

The SROI Report of Let's Save Our Own Milk



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 台灣公益團體自律聯盟
Taiwan NPO Self-Regulation Alliance

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Report Summary

This report adopts the Social Return of Investment approach to assess the social impacts of "Let's Save Our Own Milk" initiated on the crowdfunding platform flying.cc from January 2015. Let's Save Our Own Milk (abbreviated as LSOOM) raised funding from the public and then a private milk company Puremilk Co. was set up, which aims to solve social problems including the long-neglected dairy industry, the gap between young manpower demands and supplies, and unfair trade between dairy farmers and the big dairy companies. Not only has LSOOM established a fair production and sales platform, but more importantly, it fosters an ecosystem for the entire industry to further develop. This report identifies five stakeholder groups – Puremilk Co., the intern vet, undergraduate interns, dairy farms, and LSOOM crowdfunders. For every 1\$ invested there is a social return of 3.65-4.84, in our base case scenario the SROI ratio is 1:4.05. These results indicate that this project has demonstrated its social value in a short period of time. Above all, this project shows the value and the importance of creating a new dairy production-marketing model, cultivating young talents to meet the current demands, enhancing farmers' overall abilities and business confidence, and raising public awareness of fair trade to grow and overturn dairy industry in Taiwan.

Introduction of SROI analysis

About this report

This report is an evaluation report, which analyzed the period from January 2015 to December 2017. The SROI analysis of "Let's Save Our Own Milk" measures the changes and impacts of five stakeholders in order to know what impacts this project brought in terms of societal, economic and personal aspects.

About SROI analysis

This report adopts the Social Return on Investment (hereinafter referred to as SROI) methodology developed by the British and Scottish governments to evaluate LSOOM's impacts. Based on seven principles, this report measures the changes in stakeholders' inputs, outputs, and outcomes in a complete six-stage approach.

By SROI, social impacts and changes can be expressed in monetary units for the future improvements and developments of this project.

On the other hand, SROI takes account of the engagement of stakeholders and measures the changes in feelings, cognitions and even family relations among stakeholders. Thus, SROI not only shows the value of the material interests of stakeholders involved in the project but also covers the non-monetary impacts.

6 stages

This analysis follows the six stages

- 1) Establishing scope and identifying key stakeholders
- 2) Mapping outcomes
- 3) Evidencing outcomes and giving them a value
- 4) Establishing impact
- 5) Calculating the SROI
- 6) Reporting, using and embedding

7 principles

The 7 principles are underpinned in the whole SROI analysis:

- 1) Involve stakeholders
- 2) Understand what changes
- 3) Value the things that matter
- 4) Only include what is material
- 5) Do not over-claim
- 6) Be transparent
- 7) Verify the result

Stage 1. Establishing scope and identifying stakeholders

Overview of the “Let’s Save Our Own Milk” project

The dairy industry in Taiwan

Owing to the high costs of imported forage, dairy farm equipment, and intensive labor, the dairy industry in Taiwan has been developed relatively slow and is often neglected by the public. Consequently, a wide range of problems has emerged, those problems include:

1. Lack of a sound environment for small dairy farmers to develop: Restricted to the rigid production-marketing model, small farmers could only sell milk to the big dairy companies with a fixed purchase price. Therefore, farmers who put more efforts in producing good quality milk could not gain a reasonable profit.
2. The gap between young manpower demands and supplies: There is a mismatch between the demands and supplies of large animal veterinarians. Compared with one dairy veterinarian taking care of an average of about 1000 cows in Japan, an average of 5000 cows is taken care of by a dairy veterinarian in Taiwan. In addition to that, the long working hours also prevent the young veterinary graduates with large animal veterinary licenses from devoting themselves to take care of the economic animal. Consequently, without the internal and external information flow, many small farms are almost isolated from the outside world which hinders them from learning updated knowledge about herding and management. On the other hand, there is barely any access for the young talents to enter the dairy industry besides large-scale food companies or farms. It has resulted in the declining dairy industry along with no exchange of industry knowledge or experiences and the discontinuous development of the industry.
3. Consumers’ lack of fair trade awareness in the dairy industry: There were not many fresh milk brands to choose from in Taiwan. Consumers could rarely get any information about the dairy industry, let alone think about whether the development of the dairy industry is sound and fair.

Furthermore, since Taiwan joined the WTO, imported foreign milk has posed a threat to local brands. Hence, it is imperative to strengthen the dairy industry and make positive changes in the ecosystem, so that the industry can sustain in the long run.

In 2015, several passionate and creative young people proposed the Let’s Save Our Own Milk (abbreviated as LSOOM) project which aims for creating a new dairy production-marketing model and overturning the dairy industry. Through improving milk quality and farming environment, reducing the production cost of milk, adjusting the production and sales of milk in accordance with the seasons, recruiting more young people into the industry and raising public’s awareness on relative issues, this project is looking forward to a new era of dairy industry.

The startup of “Let’s Save Our Own Milk”

The project LSOOM was proposed by Chien-Chia, Kung (abbreviated as Kung). As a professional large animal veterinarian, Kung's footprints has covered the farms all over Taiwan, which equips him with a comprehensive understanding of the problems of Taiwanese dairy industry. Over the past few years, Taiwan has been rocked by many

food safety issues. The fact that the dairy industry became one of the industries being negatively affected the most had urged Kung to turn his vision for the dairy industry into actions. From Aug 2014 to the end of the year, the LSOOM project was gradually taking shape. Kung had started to select partnered dairy farms, develop a co-branding mechanism, discuss the possible collaborating way with the farmers and so forth. Meanwhile, in order to conduct a market analysis for the project, Kung also gathered the public's understandings and insights regarding the current situation of the dairy industry and the ideal one via Facebook. In Jan 2015, the LSOOM project was finally launched on the crowdfunding platform FlyingV.

The LSOOM project had rapidly gained a widespread support on FlyingV. Therefore, Kung invited another two friends to join the project and Puremilk.co was founded shortly after 3 months from the initiation of the project on FlyingV. Three of the founders established the company to execute the LSOOM project so that the project can sustain. They have also planned to invite more different organizations to take part in the project, collaboratively using the feasible and innovative way as the solution to relieve problems of the dairy industry in Taiwan in the future.

The Initiator of LSOOM.

Kung, a large animal veterinarian in Taiwan and the initiator of LSOOM, has been providing veterinary services for 35 dairy farms over 6,000 cows since 2011 after he finished his master degree. Through working in the farms, Kung has accumulated his professional skills which enables him to earn trust and build up deeply connection with dairy farmers. More importantly, his work allowed him to observe the structure of the dairy industry and its problems in Taiwan. Kung has a profound understanding of the quality of milk and farming environment for about 300 dairy farms in Taiwan. As a vet, Kung loves to take good care of the cattle and cherishes the diligence of dairy farmers who are proud of its milk quality. Kung is unwilling to see that the whole Taiwan dairy industry might fail to sustain in the foreseeable future in face of international dairy product competitors after 2025 because of the Agreement between New Zealand and the Separate Customs Territory of Taiwan, Penghu, Kinmen, and Matsu on Economic Cooperation (ANZTEC).

Kung believes in the power of the crowd - those who determine to take actions can make significant and meaningful changes in the dairy industry. Therefore, based on his veterinary medicine training, he decided to start the LSOOM project, in the hope of solving the problems of the dairy industry and helping the industry sustain in the long run.

Purpose of LSOOM

LSOOM creates a sound and fair production and sales platform with the reasonable purchase price and co-branding system. It encourages farmers to improve their business know-how and production quality. At the same time, it helps to build up professional veterinarian capacity to promote industrial upgrading. Finally, LSOOM aims for raising consumers' awareness of fair trade in the dairy industry and improve the dairy farming ecosystem.

1. Establishing a production and sales platform for small dairy farms, which helps in

cultivating young talents, marketing and promoting fair trade concepts to improve the development of the small dairy farming ecosystem.

2. Helping small dairy farmers to enhance knowledge and abilities in farm management and increase business confidence. Furthermore, small farmers can partner with Puremilk to create a co-brand and earn a fair return.
3. Cultivating young large animal veterinarians, young veterinary college students and strengthening their working confidence in the dairy industry.
4. Increasing public awareness of fair trade in the dairy industry and actual purchase of fair trade milk.

This project has been financially supported by Puremilk in the first phase, and in the next step, it plans to invite more organizations with different backgrounds to overturn the declining dairy industry collaboratively.

New business model of LSOOM

In order to ensure sustainability, LSOOM first developed "the agent of good milk in Taiwan"-Puremilk, which serves as a platform to sell milk in the co-branding way in large retail chain channels. It also develops non-standard sales channels, such as bookstores, cram schools, and toy stores as the pickup stations where the revenue is the main source supporting this project. Puremilk's purchase price is about 15%-20% higher than the market price per ton of milk. With a fair return, the farmers have greater business confidence to produce the better quality of milk. Co-branding as an innovative way of marketing strategy for selling milk in Taiwan does improve the income of small dairy farmers which gradually leads to industrial upgrading.

Operating programs and process of LSOOM

This project has five operating programs and each process as below,

1. Evaluating and building co-brand partnership
 - A. LSOOM selects partnered dairy farms from which Kung works with, and helps them to strictly control feeding environment, animal welfare, disease management, and nutrition and medication management with professional knowledge, and to be more accountable.
 - B. LSOOM establishes the co-branding way of selling with partnered dairy farms and creates individualized brand packaging, sales, and marketing models etc.
2. Developing new channels: only with good sales performance, will the dairy farmers feel motivated to participate in the project and improve the quality of milk, so LSOOM keeps developing new channels, including non-standard sales channels (such as online ordering, video rental stores, drug stores and cram schools etc.), entering large-scale chain channels as an independent brand, and exploring collaboration opportunities with chain coffee shops (such as Louisa Café).
3. Cultivating young talents: LSOOM holds internship programs for large animal veterinarian interns and young veterinary college students for learning more practical knowledge in the field. Meanwhile, LSOOM also offers job positions and learning opportunities for young people who are willing to contribute to dairy industry development.
4. Offering veterinary services: LSOOM offers regular veterinary services to dairy farms, consulting services of breeding and feeding management to improve milk

quality and encouraging more farms to join this project.

5. Building public awareness: LSOOM promotes the concept of fair trade which aims for more public awareness of the unbalanced status of dairy industry development through running Facebook, blog and hosting workshops and gatherings.

Objectives of this SROI analysis

The Project of “Let’s Save Our Own Milk” on the crowdfunding platform flyingV.cc

The LSOOM project has entered its fourth year. This project was activated with public participation, and the overall dairy farming ecosystem has thus changed rapidly. Enhancement of dairy farmers’ rights and young generation engagement in the dairy industry are considered as the two major achievements of this project.

However, further, we would like to know this project’s actual impacts on the partnered dairy farms, the young talents, and the public, whether the solutions have efficiently and effectively addressed the problems? Whether the project can be improved? The SROI analysis results will be helpful for overviewing the project and showing the value.

