	543,425	505,385	1.103	557,187	18,573
12	2007-2009	2008	29	520,957	484,490	1.050	508,715	17,542
12	2007-2009	2009	29	411,622	351,270	1.000	351,270	12,113
AVERAGE								15,308

All years adjusted for fundraising expenses; 2000 to 2003 adjusted for other costs (website development and incorporation costs)

**r represents the time elapsed from the base year (r=0 for 2009 and r=-9 for 2000)

4.4 SROI: calculation and interpretation

The ratio between the costs of running AALP on one hand and benefits that society gains from people that attended the AALP on the other hand over a fixed number of years represents the SROI. It is important that both costs and benefits are obtained for the same number of years.

A 30 year period was chosen as reasonable period during which AALP benefits would be felt. This was based on the assumption that a 37 year old person (i.e., average age of AALP participants surveyed in the sample) would likely volunteer for additional 30 years (i.e., up to the retirement age).

The following assumptions were made for the calculation of SROI of AALP:

1. Length of period for SROI calculation is 30 years

2. The total cost during this time is \$30,616 at net present value. This is because costs for each participant occur over a 2-year period, which is the length of the course for each class.
3. The total benefit is combination of both value gained in the career progression and value gained in the volunteer work.
 - a. As noted earlier, career-related direct benefit is considered for 11 years only (Figure 4.2). The nominal value assigned in year 11 was the same as in years 1 to 10. In reality, this value may be lower in year 11 due to annual devaluation of monetary value. However, the change would be small and effect of the SROI would be negligible.
 - b. The volunteering benefit is considered throughout the whole period (Figure 4.4). Beyond the 10-year period, volunteering benefits are adjusted for the net present value (i.e., discounted) in order to keep the values comparable.

Based on the above stated assumptions, the SROI of AALP over 30-year period is 1.25 (Figure 4.5 and Table 4.11). That is, for every dollar of AALP expenses the social return is \$1.25 over a period of 30 years.

Figure 4.5: Cumulative SROI of AALP over a 30-year period.