Identifying stakeholders

SROI emphasizes stakeholder engagement to identify and understand the inputs and changes created through a project. Thus, the stakeholders need to be clearly defined before exploring inputs, outputs, and outcomes and measuring changes and values.

Methods for stakeholder engagement

One of the most obvious SROI characteristics is that it values stakeholders' participation, and uses their subjective feeling and objective changes as the project outcomes performance and determining value. Hence we conducted initial discussion and workshops, interviews, and questionnaires to sufficiently communicate with stakeholders. LSOOM project site has gathered participation and inputs from many different groups.

We conducted 4 methods to involve and define stakeholder groups.

1. Initial discussion
2. Field interview and phone interview
3. Questionnaire
4. Phone confirmation

Step 1. Initial discussion

First, we had the discussion with Puremilk, an intern vet, an undergraduate intern and one of the partnered farm owners to produce a list of all stakeholders who could potentially experience changes in this project. This discussion also sought to identify what the change could potentially look like for the different groups. We identified different stakeholders including Puremilk, employees of Puremilk, intern vet, undergraduate interns, dairy farms, crowdfunders, and business customers. One representative from each stakeholder group was chosen for further discussion. We first briefly introduced the SROI framework and explain how the project can utilize the SROI to evaluate the social impact. Then we tried to identify who are the key

stakeholders with material changes. We further asked stakeholders' inputs and had a preliminary understanding of the outputs and changes.

Step 2. Field interview and phone interview

The purpose of interviews is to understand the investment and changes of stakeholder groups.

We held field interviews and phone interviews respectively with Puremilk, dairy farmers, undergraduate interns, a vet intern, crowdfunders and Louisa Café the business customer based on a semi-structured interview approach. We prepared some questions to identify their material inputs, outputs, and outcomes related to the LSOOM. We tried to identify who are the key stakeholders with material changes.

The interview questions can be summarized below:

A. Background and motivation

- a. How do you know this project?
- b. What motivated you to support and participate in this project? Why?
- c. How long have you been participating in this project?

B. Inputs

- a. How many efforts (labor, manpower, time or money) have you invested in supporting this project?
How would you identify and calculate efforts (labor, manpower, time or money) have you invested in supporting this project?

C. Outputs

- a. What have you acquired out of inputs that you have invested in supporting this project?

D. Outcomes

- a. What positive and negative changes have you got from the outputs that you have invested in supporting this project?
- b. What intended and unintended changes have you got from outputs that you have invested in supporting this project?
- c. Please describe how these positive, negative, intended, unintended changes have formed (the chain of events).
- d. Please identify the quantity and duration of these changes?
- e. Please specify the financial proxies of these changes.

We further asked the interviewees to describe the intended and unintended changes as well as positive and negative changes. We also briefly explained the concept of financial proxy. We further decided to include or exclude stakeholders from the analysis according to the materiality principle.

Step 3. Questionnaire

For the undergraduate interns, by using their internship feedbacks, the chain of events and program goals, we designed the questionnaire. We hope that through the questionnaire, we can confirm that the results do exist and we especially want to know the extent to which level young people are involved in the large animal veterinarian field after this project.

For the LSOOM crowdfunders, we observed and sorted out their posts online, and we further scheduled interviews with 5 of them. The questionnaire was designed based on the data we gathered. We hope that by asking them their thoughts on the project, their awareness of social responsibility, and the frequency of buying milk from Puremilk, we can confirm that the results do exist.

Step 4. Phone or Email confirmation

After conducting field interviews and sending questionnaires, we followed up with phone interviews to clarify and communicate with each stakeholder group about details of inputs, outputs, outcomes, and chain of events.

After stakeholder groups completed the questionnaire and interviews, we confirmed with the stakeholders regarding inputs, outputs, outcomes, indicators, and financial proxies by phone discussion. We further explained four impact factors - deadweight, attribution, displacement, and drop-off - with them to make sure they understand its concept. Finally, we required stakeholders to specify the percentage and rationale of the four impact factors of their outcomes. The interview process, numbers of people, included or excluded reasons and identification results are outlined in Table 1.

Table 1

Stakeholders groups	Total number of people	Number of people interviewed	Included(V)/ Excluded(X)	Methods	Interview process and reasons for inclusion/exclusion
Puremilk	30	3	V	Initial discussion, Field interview, phone interview, Phone confirmation	<p>We had the initial discussion, many one-to-one interviews and phone interviews with three Puremilk founders to understand Puremilk's input, output -and outcome in this project.</p> <p>After the LSOOM project's initiation on the crowdfunding platform in 2015, Puremilk.co was founded to execute the project and to support the expenses on personnel, the talent cultivation programs, and building co-brand</p>

					<p>partnership with its profits.</p> <p>Thus Puremilk was included based on the principle of materiality.</p>
Intern vet	1	1	V	Initial discussion, Field interview, phone interview, Phone confirmation	<p>The Intern vet who participated in this project is one of the main beneficiaries. Interviews showed that since he joined this project, he has had more confidence in the development of the dairy industry, and the anxiety of the difficulty in getting a good job and reasonable pay resulting from the declining dairy industry has reduced. Hence we included the intern vet in the analysis.</p>
Undergraduate interns	20	9	V	Initial discussion, phone interview, Questionnaire Phone confirmation	<p>Cultivating young talents is one of the main goals of the project. We interviewed with one of the interns then sent out the questionnaires to 20 interns. 9 of them replied and based on the results we can see that they have learned more about large animal veterinary. Meanwhile, they also indicated that this project would benefit their professional life.</p>
Partnered dairy farms	3	3	V	Initial discussion, Field interview,	<p>Partnered dairy farms are one of the main</p>

				phone interview, Phone confirmation	stakeholders in this project.
Partnered dairy farms without a co-brand	27	0	X	Not directly consulted, but we knew the outcome for them through Puremilk	<p>Partnered farms were grouped into two categories that both were offered with the medical services, and one built co-brand with Puremilk collaboratively.</p> <p>Regarding the partnered farms which built a co-brand with Puremilk, based on the one-to-one interview, we found out that the most essential change for them was that the project had driven the day-to-day dairy farm operations transformation.</p> <p>Interviews showed that not only had their knowledge and abilities enhanced but more importantly they felt a sense of achievement and happiness. Thus we included them in the engagement outcomes analysis.</p> <p>On the other hand, regarding the partnered farms without a co-brand, based on the interview with Puremilk, we understood that although the farms were offered with medical services by this project, there were no material impacts associated with this project. Hence they were excluded.</p>

Employees of partnered farms	10	0	X	Not directly consulted, but we knew the outcome for them through Puremilk	According to the interviews with farm owners, we understood that they had upgraded their farming equipment after participated in this project, and the employees of farms were benefited from the upgraded environment. However, the changes were indirect and insignificant, so employees of partnered farms were excluded in the analysis based on the principles of materiality and not overclaiming.
Crowdfunders	500	107	V	Initial discussion, phone interview, Questionnaire Phone confirmation	Crowdfunders are one of the stakeholders who have supported this project since its initiation. We wanted to find out why they have been supportive and purchased the milk with a higher price, so we held initial discussions with some of the crowdfudners. Based on the results of the discussions, a questionnaire was created. According to the results of the questionnaire, it is shown that the crowdfunders' everyday life had changed that not only had they started to pay attention to the issues of fair trade and small farmers,

					but also derived more actual changes from gained knowledge. Thus we included them in the analysis.
Business customers	15	1	X	Initial discussion, Field interview, phone interview	This project has developed many sales channels to sell milk, including Family Mart the chain convenience store, Louisa Café the chain coffee shop, major department stores and so forth. One of the business customers, Louisa Café, during the interview mentioned that since they show more concerns about the dairy industry by using milk from Puremilk they have gained new customers; meanwhile, Louisa Café has had new investments in equipment for increasing sales of their products containing milk from Puremilk to support the core values of LSOOM. However, it is difficult for us to measure the impacts from the business customers associated with the LSOOM project and it involves some confidential business information. Hence, the business customers were excluded from this SROI analysis.

Intended changes

The LSOOM project looks forward to creating a suitable environment for the development of small dairy farms, so in the evaluation, most of the positive outcomes were expected.

Unintended changes or negative impact

In order to know whether LSOOM had any negative impact or unintended changes, we designed open questions to ask all the stakeholders groups' opinions in the stage of initial discussion. We find no negative impact on stakeholders based on the responses from stakeholders. For instance, we asked Puremilk how the sales platform they created affects other small dairy farms and they indicated that there has been a great market demand in Taiwan so no one will be crowded out. We also asked the crowdfunders what they think about the higher price of the milk from Puremilk, they answered that they believe giving the dairy farmers a reasonable return is the right thing to do. They also expressed that even if they start to purchase more small-farmer products, they would not consider it is an extra expense but rather a reasonable one.

Followed by interviews, open-ended questions in the questionnaire and phone/email confirmation, we further asked if there were any unintended changes or negative impact. They did not give us any negative feedback. Therefore, we conclude that there is no negative impact of LSOOM.

Stage 2. Mapping outcomes

Inputs

The total inputs value from stakeholders is \$15,963,987 in 2015, \$53,714,753 in 2016, and \$45,332,141 in 2017.

1. Puremilk

In the initiation phase of the project, LSOOM required the inputs of capital and manpower to overturn the declining dairy industry, so Puremilk was set up as the first step to create a sustainable operation model, in preparation for recruiting more individuals or organizations to take part in the project in the future. Thus the operating expenses for the first three years of the project were supported by Puremilk.

We calculated Puremilk's operating and administrative fees, which represent the manpower and time to which LSOOM has been devoted. The administrative fees include salaries, rents, and equipment, training and miscellaneous fees etc. The operating fees include delivery fees and others. To avoid double counting, since the vet intern's salary is paid by Puremilk, we calculated it as the inputs of Puremilk. The monetary inputs of Puremilk from January 2015 to June 2017 are listed as Table 2.

Table 2 Inputs of Puremilk

Input(\$NTD)	2015	2016	2017	Total inputs (Net Present Value before impact factors adjusted)
Administrative and operating costs	\$15,963,987	\$53,714,753	\$45,332,141	\$115,010,881

2. Veterinarian intern

LSOOM Farm Internship Program had supported one vet intern, Jie-cheng Wu (abbreviated as Wu), who spent most time staying with Homelove Farm for helping daily farm management, followed both Kung and the other vet to provide veterinary services for farms that they have been cooperating with. Under the LSOOM project, Wu was employed by Puremilk since September 15th, 2016. The input of the vet intern including manpower, time, accommodation and traveling expenses were calculated as the inputs of Puremilk. Thus the monetary inputs of veterinarian intern from Sep 2016 to the end of 2017 were zero.

3. Undergraduate interns

LSOOM Farm Internship Program has supported 20 undergraduate interns to spend at least one month working with nine farms, helping farming management, and providing veterinary services. Participating undergraduate interns do not necessarily work or engage in any productive activities and may have extra expenses on leisure activities during summer vacation. Thus, with a different learning option provided by this program, the time value of their investment was zero.

4.a Homelove Farm

Homelove Farm locates in the Fushing Township, Changhua County, which is one of the four main dairy zones in Taiwan. Homelove is the first farm to join LSOOM since its initiation, which has started to sell milk to Puremilk in April 2015. Their inputs refer to manpower and time to raise cows and do farm management. Three farm staffs spent one day together every 2 weeks to work with Kung. Therefore, we use the minimum wage to find one-day payment for each staff in different years. The minimum wage is \$20,008 in 2015 and 2016 while \$21,009 for 2017¹. The monetary inputs of Homelove Farm from Apr. 2015 to the end of 2017 are listed as Table 3.

Table 3 Inputs for Homelove Farm

Input (\$NTD)	2015	2016	2017-	Total (Net Present Value before impact factors adjusted)
Manpower and time	\$36,014	\$48,019	\$50,422	\$134,455

4.b Justmilk Farm

Justmilk Farm is one of the oldest dairy farmers in Taiwan, located in Lunbei Township, Yunlin County, which started to sell milk to Puremilk in April 2016. Their inputs refer to manpower and time to raise cows and do farm management. One farm staff spends one day every 2 weeks to work with Kung. Therefore, we use the minimum wage to find daily payment for each staff in different years. The minimum wage is \$20,008 in 2016 while \$21,009 for 2017². The monetary inputs of veterinarian intern from Sep 2016 to the end of 2017 are listed as Table 4.

Table 4 Inputs for Justmilk Farm

Input (\$NTD)	2015	2016	2017	Total inputs (Net Present Value before impact factors adjusted)
Manpower and time	\$0	\$12,005	\$16,807	\$28,812

4.c Lucky Ranch

Lucky Ranch is located in Lunbei Township, Yunlin County, which is one of the four main dairy zones in Taiwan. Lucky Ranch joined Puremilk in 2017. Their inputs refer to manpower and time to raise cows and do farm management. Two farm staffs spend one day together every 2 weeks to work with Kung. Therefore, we use the minimum wage to find one-day payment for each staff in different years. The minimum wage is

¹ Hourly minimum wage refers to the regulation of the Ministry of Labor, Executive Yuan <https://www.mol.gov.tw/topic/3067/5990/13171/19154/>

² Hourly minimum wage refers to the regulation of the Ministry of Labor, Executive Yuan <https://www.mol.gov.tw/topic/3067/5990/13171/19154/>

\$21,009 for 2017³. The monetary inputs of veterinarian intern from April 2017 to the end of 2017 are listed as Table 5.

Table 5 Inputs for Lucky Ranch

Input (\$NTD)	2015	2016	2017-	Total (Net Present Value before impact factors adjusted)
Manpower and time	\$0	\$0	\$12,605	\$12,605

5. LSOOM Crowdfunders

Since its launch, LSOOM constantly promotes the concept of fair trade in the dairy industry and provides good quality milk. Through the continuous reporting of blogs, Facebook and various newspapers and magazines, a group of fans, who nicknamed “milk fans,” has been recruited to support LSOOM with actual purchase of milk and to support the growth of the dairy industry. These customers mostly get to know or to support LSOOM through relevant reports or activities hosted by Puremilk during their weekend leisure time which the time period was not for work nor productive activities. Thus, with different entertainment and learning options provided by this program, the time value of their investment was zero.

Outputs

The outputs for each stakeholder is summarized in Table 6.

Table 6 Outputs for all stakeholders

Stakeholder Group	Outputs	Description (A quantitative summary of an activity.)
1. Puremilk	Executing the project	<p>Under the LSOOM project, Puremilk has been running by three cofounders who lead a total of 30 employees:</p> <ul style="list-style-type: none"> • Building 3 small-farm milk brands. • Developing new channels, especially large-scale chain channels and successfully collaborating with one chain coffee shop and one convenience store. • Helping young people to equip with the skills to enter a career in the dairy industry • Selling milk. • Providing all kinds of dairy industry information to the public. • Being interviewed, conducting seminars and run a blog/fan page to provide dairy

³ Hourly minimum wage refers to the regulation of the Ministry of Labor, Executive Yuan <https://www.mol.gov.tw/topic/3067/5990/13171/19154/>

		industry information.
2. Veterinarian Intern	Receiving training of large animal veterinary medicine, dairy farm management	From 2016 to 2017, one vet intern, Wu, was trained in this project. During the internship period, he received training in dairy farm management, large animal veterinary knowledge, and veterinary medicine. He has provided veterinary services up to 150 times and 1,500 cows.
3. Undergraduate Interns	Receiving training of large animal veterinary medicine, dairy farm management	From 2015 to 2017, 20 undergraduate interns were trained by this project. During the internship period, they received training of large animal veterinary basic knowledge, dairy farm management. LSOOM requires the minimum duration of this internship project for at least a month with an average of 8.7 hours a day and 22 days a month.
4. Partnered Dairy Farms	Running their own farms, and setting up a co-brand with Puremilk	Three dairy farms joined the LSOOM project which has helped them to improve farm management skills, increase the quality and quantity of milk and set up a co-brand respectively. 4.a Homelove Farm 4.b Justmilk Farm 4.c Lucky Ranch
5. LSOOM Crowdfunders	Investing in a crowdfunding project or buying small-farm milk from Puremilk regularly	The questionnaire has been sent out to crowdfunders who have supported the project since 2015, and a total of 500 questionnaires were sent out and 107 were collected.

Stakeholders' outcome

According to interviews and questionnaires, five stakeholder groups experienced material changes. The outcomes include the following:

Table 7 Stakeholders' outcomes and event chain

Stakeholder groups	Outcomes	Event Chain
1. Puremilk	Generated revenue from milk sold.	began the project and thereafter Puremilk was founded → recruited young talents into the project to overturn the long-neglected dairy industry → collaborated with the farms which shared the same goals →

		produced high-quality milk → recognized by the consumers with actual purchase → generated revenue
	Increased media effectiveness	Began the project and thereafter Puremilk was founded → executed the project → gained media and consumer attention → got media coverage
2. Intern Vet	Enhancing profession in large animal veterinary medicine and dairy farm management	Participated in the LSOOM project → received professional training → applied the knowledge and skills to the work
	Becoming positive about the future career	Participated in the LSOOM project → provided veterinary care for cows as an intern → received an official offer as a vet → got a stable and reasonable salary and built mutual trust with the farm owners → became positive about the future career development
	Feeling more fulfilled in life	Participated in the LSOOM project → got to know more about the development of the dairy industry → started to think of one's own role within the industry → felt responsible for the dairy industry → actively participated in the relevant activities and enthusiastically shared the information and experiences with the junior students → feel more fulfilled
3. Undergraduate interns	Enhancing profession in large animal veterinary medicine and dairy farming management	Participated in the LSOOM project → received training → obtained the professional knowledge and skills
	Increasing social responsibility awareness	Participated in the LSOOM project → got to know more about the long-neglected and traditional dairy industry → became more aware of the issues of fair trade and small farmers in everyday

		life → constantly paid attention to the issues regarding small farmers and participated in the relevant activities
4. Partnered dairy Farms	Increasing income	Participated in the LSOOM project → got a higher purchase price → the income increased
	Becoming positive about the dairy industry	Participated in the LSOOM project → discussed future development strategies with Puremilk → felt more assured to invest in the development of the dairy industry → believed a more promising future in the dairy industry and thereafter purchased new farming equipment
	Enhancing knowledge and abilities in farm management.	Participated in the LSOOM project → enhanced knowledge and abilities in farm management → applied the knowledge and abilities in farm management
	Enhancing self-confidence	Participated in the LSOOM project → other peer farm owners came and asked about operating models and experiences → self-confidence increased
	Feeling closer to the family	Participated in the LSOOM project → working time reduced and got more time for family → shared the common topic with the family → felt closer to the family
5. LSOOM Crowdfunders	Increasing social responsibility awareness	Participated in the LSOOM project → purchased the milk from Puremilk regularly → kept track of the issues of dairy farmers and other small farmers - purchased more products from small farmers → felt more responsible for the society → gradually fulfilled the concept of fair trade in everyday life and felt self-satisfied.

1. Puremilk

Puremilk is one of the biggest beneficiaries of LSOOM. Thanks to the LSOOM project, Puremilk was established and its success has completely changed the three founders' career and life, as well as offering the opportunities for the young talents to take part

in the dairy industry. Together they have injected new vitality to the declining dairy industry.

Meanwhile, there were also many consumers participated in the online/offline activities held by Puremilk. Many TV, newspaper, and magazines reported the successful story of Puremilk and the LSOOM project. Puremilk successfully attracted media attention and raised the issues for discussion.

As a start-up, Puremilk's fresh milk sales have shown strong growth every year. From April 2015 to June 2017, Puremilk has sold 237.7 tons in 2015, 1354.8 tons in 2016, and 2454.7 in 2017. Puremilk expands rapidly and is currently the top small farmer milk brand.

We summarize Puremilk's changes and outcomes as below:

- 1.1 Generated revenue from milk sold
- 1.2 Increased media effectiveness

2. Intern veterinarian

Background

The decline of the dairy industry and the working environment have made young people reluctant to become dairy veterinarians, and many experienced veterinarians have gradually left the industry. From the initiation of LSOOM in 2015 to the end of 2017, the number of dairy veterinarian had dropped from 30 to merely 20 who still serve in Taiwan. Lack of young large animal veterinarian not only because it is more difficult to be a large animal veterinarian, more importantly, but it also takes a long time to cultivate a large animal veterinarian, and it requires the dairy farms' support and cooperation to provide an environment for practical training.

Since cows are the economic animal that dairy farmers rely on for their living, farmers do only allow the vet whom they trust enough and have confidence in their profession to conduct medical behaviors. In Taiwan, a bachelor with veterinary medicine degree and veterinarian license does not have sufficient experiences and skills for clinical needs because they barely receive training in undergraduate study. It is a critical issue for career development especially for those who have made up their mind to work as a large animal vet in the future. The idling period (one or two years) will be most likely to spend on utilizing personal networks to find an experienced vet being his/her tutor (the student being an apprentice) who are willing to educate the intern. The tutorship is mostly unpaid. Even one or two tutorship period has passed; he/she does not necessarily get a job on the dairy farm. The intern vet suffers from strong emotions such as insecurities, worries, and anxiety towards career development in the current large animal vet education system, which would prevent the intern's determination from being a large animal vet.

Action and Change

One of the major achievements of LSOOM was serving as the only incubator in Taiwan nurturing young veterinarians and has successfully trained one intern veterinarian into a professional one who is widely trusted by the farm owners in a short period of time.