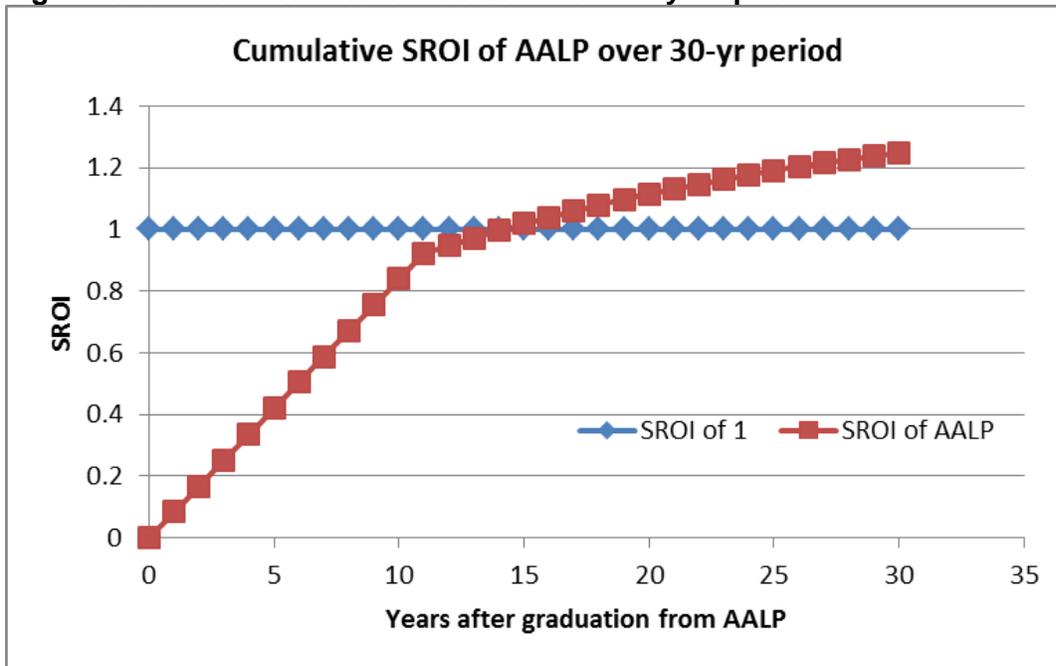


Table 4.11: Calculation of the cumulative SROI of AALP over a 30-year period

Year after graduation from AALP	Cost	Benefit			Cumulative SROI	
		Employment and/or Business	Volunteering work	Annual		
1	\$30,616	\$1,699	\$871	\$2,570	\$2,570	\$0.08
2		\$1,699	\$871	\$2,570	\$5,139	\$0.17
3		\$1,699	\$871	\$2,570	\$7,709	\$0.25
4		\$1,699	\$871	\$2,570	\$10,279	\$0.34
5		\$1,699	\$871	\$2,570	\$12,848	\$0.42
6		\$1,699	\$871	\$2,570	\$15,418	\$0.50
7		\$1,699	\$871	\$2,570	\$17,987	\$0.59
8		\$1,699	\$871	\$2,570	\$20,557	\$0.67
9		\$1,699	\$871	\$2,570	\$23,127	\$0.76
10		\$1,699	\$871	\$2,570	\$25,696	\$0.84
11		\$1,699	\$829	\$2,528	\$28,224	\$0.92
12			\$790	\$790	\$29,014	\$0.95
13			\$752	\$752	\$29,766	\$0.97
14			\$716	\$716	\$30,483	\$1.00
15			\$682	\$682	\$31,165	\$1.02
16			\$650	\$650	\$31,814	\$1.04
17			\$619	\$619	\$32,433	\$1.06
18			\$589	\$589	\$33,022	\$1.08
19			\$561	\$561	\$33,584	\$1.10
20			\$534	\$534	\$34,118	\$1.11
21			\$509	\$509	\$34,627	\$1.13
22			\$485	\$485	\$35,112	\$1.15
23			\$462	\$462	\$35,574	\$1.16
24			\$440	\$440	\$36,013	\$1.18
25			\$419	\$419	\$36,432	\$1.19
26			\$399	\$399	\$36,831	\$1.20
27			\$380	\$380	\$37,211	\$1.22
28			\$362	\$362	\$37,573	\$1.23
29			\$345	\$345	\$37,917	\$1.24
30			\$328	\$328	\$38,245	\$1.25

4.5 Open-ended responses about importance of skills gained through AALP

4.5.1 The Value of AALP to Career Progression, Business Growth and Employers

The focus of AALP on broadening sector knowledge, communications including negotiation and facilitation, sales and presentation skills has resulted in career progression or business growth for many AALP Alumni. Alumni noted that they are more confident in their own abilities to make decisions within their jobs or affecting their businesses because they can draw on broader knowledge of the agri-food sector and a better understanding of the policy process and understanding of the issues. Part of this is the confidence gained in making decisions as a result of being more informed on important issues and challenges facing the sector.

Not only have Alumni gained knowledge and the ability to critically think about issues in the sector, but many responded that they are better able to present positions on issues at short notice and feel comfortable in communicating and presenting those positions; which has been a great asset to effectively deal with clients and customers, but also in their roles as community leaders.

AALP also provided new perspectives on business management, including personnel management and learning to effectively work within teams and with various personalities. As leaders in their own businesses or growing within an organization or company, Alumni have benefitted from improved management and being able and willing to lead teams to an effective outcome resulting in additional responsibilities, promotion within the workplace and the ability to pursue new and different positions within their organizations or in new ones.

It is clear that both the Alumni and their employers have benefitted from sending employees to AALP. One Alumnus noted that the impacts to his/her employer go far beyond his/her individual improvements and contributions as the employer has sent numerous employees to AALP over the years thereby building up leadership skills within the company. Building leadership within a company can result in promotion from within, thereby hiring executives with a history in the company that require less 'learning time' than hiring from outside. Also as a result of sending multiple employees to the course, there has been an increased awareness of the organization by other leaders (Alumni) in the sector that has also been valuable.

One Alumni also mentioned that job prospects have broadened with having AALP on his/her resume, since it demonstrates to new potential employers that Alumni are interested in continuing education and continuous improvement and have a good leadership foundation.

4.5.2 The Value of AALP Continued Education

A number of comments were made suggesting that AALP has instilled in Alumni a culture of continuing education and improvement. Either Alumni were eager to continue exploring new challenges and new courses after AALP graduation and did so, or Alumni were encouraged to continue participating in new education programs by their peers.