LSOOM's internship program has supported Wu with a full-time paid job and offered full training courses to prepare the intern for the job market. During the internship

period, Wu had been assisting Kung of providing veterinary services and building up trust and networks with dairy farms, which increases the possibility of being employed by the dairy farms after the internship ends.

During the interview, Wu indicated that joining Puremilk has enabled him to learn 13 subjects, including milking and milking management, feeding and management, reproductive management, reserved cows management, basic and advanced farming management, laminitis control, cow health management, hoof care, farm environment management, farm performance evaluation, the higher farm management training, farm waste processing skills and application, beef production and processing, milk source management.

In addition, he has become positive to future career toward large animals vet for his career development through the internship. In return for the help of the seniors, Wu has started to feel more responsible for the entire industry. He also hopes that in the future he can assist in the development of the dairy industry from the root, and train more young students to take part in the dairy industry and alleviate the burden of the few remaining veterinary practitioners in Taiwan. Participating in the project also has also made Wu feel a great sense of achievement.

Wu has gained the following outcomes through the internship.

- 2.1. Enhancing profession in large animal veterinary medicine and dairy farm management
- 2.2 Becoming positive about the future career
- 2.3 Feeling more fulfilled in life

3. Undergraduate interns

Since the dairy industry is rather conservative in Taiwan and cows are the economic animal that dairy farmers rely on for their living, farmers are usually reluctant to open their farms for the interns to do practical training. However, Kung has built mutual trust with the small dairy farm owners which enable him to match the needs of the intern to gain the experiences working at the forefront of the farm. Besides, some dairy farms have been handed over to the young second generation who hopes to improve farming practices with technological facilities in order to enhance working efficiency. Undergraduate interns would be welcomed to do some research on farming management. Therefore, the Farm Internship Program was initiated to prepare and encourage undergraduates to work as large animal veterinarians in the future. Even now, LSOOM is still the only project that offers internship opportunities in dairy farms for undergraduate students in Taiwan.

“I was looking for large animal intern vet opportunity in the dairy farms in 2016 and I couldn’t find any information through school or the government. But it’s different now, all the veterinary students who want to become a large animal vet know that if you need an internship opportunity in the dairy farms, LSOOM is the only way to make it happen.”

By the undergraduate intern

After receiving an internship application, Kung would hold face-to-face, phone, online interviews for applicants to understand their motivation (why they apply?), their academic performance (what courses and internship they have taken?), expectation

(what students want to learn from the internship?), and future planning (what they want to do in school or towards their career?). The purpose of interviews is to ensure that the applicants cherish the internship opportunities. Few applicants have been rejected due to objective mismatch or time conflicts. Kung is responsible for finding the most appropriate internship match for two sides in consideration of geographic proximity, accommodation, time arrangement, and farms' needs, etc. The program does not have specific requirements for the internship since each dairy farm has different needs. Kung does communicate with farmers regarding internship details. Generally, the internship enables students to learn the basics of milking, farming management, feeding and management, and some research depending on the needs of dairy farms. LSOOM has successfully arranged 20 students to intern at 9 dairy farms during summer or winter vacation from 2015 to 2017.

According to 9 questionnaire responses, all respondents expressed that they joined the program to learn more about large animal veterinarian or dairy industry. It is evident that the efforts of LSOOM has put in the field of large animal veterinary and dairy industry have been well received and recognized.

90% students indicated that they learn basic knowledge and skills of milking and milking management, feeding and management, reproductive management. Almost 80% of students learn basic knowledge and skills of cow comfort, nutritional management. 67% of students learn knowledge and skills of how to prevent and cure postpartum disease and other diseases, cow feeding, and cow health. About 10% of students learn basic knowledge and skills of epidemic disease for cows. The material outcome of undergraduate interns is to enhance the profession in large animal veterinary medicine and dairy farming management.

Also, students mentioned some positive changes as a result of the internship. For example, 78% of students do raise their intention to be a large animal vet in the future; 56% of students raise their willingness to work for the dairy industry in the future. About 56% of the students specified that their willingness to work as a large animal vet in the future has increased from 20% to 30% after the internship; one student has even increased up to 50%. Therefore, the internship seems to raise the willingness of being a large animal vet.

The students also listed several changes after participating in this program. 100% of the students expressed more concerns about the development of the dairy industry, such as small dairy farmer issues, the authenticity of the dairy product advertisement, and the structure and trend of dairy industry etc. Moreover, they have started to support small farmers' products with actual purchase. These are the core values LSOOM holds for training the students, as well as the social responsibility and social awareness that strives to appeal to the public.

This project is to attract and retain the students in the dairy industry and train them into professional veterinarians, like Wu, who now serves as a large animal veterinarian.

Undergraduate interns have gained the following outcomes through the project.

- 3.1. Enhancing profession in large animal veterinary medicine and dairy farm management
- 3.2. Increasing social responsibility awareness

4. Partnered Dairy Farms

Background

In the past 25 years, 700 dairy farmers in Taiwan have left the labor-intensive and year-round dairy industry. Dairy farmers do not have a week off and work every day from 4 am to 7 pm because the cows need to be milked every day for the prevention of mastitis. In addition to the hard work of dairy farming, Taiwan's dairy market is also facing an unfriendly purchasing mechanism. Regardless of the quality of the milk, it is purchased by the dairy company at the same price. The milk produced by different dairy farms is complied with the uniform examination and sterilization and will be mixed which results in high-quality milk not being differentiated from low-quality milk.

“We’ve observed that the purchase price for milk has gradually increased in the past three years, which was considered to be impossible before. The issue of reasonable milk purchase price has seemingly started to receive attention from the market little by little because of this project.”

by Kung

Action and Change

Puremilk signs contract with dairy farms at a reasonable purchase price, and provides one-to-one consulting services including farm environment, cattle management and marketing strategy etc., which helps to improve the quality of milk and to achieve farm sustainability.

The dairy farms have gained the following outcomes through the project.

- 4.1 Increasing the income
- 4.2. Becoming positive in the dairy industry
- 4.3. Enhancing knowledge and abilities in farm management
- 4.4. Enhancing self-confidence
- 4.5. Feeling closer to the family

The differences between the farms are as follows:

4.1 Homelove Farm

The owner, Huang, has been devoting a lot to producing high-quality milk. However, even if the milk quality of Homelike Farm ranks high among the dairy industry in Taiwan, its hard work did not reflect in its financial results. So when Huang learned about the LSOOM project, he challenged himself and established the co-brand with the project. The reasonable return he gained in a short period of time has assured him that he has more business confidence to invest in his own farm. These changes make the farm environment more comfortable, and the family is more willing to participate in the farming operation together, thus having a common topic the family relationship is closer.

Being the first partner joined the project, Homelove Farm has gained the attention and became an example case of discussion in the dairy industry. According to Huang, many people come to ask about Homelove's development and current situation. There also have been more interviews in newspaper and magazine, so that Homelove is more widely known by the consumers. Therefore, Huang has become confident in the future and look forward to creating a model of the dairy farm.

4.2 Justmilk Farm

Justmilk Farm is one of the oldest dairy farmers, located in Lunbei Township, Yunlin County in Taiwan. Justmilk has been devoting a lot to producing high-quality milk. Similar to Homelove Farm, Justmilk has been looking for a way that can differentiate their milk from others and gain reasonable profits according to their efforts. Kung proposed the idea of the co-branding way to sell milk. Chen family manages the farm with an open mind to make changes in farm management. After having a deep conversation with Kung, Chen family decided to produce all the milk for Puremilk and set up a co-brand with Puremilk. Since April 2016, Justmilk became the second partner farm for LSOOM.

After Justmilk Farm joined LSOOM and earned more money, the owner felt that their hard work and consistent quality has finally paid off. Hence they were more willing to spend money on farm facilities, including renovating the ceiling of the farm cottage, generator, milk cooling tank, cooling sprinkler in 2016; sweeping robot, milk recorder, and cattle identification system in 2017. Moreover, Justmilk also has had more business confidence so they were determined to upgrade and buy new facilities. These new facilities can more effectively and efficiently improve farming management with new technologies. Also, facility improvement can benefit cattle comfort. For example, Taiwan raises cows that are quite sensitive to temperature and can only produce better milk when lives at a lower temperature. Thus, the ceiling renovation and cooling sprinkler can facilitate air ventilation and remain the lower temperature of the farm.

Except for two material outcomes, Justmilk Farm owner also has a positive psychological effect in gaining a sense of proud after joining LSOOM. It is because the quality of milk has been rewarded with reasonable profits and has been publicly recognized. Chen said that *"Sometimes our neighbors or sales from the big dairy company will come over to chat with me about details of how I cooperate with Puremilk. Other dairy farms feel jealous of me and I feel so flattered. I know what they can do is only to envy me because they will not make any change."*

4.3 Lucky Ranch

Lucky Ranch is also located in Lunbei Township, Yunlin County in Taiwan. The owner, Chen, stepped into the dairy industry without any relevant experience. However, Chen has been making great efforts to learn from other dairy farmers and Kung on building a high-quality farm and producing high-quality milk. Chen's son, who just graduated with a major in animal husbandry, is also devoting himself to the industry which he believes that there is still room for improvement and looks forward to making a change.

After Lucky Ranch joined LSOOM, it has realized the criticalness of farm environment and has spent more money on farm facilities, including renovating the sweeping robot, turbofans, skid-proof mat, electronic sensor system, and TMR mixer.

During the interview, Chen indicated that several farm owners have come and consulted with him about issues such as breeding and feeding management so that he can share his business philosophy with other peers.

5. LSOOM crowdfunders

In the past, it was nearly impossible for consumers in Taiwan to trace the original source of the milk they purchase, nor can they get any information about the development of the dairy industry. Since the initiation of the LSOOM project in Taiwan, LSOOM has been continuously providing a large amount of information on the development of the dairy industry through Puremilk, in hope of bridging consumers and dairy farms, so that the farms realize its responsibility of providing good quality milk while consumers understand that they also have the power to improve the development of the dairy industry.

From the initial discussion with the crowdfunders, we learned that the main reason they took part in LSOOM was to give dairy farmers a reasonable return. They did not mind paying extra on the milk, and even in terms of other food ingredients, they would prefer to buy from small farmers. Hence we asked more follow-up questions about their changes in awareness and actions in the questionnaire.

In the 107 questionnaires collected from the crowdfunders, we find out that a majority of the respondents fully understands the concepts and action of this project, for instances, 100% of the respondents know that the establishment of Puremilk is to set up a milk production and sales platform, 88% of them understand that LSOOM aims for establishing a mechanism to ensure dairy farmers getting a fair return with a higher purchase price, and 93% know that the purpose of the project is to improve consumers' understanding of dairy industry.

Meanwhile, 91 out of 107 respondents expressed that the reason they buy milk from Puremilk is for dairy farmers getting a fair return. Thus, even if the price is higher than the major brands, they are still willing to pay a reasonable price in order to support the development of the dairy industry. Additionally, among the 107 respondents, 105 of them have recommended Puremilk to friends and family, which the total reach exceeds 500.

The consumers show their support for LSOOM and Puremilk's co-brands not only through the actual purchase of milk but also by participating in activities hosted by Puremilk. For example, in 2016, Puremilk proposed a Father's day project which it asked milk fans to send thank you notes to the three partnered farm owners. 20 milk fans responded right away to the project. Three short video clips, collections of words of thanks from the consumers to the three partnered farmers edited by Puremilk, were posted on its Facebook fan page with over 50000 reaches, and 363 comments and sharing. Milk fans who could not make it in time instead posted a few words on Facebook to express their gratitude.

This kind of interaction between the farm owners and consumers is quite impossible in the past. Through this activity, it does bring consumers closer to the farms which produce the milk they daily consume and consequently a sense of closeness is created. On the one hand, farm owners have become confident and felt honored and more responsible for the milk they sell. On the other hand, these milk fans show their support not only with actual purchase of the milk but also with their participation in the activities.

According to the feedbacks and responses showed above, we believe that the LSOOM crowdfunders have gained the following through the project:

5.1. Increasing social responsibility awareness.

Lesson:

In the step of initial discussion, we asked crowdfunders about their changes in action and awareness. We learned that the crowdfunders not only started to purchase milk from small farms after knowing more about the current situation of dairy industry but also started to buy other small farm products to show their support for fair trade. The crowdfunders further indicated that buying small farm products, caring about social issues and knowing that they have the purchasing power to change the current situation have made them feel more responsible for the society, and thus feel more self-satisfied. However, when we designed the questionnaire, the questions about emotional and psychological changes were not included. Hence, the results of the questionnaire only showed the behavioral changes. In the future, the design of the questionnaire should be more detailed and obtain more comprehensive information.

Stage 3. Outcomes and value

Indicators selection

The responses of interviews and questionnaires allow us to understand what changes they have had. Furthermore, we try to find indicators of each outcome.

1. Puremilk

Table 8 Outcomes and indicators for Puremilk

Outcome	Indicator
1.1 Generated revenue from milk sold	Revenue earned from the sale of milk
1.2 Increased media effectiveness	235 media exposures. Attracting extensive media coverage. People start to invest in the crowdfunding project and buy small farmer milk.

2. Intern Veterinarian

Table 9 Outcomes and indicators for the intern vet

Outcome	Indicator
2.1 Enhancing profession in large animal veterinary medicine and dairy farm management.	Profession in milking, breeding and feeding management, reproductive management, reserved cows management, farming management, mastitis control, cow health management, milking management, more breeding and feeding management, hoof care, farm environment management, farm performance evaluation, the higher farm management training, farm waste processing skills and application, beef production and processing, milk source management.
2.2 Becoming positive about the future career	Working at Puremilk as a veterinarian and taking care of 1500 cattle/year.
2.3 Feeling more fulfilled in life.	Sharing experience with junior students, and participating in relevant activities.

3. Undergraduate Interns

Table 10 Outcomes and indicators for undergraduate interns

Outcome	Indicator
3.1 Enhancing profession in large animal veterinary medicine and dairy farm management	The profession in milking and milking management, feeding and breeding management, reproductive management, reproductive management, cow health management.
3.2 Increasing social responsibility awareness.	Starting to pay more attention to issues or actions regarding social responsibility

4. Dairy Farms

4.a. Homelove Farm/4.b. Justlove Farm/ 4.c. Lucky Ranch

Table 11 Outcomes and indicators for dairy farms

Outcome	Indicator
4.1 Increasing the income of Homelove/Justlove farm and Lucky Ranch.	Increasing the income of Homelove/Justlove farm and Lucky Ranch with higher purchase price after joining the project.
4.2 Becoming positive in the dairy industry	Investing in more facilities to enlarge the scale of their farms.
4.3 Enhancing knowledge and abilities in farm management	Profession in milking, breeding and feeding management, reproductive management, reserved cows management, farming management, mastitis control, cow health management, milking management, more breeding and feeding management, hoof care, farm environment management, farm performance evaluation, the higher farm management training, farm waste processing skills and application, beef production and processing, milk source management
4.4 Enhancing self-confidence	Being consulted by other farms. According to the interview, the owners of Justlove Farm and Lucky Ranch have become more confident, because some other farmers come and consult with them the managing know-how. The owner of Homelove indicated that since more consumers know Homelove as a fresh milk brand, he has felt that he has expanded social network and become more confident.
4.5 Feeling closer to the family	Working time reduced and have a common topic with the family.

5. Crowdfunders

Table 12 Outcomes and indicators for Puremilk fans

Outcome	Indicator
5.1 Increasing social responsibility awareness	starting to pay more attention to issues or actions regarding social responsibility

Duration of outcomes

Duration of outcomes takes time effects into consideration since some outcomes yield impacts for more than one year.

Table 13 Duration for outcomes

Outcome	Duration	Rationale
1. Puremilk		

1.1 Generated revenue from milk sold	1 year	The outcome is the total amount of milk sold. The duration is 1 year.
1.2 increased media effectiveness	2 years	Many mainstream media, like TV programs, newspapers, and magazines, reported Puremilk's milk and LSOOM's mission and vision. Media reports helped raise visibility for the consumers. In order not to over-claim the effects of advertisements, we calculate 2 years for media exposure.
2 Intern Veterinarian		
2.1 Enhancing profession in large animal veterinary medicine and dairy farm management	5 years	The intern vet indicates that the training of large animal veterinary medicine and dairy farm management received during the internship will last for his lifelong career as an independent vet. Since knowledge can be sustained, the duration is identified as 5 years.
2.2 Becoming positive about future career	5 years	The duration is taken as 5 years because its outcome happens when he takes care of the cattle.
2.3 Feeling more fulfilled in life	5 years	The more and deep the intern vet learned from the project, the more responsibility he felt toward the industry. He felt grateful for the help of the seniors, so he actively posted feedbacks and experiences online, and interacted with the juniors in the hope of encouraging them taking part in the industry as well. The duration is taken as 5 years.
3. Undergraduate Intern		
3.1 Enhancing profession in large animal veterinary medicine and dairy farm management	2 year	According to the questionnaire to undergraduate interns, one third thinks the outcome of the enhanced profession for LSOOM internship will last 1 year, one third says 2 years, and the other one third says 3 years. Thus, we calculate 2 years as the average for the duration.
3.2 Increasing social responsibility awareness.	1 year	According to the questionnaire to undergraduate interns, the graduate interns who joined the project keep tracking relevant issues, share the information with others and purchase the products from small farmers. The duration is taken as a year.
4. Dairy Farms		
4.a Homelove Farm/ 4.b Justmilk Farm/ 4.c Lucky Ranch		

4.1 Increasing the income of Homelove Farm/ Justmilk Farm/ Lucky Ranch	1 year	The duration of revenue of milk sold is 1 year because its outcome happens when the payment incurs.
4.2 Becoming positive about the dairy industry	2 years	After partnering with Puremilk, the farms have felt more confident about their business and decided to upgrade and invest in new facilities. Such facilities have improved farm environment. According to stakeholders' engagement, the duration varied from 5 to 10 years. However, based on the principle of not over-claiming, we only calculate 2 years for the duration.
4.3 Enhancing knowledge and abilities in farm management	2 years	After partnering with Puremilk, these 3 farms have benefited from knowledge and abilities gained such as farm management, breeding and feeding, industry development, and marketing strategy. According to stakeholders' engagement, the duration varied from 5 to 10 years. However, based on the principle of not over-claiming, we only calculate 2 years for the duration.
4.4 Enhancing self-confidence	2 year	Since the farms have participated in the LSOOM project and established the co-brands, some peer farm owners have come and consulted with them about relevant issues. According to stakeholders' engagement, the duration varied from 5 to 10 years. However, based on the principle of not over-claiming, we only calculate 2 years for the duration.
4.5 Feeling closer to the family	2 years	After the new farming equipment and new methods of management were gradually integrated into the day-to-day operations, the farm owners spent less time on farm management. Since the working time reduced, they have had more time with the family. According to stakeholders' engagement, the duration varied from 5 to 10 years. However, based on the principle of not over-claiming, we only calculate 2 years for the duration.
5. Crowdfunders		
5.1 Increasing social responsibility awareness.	1 year	The outcome happens when the actual purchase or participation incurs, so the duration is taken as 1 year.

Financial Proxy

Financial proxies primarily refer to Taiwan's market quotations and stakeholder engagement. We summarize the logistics of financial proxies for some important outcomes as below while the details are listed in Table 14.

It is worth noting that the choice of financial proxies depends on the subjective judgment of the stakeholders. Even if it is a similar result, there will be different choices due to the feelings of different stakeholders.

1. For advertisement effectiveness, we choose the lowest price of the Common Wealth Magazine commercial advertisement charge in Taiwan for each media report (\$150,000) as the financial proxy.
2. Training or courses for large animal veterinary medicine in Taiwan is rare, so we refer to (1). a professional dairy farming training course which covers all aspects from Cornell University's College of Agriculture and Life Sciences (CALS), and (2). a series of thematic courses provided by Nestle Dairy Farming Institute in China. The calculation of enhanced profession of veterinary medicine and farm management of the intern vet and undergraduate interns is based on the course price of Nestle Dairy Farming Institute. The United States and Europe also have similar training, programs, and courses for large animal veterinary medicine. Its expenses cost much more than China. Therefore, we use equivalent courses offered in China in consideration the economy and living standards for Taiwan and China. The course expenses of Nestle Dairy Farming Institute are relatively lower and we think it is a reasonable financial proxy for Puremilk case.
3. The cost per cow for vet and medicine is the financial proxy for the intern veterinarian, Wu, who has become positive about the future career. Since there is no official statistics in Taiwan, we choose to use the data published by the College of Agricultural Sciences of Pennsylvania State University.
4. For dairy farms having a more positive perspective toward future developments in the dairy industry is calculated according to the investment in facilities and equipment that each farm spends on.
5. Regarding supporting small farmer milk and fair trade and increasing social responsibility awareness, we choose the activity fees from three of the most representative social enterprises in Taiwan. In order not to over-claim, we calculate it as participating in three activities a year.