4.5.3 The Value of AALP's Network and Community

It is difficult to quantify the value of business networks and networking itself, therefore no attempt was made to capture this in the SROI analysis. However, there is no doubt from the comments that Alumni provided that the enduring and mutually beneficial relationships and the community that AALP creates amongst its Alumni is invaluable (and may be the most valuable part of the program).

The access to network of professionals, gained through participation in AALP, provides Alumni with contacts in new areas of the agri-food sector and helps expand their knowledge of the sector. Being exposed to multiple perspectives regarding an agri-food issue has allowed Alumni to remain current on pressing issues and to think strategically with an open mind about opportunities and challenges facing the sector.

Not only is the expanded network valuable, but it has allowed Alumni to model themselves based on new contacts that they value and respect and see as leaders in the sector; or opposite it allows Alumni to expand their sphere of influence. For example,

“Being exposed to so many positive, dynamic people and businesses, both in fellow classmates and in the tours gave me the opportunity to select the best characteristics from these like-minded people and try to implement them in my own business”

Most importantly, AALP Alumni not only expanded their networks through their participation in the program but were able to leverage their contacts into valuable opportunities. Alumni have been exposed to new people and provided new opportunities for their careers and/or businesses from those people, or by referrals their new contacts made about them. Having a larger network has also been beneficial in dealing with clients/customers/co-workers with specific needs; one Alumnus noted that he/she now can call upon the advice and expertise of a larger network that may be able to assist with the specific needs of clients, customers and co-workers, which also makes the Alumnus more valuable to these clients. For example,

“Able to draw on a much broader range of expertise”

4.5.4 The Value of AALP on Personal Development

The skills learned in AALP do not only translate in the workplace but in all aspects of Alumni lives including communications skills and being able to deal with or manage different personalities.

One Alumnus noted that AALP helped him/her to realize that they did not want to just work for a company that made a profit but for one that made a difference, which resulted in a career change more suited to the Alumni's beliefs.

4.5.5 The Value of AALP on Community Leadership

One Alumnus felt that the most valuable aspect of AALP is in cultivating community leaders, more so than 'agricultural' leaders. This respondent feels that AALP should differentiate and separate the curriculum between agricultural leadership and understanding of agricultural policy and that of community leadership.

In responses from Alumni, the larger community has benefits in two primary ways from AALP: from its Alumni utilizing the skills learned to effectively lead in community and sector organizations, as well it actually spurred interest in volunteerism as a whole since participants now had the skills to take on the challenges that come with increased community participation.

The skills used by Alumni as they participate in the broader rural community include organizational skills, team building and personnel management skills (including delegating and understanding others), ability to strategically develop a plan and then implement it, communication skills including facilitation, public speaking and the ability to present a position and debate.

AALP has provided Alumni with the above mentioned skills which have resulted in the confidence to pursue volunteer opportunities as well as take on more responsibility and executive positions in many organizations as a result of more effective leadership skills.

Overall, the use of the training received in AALP and the networks made continue to be utilized by Alumni for years after graduation. For example,

"I perceive AALP to be equivalent to a Masters in Real Life. Very valuable to the network of the agriculture, agri-food and rural communities. This was a far better investment than anything taught in a classroom setting because of the continued exposure to various industries, communities and the global approach. Just as worthy an investment as my university degree in making me a better business person as well as cementing my social conscience and recognizing the importance of community".

5. Conclusions

The overall goal of Advanced Agricultural Leadership Program is to provide an opportunity for individuals to develop the skills, knowledge and broad perspective to effectively manage issues and trends in rural communities and the agri-food industry. The objectives for participants are:

- to learn and practice leadership skills (communication, motivation, critical thinking, issue analysis, decision making, volunteer and group management)
- to acquire knowledge of agriculture, agri-food and rural systems and the economic, political, social, cultural and physical environment in which they operate
- to broaden their perspective on local, national and international issues
- to provide effective leadership in a complex industry and diverse society

Thus, AALP's focus is on enabling individuals to develop leadership skills, which would further lead to both career improvements and more vibrant community.

In this project we estimate the effects of AALP on society by measuring the improvements in career progression as well as improvements in community leadership. We found that for the first 10 years post-AALP experience the skills gained through AALP give the society an annual return value of \$1,699 per participant through career progression and \$870 per participant through more volunteering work.