Table 14 Outcomes and financial proxies

Outcomes	Financial Proxy	Price (\$NTD)	Rationales and Data collection Source/ Link
1. Puremilk			
1.1 Generated revenue from milk sold	The average price of milk sold per ton each year	79,816	Annual Financial Report for 2015, 2016, and 2017. https://drive.google.com/open?id=1rSRZhh2GfbJZfNZ3ILCjoNYIUz2EZjKW

1.2 Increased media effectiveness.	Traditional media exposure charge	150,000	<p>A lot of TV program, newspaper, and magazine reported Puremilk or Kung, we calculated the minimum price charged by Common Wealth Magazine to avoid over-claim. Advertising charge price by CommonWealth Magazine.</p> <p>https://drive.google.com/open?id=1_EqllOaqNqsnxBpWLGpflg6-42TulEZ3</p> <p>Reporting media list</p> <p>https://drive.google.com/open?id=1j_ESBkdr3j4j9uB-aD1z9fFg6rr7m2FV</p>
2. Intern Veterinarian			
2.1 Enhancing profession in large animal veterinary medicine and dairy farm management	Refer to courses offered by Nestle Dairy Farming Institute in China, including all Level 1 Courses and partial Level 2, 3, and 4 partial courses	27,404	<p>Courses offered by Nestle Dairy Farming Institute</p> <p>http://www.nestle.com.cn/</p> <p>Wu has learned 13 courses items in reference to Nestle Dairy Farming Institute in China - Item 1, 2, 3, 6, 7, 11, 12, 14, 15, 18, 19, 20, and 21 in the list.</p> <p>https://drive.google.com/file/d/1dvkTHLT2d-1aIVZhBbhXBZ1APOXZl-t/view</p> <p>The average price of the 13 courses is NTD\$34,255. The course price in the list is RMB.</p> <p>According to engagement, he believes that 70% of the course cost can be used as the financial proxy to reflect the outcome.</p> <p>https://drive.google.com/open?id=1tGb7hRQBSvKIWuJrgpqWn3q5825MOVEI</p> <p>https://drive.google.com/open?id=1d0sf_Y1KjHdulblehRIh1FXACUNLzu12</p>
2.2 Becoming positive about future career	The cost per cow for vet and medicine	283,500	<p>There are rarely researches about large animal veterinary in Taiwan, so we refer to the cost per cow for vet and medicine in the United States which the cost ranges from 88 to 126 USD and we calculate the median cost.</p> <p>https://drive.google.com/open?id=1z3rXWqDPMe6owg--yaznlxQy4eFk6FYp</p> <p>According to Wu, he believes that 70% of the cost can be used as the financial proxy to reflect the outcome.</p>

			https://drive.google.com/open?id=1tGb7hRQBSvKIWuJrgpqWn3q5825MOVEI https://drive.google.com/open?id=1d0sfY1KjHdulblehRlh1FXACUNLzu12
2.3 Feeling more fulfilled in life	Activity fees	5,720	<p>Three main events about social enterprise and social buy in the recent year in Taiwan include SEINSIGHTS annual conference, Dialogue in the Dark workshop and Dining in the Farm event. The total entrance fee is \$7,500. According to Wu, he believes that 80% of the activity fees can be used as the financial proxy to reflect the outcome.</p> <p>https://drive.google.com/open?id=18o1o6PnC1pBS_ufx4D6pECwIXmDGiv7u</p> <p>https://drive.google.com/open?id=1xwLPHvCTF4ah4FGQkuGMHeLREcN-5oga</p> <p>https://drive.google.com/open?id=1uhtRdC1UjKOGNeS9-HOKHMTaXL6RXCH</p>
3. Undergraduate Intern			
3.1 Enhancing profession in large animal veterinary medicine and dairy farm management	Refer to Level 1 and partial 2 Courses provided by Nestle Dairy Farming Institute courses offered by Nestle Dairy Farming Institute in China	58,989	<p>Courses offered by Nestle Dairy Farming Institute, the average cost per course is \$58,989.</p> <p>https://drive.google.com/open?id=1drouC9gnaiixWtAhmssOdSRXtzJuLStj</p> <p>https://drive.google.com/file/d/1_lxvwoVqhzLEK656AUKZqnKxh1ww0Zl4/view</p>
3.3 Increasing social responsibility awareness.	Activity fees	7,150	<p>Three main events about social enterprise and social buy in recent years in Taiwan include SEINSIGHTS annual conference, Dialogue in the Dark workshop and Dining in the Farm event.</p> <p>https://drive.google.com/file/d/1_lxvwoVqhzLEK656AUKZqnKxh1ww0Zl4/view</p> <p>https://drive.google.com/open?id=18o1o6PnC1pBS_ufx4D6pECwIXmDGiv7u</p> <p>https://drive.google.com/open?id=1xwLPHvCTF4ah4FGQkuGMHeLREcN-5oga</p> <p>https://drive.google.com/open?id=1uhtRdC1UjKOGNeS9-HOKHMTaXL6RXCH</p>
4. Partnered dairy Farms			
4.a Homelove Farm/ 4.b Justmilk Farm/ 4.c Lucky Ranch			

4.1 Increasing the income of Homelove Farm/ Justmilk Farm/ Lucky Ranch	Puremilk buys milk from the dairy farm at a higher price	8,000	<p>According to the MOU, Puremilk buys milk from the dairy farm at the price higher than the average market price. .</p> <p>https://drive.google.com/open?id=18sQCvjtD1y5Z0k1iwFVvnH4A1YMKsIU2</p> <p>https://drive.google.com/file/d/18TA5oOkefFVWTcnYW_rjxYOi5zXSodYT/view</p> <p>https://drive.google.com/open?id=1eEOWd0G_7zUWR7obpLINcAiVyny8HSam</p> <p>https://drive.google.com/file/d/1OHohoKQO_a9JtLFIJ2LIQTxdMdT5-ODo/view</p>
4.2 Becoming positive in the dairy industry	Average expenses for new facilities	1,883,697	<p>According to the three farms, they invested in new facilities as a result of the partnership with Puremilk from 2015 to 2017.</p> <p>https://drive.google.com/open?id=1KNjq5NOzGuDnRJWv7xz9MuRT7Ac20TPX</p> <p>https://drive.google.com/open?id=1yWBXVJuzojJNHxKi7URwujmQM4cgIUsg</p> <p>https://drive.google.com/open?id=1IVBEYrINv24xQSmJ-cl6GGWSP5IFpefJ</p>
		790,000	
		5,607,107	
4.3 Enhancing knowledge and abilities in farm management	Refer to Level 1 and partial 2 Courses provided by Nestle Dairy Farming Institute courses offered by Nestle Dairy Farming Institute in China	25,788	<p>Courses offered by Nestle Dairy Farming Institute.</p> <p>http://www.nestle.com.cn/</p> <p>Since three farms have gained knowledge and abilities in different aspects, and each of them acknowledges the different ratio of financial proxy, the numbers based on their consent ratio are shown at left.</p> <p>https://drive.google.com/file/d/1dvkTHLT2d-_lalVZhBbhXBZ1APOXZI-t/view</p> <p>https://drive.google.com/open?id=1KNjq5NOzGuDnRJWv7xz9MuRT7Ac20TPX</p>
		33,041	
		33,041	
4.4 Enhancing self-confidence	Consulting fee	0	<p>Average vet call out fee is \$3,000. Two out of three farms agree with the financial proxy used here, and one does not understand the connection between the financial proxy and enhanced-confidence, so one of the numbers is shown as zero.</p>
		3000	

		3000	https://drive.google.com/open?id=1KNjq5NOzGuDnRJWv7xz9MuRT7Ac20TPX https://drive.google.com/open?id=1yWBXVJuzojJNHxKi7URwujmQM4cgIUSq https://drive.google.com/open?id=1IVBEYrINv24xQSmJ-cl6GGWSP5IFpefJ
4.5 Feeling closer to the family	Participating activities with family	0	<p>Family travel can best promote parent-child relationships, so we refer to the family travel package. One of the farms does not understand the connection between the financial proxy and strengthened-family-relationship, so the number is shown as zero and the financial proxies of other two farms are calculated based on their consent ratio.</p> https://drive.google.com/open?id=1KNjq5NOzGuDnRJWv7xz9MuRT7Ac20TPX https://drive.google.com/open?id=1yWBXVJuzojJNHxKi7URwujmQM4cgIUSq https://drive.google.com/open?id=1IVBEYrINv24xQSmJ-cl6GGWSP5IFpefJ
		35,840	
		31,360	
5.LSOOM crowd funders			
5.1 Increasing social responsibility awareness	Activity fees	7,150	<p>Three main events about social enterprise and social buy in recent years in Taiwan include SEINSIGHTS annual conference, Dialogue in the Dark workshop and Dining in the Farm event.</p> https://drive.google.com/open?id=1D2zvJ_FteBsY42dVodv8fiZSkU2d-9Ap https://drive.google.com/open?id=18o1o6PnC1pBS_ufx4D6pECwIXmDGiv7u https://drive.google.com/open?id=1xwLPHvCTF4ah4FGQkuGMHeLREcN-5oga https://drive.google.com/open?id=1uhtRdC1UjKOGNeS9-HOKHMTaXL6RXCH

Stage 4. Establishing impact

Definition of impact factors

Impact factors are derived based on 7 principles of SROI, which take deadweight, displacement, attribution, and drop-off into consideration for each outcome. How to adjust the impact factors of each outcome will be understood and determined by discussions with stakeholders and other objective or subjective evidence. For example, the assessment of impact factors for undergraduate interns and the vet intern is derived from responses from stakeholders. For example, in the questionnaire for undergraduate interns and the vet intern, we asked them to think if four impact factors affect the scale for each outcome and pinpoint a percentage to represent the magnitude for each outcome.

Table 15 Impact factors for all outcomes

Outcomes	Factors	Ratio	Description
1. Puremilk			
1.1 Generated revenue from milk sold	Deadweight	0%	All of the changes and outcomes would not have happened without LSOOM.
	Displacement	0%	Since LSOOM is rather new and only holds a small amount of the market share, the displacement rate is 0%.
	Attribution	0%	All revenue was from LSOOM.
	Drop-off	0%	Since the duration of generating revenue from LSOOM is 1 year, the drop off rate is 0%.
1.2 Increased media effectiveness	Deadweight	0%	All of the changes and outcomes would not have happened without LSOOM.
	Displacement	0%	No displacement effects
	Attribution	0%	All reports of media exposures and advertising effectiveness were caused by LSOOM.
	Drop-off	20%	In order not to over-claim the advertisement effectiveness, we take 20% for the drop-off effects for advertisement effectiveness.
2. Intern Veterinarian			
2.1 Enhancing profession in large animal veterinary medicine and dairy farm management	Deadweight	20%	Wu had determined to be a professional vet before joining the project. Wu said it is very difficult in Taiwan to find a farm and an experienced vet to adopt him if he did not join the LSOOM internship program. Moreover, if Wu did not join the project, he would pursue further study in veterinary.

			However, there is a high possibility that he will not be able to get practical training. Therefore, we take 20% as deadweight.
	Displacement	0%	No displacement effects
	Attribution	0%	During the period of Wu's participation in LSOOM, the project was the only place where he could obtain knowledge and gain practical experience. Thus we calculate 0% for attribution.
	Drop-off	50%	According to the interview, Wu believed that the duration of the outcome "enhancing profession in large animal veterinary medicine and dairy farm management" is 5 years. Since learning effectiveness usually decreases as time passes, based on the principle of not overclaiming, the drop-off rate is 50%.
2.2 Becoming positive about future career	Deadweight	20%	According to the interview, if Wu had not joined the project, he would pursue further study in veterinary and it will take him long time become an official large animal vet. Thus we take 20% as deadweight.
	Displacement	0%	No displacement effects
	Attribution	0%	Wu had determined to be a professional vet before joining the project. Since LSOOM is the only project provides vet internship opportunities in Taiwan, we calculate 0% for attribution.
	Drop-off	50%	According to the interview, Wu believed that the duration of the outcome "becoming positive about future career" is 5 years. Based on the principle of not overclaiming, the drop-off rate is 50%.
2.3 Feeling more fulfilled in life	Deadweight	10%	Wu could raise awareness of social responsibility by participating in activities promoting different social missions. However, there are no any initiatives promoted for animal husbandry other than LSOOM in Taiwan. We calculate 10% for deadweight effect.
	Displacement	0%	No displacement effects
	Attribution	0%	Since LSOOM is the only project provides vet internship opportunities in Taiwan and there are no any other initiatives promoted

			for animal husbandry other than LSOOM, we calculate 0% for attribution.
	Drop-off	50%	According to the interview, Wu believed that the duration of the outcome "becoming positive about future career" is 5 years. Based on the principle of not overclaiming, the drop-off rate is 50%.
3. Undergraduate intern			
3.1 Enhancing profession in large animal veterinary medicine and dairy farm management	Deadweight	10%	Since it is very difficult in Taiwan to find internship opportunities in the dairy farm, we calculate 10% for deadweight effect.
	Displacement	0%	No displacement effects
	Attribution	10%	Undergraduate students can also study veterinary at schools, but they are not able to get any practical training. Thus we calculate 10% for attribution.
	Drop-off	0%	Since the duration of enhancing profession in large animal veterinary medicine and dairy farm management from LSOOM is 1, the drop-off rate is 0%.
3.2 increasing social responsibility awareness	Deadweight	10%	Students could raise awareness of social responsibility by participating in activities promoting different social missions. However, there are no any initiatives promoted for animal husbandry other than LSOOM in Taiwan. We calculate 10% for deadweight effect.
	Displacement	0%	No displacement effects
	Attribution	0%	Since LSOOM is the only project provides vet internship opportunities in Taiwan and there are no any other initiatives promoted for animal husbandry other than LSOOM, we calculate 0% for attribution.
	Drop-off	0%	Since the duration of increasing social responsibility awareness is 1 year, the drop-off rate is 0%.
4. Dairy Farms			
4.a Homelove Farm/ 4.b Justmilk Farm/ 4.c Lucky Ranch			
4.1 Increasing the income of Homelove Farm/	Deadweight	0%	According to the interview, we learned that the milk purchase price has not changed in the past decade in Taiwan. Thus there is no deadweight effect.

Justmilk Farm/ Lucky Ranch	Displacement	0%	No displacement effects
	Attribution	0%	According to stakeholders' engagement, the attribution rate is 0%.
	Drop-off	50%	According to stakeholders' engagement, three farm owners believed that the duration of the outcome "increasing the income" is varied from 5-10 years. Based on the principle of not overclaiming, the drop-off rate is 50%.
4.2 Becoming positive about the dairy industry	Deadweight	0%	According to the interview, we learned that the dairy industry has remained the same in the past decades and there is no other project like LSOOM in Taiwan. Thus there is no deadweight effect.
	Displacement	0%	No displacement effects
	Attribution	0%	According to stakeholders' engagement, the attribution rate is 0%.
	Drop-off	50%	According to stakeholders' engagement, 3 farm owners believed that the duration of the outcome "becoming positive in the dairy industry" is varied from 5-10 years. Based on the principle of not overclaiming, the drop-off rate is 50%.
4.3 Enhancing knowledge and abilities in farm management.	Deadweight	20%	According to the interview, we knew that many small dairy farms are almost isolated from the outside world which hinders them from learning updated knowledge about herding and management. Even though the farms usually cooperate with one vet, it is still hard for the farms to enhance knowledge and abilities in farm management. Thus we take 20% as deadweight.
	Displacement	0%	No displacement effects
	Attribution	0%	According to stakeholders' engagement, the attribution rate is 0%.
	Drop-off	50%	According to stakeholders' engagement, three farm owners believed that the duration of the outcome "enhancing knowledge and abilities in farm management" is varied from 5-10 years. Based on the principle of not overclaiming, the drop-off rate is 50%.

4.4 Enhancing self-confidence.	Deadweight	0%	According to the interview, we learned that the dairy industry has remained the same in the past decades and there is no other project like LSOOM in Taiwan. Thus there is no deadweight effect.
	Displacement	0%	No displacement effects
	Attribution	0%	According to stakeholders' engagement, the attribution rate is 0%.
	Drop-off	50%	According to stakeholders' engagement, three farm owners believed that the duration of the outcome "enhancing self-confidence" is varied from 5-10 years. Based on the principle of not overclaiming, the drop-off rate is 50%.
4.5 Feeling closer to the family	Deadweight	0%	According to the interview, we learned that the dairy industry has remained the same in the past decades and there is no other project like LSOOM in Taiwan. Thus there is no deadweight effect.
	Displacement	0%	No displacement effects
	Attribution	0%	According to stakeholders' engagement, the attribution rate is 0%.
	Drop-off	50%	According to stakeholders' engagement, 3 farm owners believed that the duration of the outcome "feeling closer to the family" is varied from 5-10 years. Based on the principle of not overclaiming, the drop-off rate is 50%.
5. LSOOM crowdfunders			
5.1 Increasing social responsibility awareness	Deadweight	20%	LSOOM crowdfunders could raise awareness of social responsibility by participating in activities promoting different social missions. However, there are no any initiatives promoted for animal husbandry other than Puremilk in Taiwan. Meanwhile, it was impossible to buy small farmers' milk in the general large-scale retail channels in the past few years. Thus we calculate 20% for deadweight effect.
	Displacement	0%	No displacement effects
	Attribution	0%	There is no any other project like LSOOM which aims for raising consumers' awareness of fair trade in the dairy industry

			and improve the dairy farming ecosystem. Thus there is no attribution effect.
	Drop-off	0%	Since the duration of increasing social responsibility awareness is 1 year, the drop off rate is 0%.

Stage 5. Calculating the SROI

Value of outcomes

The calculations for the net present value of outcomes are as below:

Table 16 Total value for outcomes

Outcome	Total Value for the outcome	Value Per Stakeholder Group	Percentage of each group
1. Puremilk			
1.1 Generated revenue from milk sold	\$312,583,624	\$374,136,131	82.62%
1.2 Increased media effectiveness	\$61,552,508		
2. Intern Veterinarian			
2.1 Enhancing profession in large animal veterinary medicine and dairy farm management.	\$721,701	\$7,219,855	1.59%
2.2 Becoming positive for future career	\$6,479,834		
2.3 Increasing social responsibility awareness.	\$18,320		
3. Undergraduate interns			
3.1 Enhancing profession in large animal veterinary medicine and dairy farm management	\$985,272	\$1,046,698	0.23%
3.2 Increasing social responsibility awareness.	\$61,426		
4. Dairy Farms			
4.a. Homelove Farm			
4.a.1 Increasing the income of Homelove farm.	\$18,153,535	\$40,338,905	8.91%
4.a.2 Becoming positive about the dairy industry.	\$21,899,416		
4.a.3 Enhancing knowledge and abilities in farm management.	\$285,954		
4.a.4 Enhancing self-confidence.	\$0		
4.a.5 Feeling closer to the family.	\$0		
4.b. Justlove Farm			

4.b.1 Increasing the income of Homelove farm.	\$10,574,101	\$18,094,236	4.00%
4.b.2 Becoming positive about the dairy industry.	\$6,869,532		
4.b.3 Enhancing knowledge and abilities in farm management.	\$430,350		
4.b.4 Enhancing self-confidence.	\$12,931		
4.b.5 Feeling closer to the family.	\$207,321		
4.c. Lucky Ranch			
4.c.1 Increasing the income of Lucky Ranch.	\$2,601,228	\$11,244,687	2.48%
4.c.2 Becoming positive about the dairy industry.	\$8,056,381		
4.c.3 Enhancing knowledge and abilities in farm management.	\$430,350		
4.c.4 Enhancing self-confidence.	\$21,552		
4.c.5 Feeling closer to the family.	\$135,176		
5. LSOOM crowdfunders			
5.1 Increasing social responsibility awareness	\$755,232	\$755,232	0.17%

The value of Social Return on Investment (SROI)

Finally, we divide the value of the project by the total value of inputs. The SROI ratio of “Let’s Save Our Own Milk” project from 2015 to December 2017 is 1:4.05.

Table 17 SROI of “Let’s Save Our Own Milk” project

Total Present Value (PV)	\$452,835,743
Total Input Value	\$111,884,080
Net Present Value	\$340,951,663
Social Return NT\$ per NT\$	4.05

Sensitivity analysis

To avoid over-claiming, we take conservative attitudes in calculating cost and estimate duration to measure all outcomes. If we use other financial proxies and prolong duration with higher value, the SROI would change.

1. Increase financial proxy of “increasing the income”

The greatest value of this project lies in increasing the income of the partnered dairy farms. These dairy farms not only get a higher purchase price but also save a lot of expenses by participating in this project, such as the marketing entry costs or slotting fees for entering the retail market. In Taiwan, since the general slotting fee is too high (around 45-50% of the selling price) with a cumbersome administrative process, it is almost impossible to see small farm milk in the large-scale chain stores. However, LSOOM manages to make it to 38%. Therefore, the difference in the cost of the slotting fee here is calculated at 10% of the selling price. If we reflect the slotting fee of what partnered dairy farms had actually saved, the value should be \$19,048 per ton. In addition to the slotting fee difference, LSOOM's milk purchase price is higher than the market price which is the market price plus \$8,000 per ton. If we combine them as the dairy farm's income and adjust the financial proxy to become \$27,048, the SROI will be 4.7.

2. Increase financial proxy of “increase advertising effectiveness”

The media effectiveness helped to build up reputation and branding, which would reach more consumers and raise their willingness to pay for Puremilk's milk. The main purpose of Puremilk is to promote high-quality milk for consumers, spread the mission of Puremilk, and stimulate consumers to increase their purchase of Puremilk's milk. Thus, media exposures of Puremilk helped to increase advertising effectiveness and revenues for dairy farms and intern veterinarian. Many TV programs, newspapers, and magazines reported Puremilk's and/or Kung's story, we only calculated the lowest price by Common Wealth Magazine for each advertisement to avoid over-claim. If we adjust the advertisement from \$150,000 to \$350,000, the SROI differs from the basic value. If we reflect the advertising effectiveness of what stakeholders had actually received, the value should be far more than \$150,000. Therefore, if we adjust the financial proxy to become \$350,000, the SROI will be 4.84.