AALP has provided Alumni with essential leadership skills, which have resulted in the confidence to pursue volunteer opportunities as well as take on more responsibility and executive positions in many organizations. After graduation from AALP, Alumni increase the number of hours they volunteer; they take on more responsibility by volunteering in more influential positions (board members of committee chairs) and they participate in more organizations.

The access to network of professionals, gained through participation in AALP, provides Alumni with contacts in new areas of the agri-food sector and helps expand their knowledge of the sector. Being exposed to multiple perspectives regarding an agri-food issue has allowed Alumni to remain current on pressing issues and to think strategically with an open mind about opportunities and challenges facing the sector.

The skills used by Alumni as they participate in the broader rural community include organizational skills, team building and personnel management skills (including delegating and understanding others), ability to strategically develop a plan and then implement it, communication skills including facilitation, public speaking and the ability to present a position and debate.

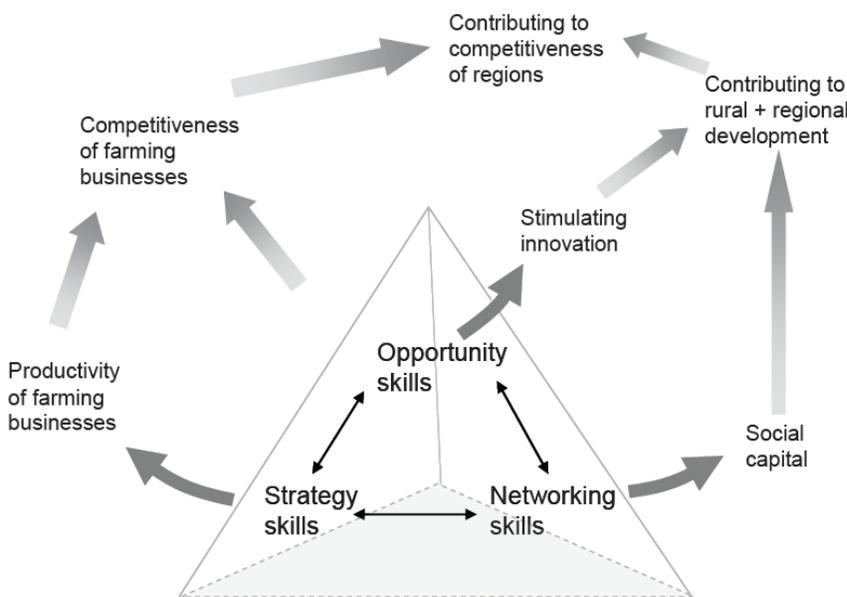
It is difficult to quantify the value of business networks and networking itself, however, there is no doubt that the enduring and mutually beneficial relationships that AALP creates amongst its Alumni is invaluable (and may be the most valuable part of the program). Not only is the expanded network valuable, but it has allowed Alumni to model themselves based on new contacts that they value and respect and see as leaders in the sector; or opposite it allows Alumni to expand their sphere of influence.

Most importantly, AALP Alumni not only expanded their networks through their participation in the program but were able to leverage their contacts into valuable opportunities. Alumni have

been exposed to new people and provided new opportunities for their careers and/or businesses from those people, or by referrals their new contacts made about them. Having a larger network has also been beneficial in dealing with clients/customers/co-workers with specific needs

It is important to note that effects of AALP extend past the SROI of 1.25. AALP connects Alumni through new networks; AALP presents Alumni with new opportunities; AALP teaches Alumni to think and work strategically. Without the intention, AALP is improving the set of skills that are pivotal for improving the competitiveness of the agricultural sector and communities in general (Rudmann et al., 2008; Figure 5.1.).

Figure 5.1: Schematic presentation of relationship between entrepreneurial skills (networking, strategy, opportunity) and overall competitiveness of regions



Adopted from: Rudmann et al. 2008

The opportunity skills, strategy skills and networking skills, are conceived as the driver of agricultural competitiveness and through social capital and innovation directly linked to regional competitiveness. Specifically, recognizing opportunities is linked to innovation which extends beyond the agricultural sector and into the regional non-agricultural sector. At the same time, networking leads naturally to the development of associations and social capital, which ties agriculture in with the region. Hence, AALP plays pivotal role in improving the competitiveness of regions.

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