3. Increase the duration of “becoming positive about the dairy industry”, “enhancing knowledge and abilities in farm management”, “enhancing confident” and “feeling closer to the family”

According to the interviews, the farm owners have been trying to control the quality of milk, in the hope that they can contribute in the dairy industry development and at the same time their efforts can be recognized. After participated in the LSOOM project and established a co-brand, they felt that their hard work has finally been paid off that not only can they get a fair profit, but also get more time to spend with the family due to the reduced working hours. In addition to the financial return, the farmers also indicated that their knowledge and abilities have enhanced, and felt more confident about the future development of the dairy industry. According to the stakeholders' engagement, the duration was varied from 5 to 10 years. However, based on the principle of not overclaiming, the duration is taken as 2 years in this report. If we increase the duration as the farm owners stated, the SROI will be 4.1.

4. Deadweight

The results of the interviews and questionnaire suggest that without the LSOOM project, some of the outcomes would not exist and the most corresponding deadweights are therefore set at 0. If the 0% deadweights and 10% deadweights are changed to become 20%, the SROI will become 3.98. The calculation does not include the stakeholder Puremilk, because its establishment and its outcomes were entirely

attributed to the LSOOM project. It is nearly impossible to achieve the same results with other projects.

5. Attribution

The results of the interviews and questionnaire suggest that the most of the outcomes are attributed to the LSOOM project, therefore the attribution is set at 0. If it is changed to 20%, the SROI will become 3.98. The calculation does not include the stakeholder Puremilk, because its establishment was entirely attributed to the LSOOM project. Puremilk and its outcomes would not have existed without the project.

6. Drop-off

The results of the interviews and questionnaire suggest that no significant drop-off can be identified because most stakeholders continue to participate. The drop-off is set at 50% in order to avoid overclaiming. If the 50% drop-off is changed to become 20%, the SROI will become 4.14.

Table 18 Sensitivity analysis

Item	Base Case	New Assumption	Base Result	New Result
Increase financial proxy of "Increasing the income"	\$8,000	\$27,048	4.05	4.77
Increase advertising effectiveness	\$150,000	\$350,000		4.84
Increase the duration of the partnered dairy farms' outcomes	2 years	Various from 5-10 years		4.1
Deadweight adjustment	Various from 0-10%	20%		3.98
Attribution adjustment	0%	20%		3.98
Drop-off adjustment	50%	20%		4.14
Increase and decrease the overall results by 10%	4.05	Increase and decrease by 10%		3.65-4.46

Stage 6. Reporting, using and embedding

Reporting material changes

Since 2015, "Let's Save Our Own Milk" has led a series of material changes for stakeholders, which are listed below:

1. Establishing one company named Puremilk Co.
2. Helping 3 partnered dairy farms- Homelove Farm, Justmilk Farm, and Lucky Ranch to establish co-brands
3. Cultivating one intern veterinarian
4. Cultivating 20 undergraduate interns
5. Raising 107 Puremilk crowdfunders' awareness of fair trade in the dairy industry

Based on the revenue of Puremilk, the more business means the more social impacts the LSOOM project has. In the past three years, the project has sold 4,048 tons of milk and it has gradually made more dairy farms gain a reasonable return by establishing one co-brand with one dairy farm every year. With a reasonable profit, the farmers can focus on producing high-quality fresh milk. Consequently, they have gained more business confidence to invest in new equipment and facilities. Moreover, they also feel more positive about the future development of the dairy industry, become more willing to share experiences with other peer farmers, and get more time and common topics for the family. On the other hand, the profit from the project is used for continually supporting the internship program, so that the young vets or college students can obtain the internship opportunities in a dairy farm through this project. We will continue to track the follow-up changes in the numbers of interns who actually devote themselves to the dairy industry.

Using and embedding

LSOOM appreciates all stakeholders' support. A sound and fair dairy farming ecosystem come with the shared vision. According to the analysis of the SROI, Puremilk might be advised as below:

1. Veterinarian internship program: Since to cultivate veterinarians for Taiwan is one of the main objectives for Puremilk, the social impacts of the internship program for intern vets and undergraduate interns are gradually showing according to the SROI analysis. We believe that we will see more positive impacts of it in a few years. LSOOM has been running internship programs actively so that it might attract more farms and students to join. Therefore, LSOOM might spend more time to do more work on tracking interns regarding their career plan in being a large animal veterinarian and/or joining the dairy industry.
2. LSOOM crowdfunders: We can see that many supporters acknowledge the concept of fair trade for small farmers promoted by LSOOM, and further turn the idea into practical action to purchase high-quality milk produced by the small farmers. In the future, LSOOM might embed the concept of SROI with a more rigorous attitude to conduct surveys regularly, in order to continuously track the changes in consumer awareness.

Appendix

1. LSOOM Farm Internship Program- Undergraduate intern Questionnaire

1. What are the main reasons you applied for this internship program? (Please tick a maximum number of 2 boxes)

- I am interested in big animal veterinary
- I want to know more about LSOOM/Puremilk
- I want to learn more about milk products or dairy industry
- My school sent me here.
- Other

2. How many hours did you work a day and for how long? E.g. 8 hours a day, 20 days a month and a month in total.

3. What have you learned in the internship program? Please tick the appropriate boxes below for what you have learned in the internship program. The following options refer to the Nestlé Dairy Farming Training Institute which provides a complete series of courses in feeding management, breeding management, milking and milk. Each course is about RMB 2,100 (about NT\$9,500), and dairy cow health management is worth about RMB 4,800 (about NT\$21,700).

- Feeding management: basic feeding knowledge
- Breeding management: basic breeding knowledge
- Milking and milk: mastitis control, milking management, milk quality control
- Cow health management: cow comfort, nutrition needs.
- Cow health management: prevention from/treatment of postpartum diseases, lameness and other diseases.
- Cow health management: calf feeding and female cattle health management
- Cow health management: diagnosis and treatment of common infectious diseases

4. Refer to Q3, how long do you think the impact can last for what you have learned in this internship program?

- one year two years three years four years

5. Refer to Q3, for what you have learned in this internship program, please answer to identify the appropriate ratio for each of the following questions.

5.1 What are the possibilities to take the same course, if you had not participated in this project?

- 0% 1%-20% 26%-50% 51%-75% 76%-100%

5.2 What are the chances to take the same course in somewhere else?

- 0% 1%-20% 26%-50% 51%-75% 76%-100%

5.3 What are the chances to take part in other big animal internship programs?

- 0% 1%-20% 26%-50% 51%-75% 76%-100%

6. Have you made these changes below after participating in the internship program?

<p>6.1 Enhancing profession in large animal veterinary and dairy farm management. <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neutral <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p>
<p>6.2 Reducing the anxiety towards career development as a big animal veterinarian <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neutral <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p>
<p>6.3 Increasing the willingness to become a big animal veterinarian <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neutral <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p>
<p>6.4 Increasing the willingness to pursue further study in big animal veterinary <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neutral <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p>
<p>6.5 Increasing the willingness to work in milk and dairy industry <input type="checkbox"/> Strongly agree <input type="checkbox"/> Agree <input type="checkbox"/> Neutral <input type="checkbox"/> Disagree <input type="checkbox"/> Strongly disagree</p>
<p>7. Have you increased the willingness to become a big animal veterinarian in the future after you participated in the project? If yes, please specify the percentage increase in the amount of willingness. _____ %</p>
<p>8. Have you recommended this internship program to your fellow classmates? If yes, please indicate how many. _____</p>
<p>9. After you participated in the internship program, is there any change in your life? E.g. paying more attention to issues regarding dairy industry, increasing the purchase of products from small farmers, increasing going to the small farmers' market and so forth. Please describe briefly. _____ _____ _____</p>

2. Let's Save Our Own Milk fundraising project -Crowdfunder questionnaire

<p>1. Before you know LSOOM/Puremilk, how often do you buy milk? <input type="checkbox"/> Buying milk regularly from major brands <input type="checkbox"/> Buying milk regularly from small farmers <input type="checkbox"/> Buying milk irregularly from major brands <input type="checkbox"/> Buying milk irregularly from small farmers <input type="checkbox"/> Before knowing LSOOM/Puremilk, seldom or no consumption of milk <input type="checkbox"/> Other</p>
<p>2. What are the reasons for you to buy milk from LSOOM/Puremilk? (Please tick a maximum number of 3 boxes) <input type="checkbox"/> Reasonable price <input type="checkbox"/> Flavor</p>

- Package design
- Safety concern, milk from LSOOM/Puremilk is controlled by the veterinarian
- Single-source milk
- For dairy farmers getting reasonable profits
- Other

3. After participating the crowdfunding project, how often do you buy milk from LSOOM/Puremilk? (Including offline/one-time purchase. If you order online regularly, please select "Other", then fill in the frequency of ordering)

- Once a week
- More than twice a week
- Once a month
- Every two months
- Every three months
- Every four months
- Every half year
- Every year
- Irregularly
- Other

4. How many friends and family have you recommended LSOOM/Puremilk to?

5. Refer to Q4, what are the reasons that you recommend LSOOM/Puremilk to friends and family? (Please tick a maximum number of 3 boxes)

- Reasonable price
- Flavor
- Package design
- Safety concern, milk from LSOOM/Puremilk is controlled by the veterinarian
- Single-source milk
- For dairy farmers getting reasonable profits
- Other

6. Do you agree the following changes resulting from the Let's Save Our Own Milk project?

6.1 Setting up Puremilk Co. and establishing a milk production and sales platform.

- Strongly agree Agree Neutral Disagree Strongly disagree

6.2 Providing high quality milk with no ingredient adjustment.

- Strongly agree Agree Neutral Disagree Strongly disagree

6.3 Establishing a quality-control-by-the-veterinarian mechanism.

- Strongly agree Agree Neutral Disagree Strongly disagree

6.4 Establishing a mechanism to ensure dairy farmers getting a fair return with a higher purchase price.

- Strongly agree Agree Neutral Disagree Strongly disagree

6.5 Enhancing farm management efficiency.

Strongly agree Agree Neutral Disagree Strongly disagree

6.6 Improving farm environment.

Strongly agree Agree Neutral Disagree Strongly disagree

6.7 Reducing consumer concerns about the quality of milk.

Strongly agree Agree Neutral Disagree Strongly disagree

6.8 Changing the monopoly market structure of the dairy industry with consumer buying power.

Strongly agree Agree Neutral Disagree Strongly disagree

6.9 Improving consumers' understanding toward the structure of the dairy industry and the quality of milk.

Strongly agree Agree Neutral Disagree Strongly disagree

6.10 Cultivating more large animal veterinarians.

Strongly agree Agree Neutral Disagree Strongly disagree

7. After you participated in the crowdfunding project, is there any obvious change in your life? E.g. paying more attention to issues regarding dairy industry, increasing the purchase of products from small farmers, increasing going to the small farmers' market and so forth. **Please describe briefly.**
