

FINAL TECHNICAL REPORT / RAPPORT TECHNIQUE FINAL

FARM SHOP: SCALING A SOCIAL FRANCHISE

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Farm Shop:

Scaling a Social Franchise

Final Technical Report

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Farm Shop: Scaling Access to Productivity-Enhancing Agricultural Inputs for Smallholder Farmers in Africa

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1.0 Executive Summary

In 2015, Cape Breton University, Farm Shop, Evalsys, Datassist, the University of Nairobi and Studio Amarelo were awarded \$1.5M by the International Development Research Centre (IDRC) and Global Affairs Canada under CIFSRF Phase 2, which aimed to “to scale up research results and innovations to reach more people and have a greater impact globally to improve food security.”¹ Phase 1 of CIFSRF had focused on innovations. Phase 2 shifted the emphasis to understanding how innovations can be scaled through private sector organizations and other partners. Eighteen grants were awarded. The research on Farm Shop was unique in CIFSRF’s Phase 2 portfolio in that Farm was a social enterprise rather than a traditional development project or non-governmental organization.

Supporters of scale and scaling-up are seeking greater social impact because the magnitude of global development challenges can be very large, often affecting billions of people with insufficient access to health, food security, education, water, sanitation, energy and other basic needs. However, although much of the conversation on scale raises hope for potential impact for a large number of beneficiaries, the reality is that social enterprises face many challenges in achieving scale.

Seelos and Mair argue that decisions about “scaling in the social sector necessitate a much more strategic organizational perspective than we typically encounter.”² They argue that although the idea of scaling social impact continues to gain momentum, too often the conversations about scale, although well-intended, can be overly optimistic and simplistic in their understanding of the pathways, processes, trade-offs, and challenges that organizations face in the real world of dealing with complex, uncertain, and changing market contexts.

Our project focused on Farm Shop’s innovative business model: social franchising. A social franchise combines the principles of business franchising (a standardized and replicable business system that reduces risk for entrepreneurs) with a social objective (e.g., improving the lives of smallholder farmers). Social franchising creates replicable models that have the greatest likelihood of success as they spread to new geographic areas. Social franchises, such as Farm Shop, have a primary objective of addressing important social problems not adequately addressed by markets or governments.

In the field of social entrepreneurship and social impact, social franchising holds great interest for its potential to achieve social impacts in ways that are financially self-sustaining and scalable. Many organizations in various countries and sectors are experimenting with social franchising. As noted in the CIFSRF call, “A key element of successful scaling-up is sustainability—in particular, the degree to which innovations can self-perpetuate or replicate.” The focus of this research is therefore on one of the most important questions for Farm Shop and for the field: What are the barriers to and enabling factors for Farm Shop’s social franchising business model to achieve breakeven and scale so that its social impact can enhance the lives of smallholder farmers in Africa? The objectives in our grant agreement were stated as follows:

¹ CIFSRF Call for Proposals, February 2nd, 2015.

² Seelos, C., & Mair, J. (2017). *Innovation and scaling for impact: How effective social enterprises do it*. Stanford University Press, page 2.

Objective 1: Smallholder farmers have access to affordable, quality, agricultural inputs

Objective 2: Increased smallholder capacity

Objective 3: Knowledge generation

Smallholder farmers have access to affordable, quality, agricultural inputs

As of February 1, 2018, Farm Shop was serving 34,998 smallholder farmer customers (54% women) through a network of 75 franchised agricultural input shops. Since inception, Farm Shop has opened a total of 98 branded shops with 16 unbranded affiliate shops (currently in conversion) for a total of 114 shops, across 5 counties in Kenya. Of the total of 98 shops opened since inception, 39 have closed. The project did not meet the target of reaching 150 franchises, however. The story of Farm Shop's journey since inception until the end of the project period is captured in detail in the paper "Farm Shop: Lessons Learned from Scaling a Social Franchise" (Appendix 10.2). As an enterprise, Farm Shop is entering a market where it is aiming to serve rural, low-income, smallholder farmers (primarily women). The nature of this enterprise-led, market-based intervention is that it requires a continuous process of learning, experimentation, trial and error, testing and validating assumptions while aiming to deliver social value to farmers and franchisees as well as be financially self-sustaining and scalable. As detailed in the paper, some of the key challenges that Farm Shop faced on its path to scale included: lower sales margins than expected; complex and difficult to disrupt relationships between suppliers, distributors, and wholesalers; suppliers unwilling to give significant bulk discounts; microfinance institutions unwilling to extend working capital to franchisees; high overheads given the start-up nature of the organization and its social mission; low level of franchisee management capacity; and disruptions to the economy due to uncertainty and conflict related to the 2017 Kenyan elections.

The project developed a detailed financial model to assist Farm Shop and other social franchises on their path to scale. The model was based on gathering financial information from Farm Shop's monthly profit and loss statements and other related quantitative data. This analysis based on this model identified barriers and enabling factors, as well as strengths and weaknesses in the economics of the operations.³ This financial model was used to create an online interactive app that is dynamic and allows the management team to consider the potential impact of each major variable and strategic decision on the path to breakeven and scale.⁴ Initially, the financial model resulted in the estimation that Farm Shop would break even at about 500 shops. This led to a strategic reorientation within Farm Shop to 1) increase revenues by increasing margins from existing businesses, sell more higher-margin products, generate new revenue streams and support profitable shops, as well as 2) decrease costs through reducing staff, separating for-profit and not-for-profit activities, optimizing supply chain efficiencies, hiring an experienced CEO, and fully operationalize its management information systems.⁵ Since this strategic reorientation happened at the end of the project period, we do not know the exact effect on the number of shops now needed for break-even, although the new Farm Shop CEO estimates that it could now be closer to 100.

Increased smallholder capacity

Farm Shop has directly trained 26,578 farmers (52% women) on various aspects of agronomy and animal husbandry through a network of 59 village demonstration sites. Farm Shop also provides opportunities and training for its franchisors (50% women) and their shop assistants (54% women). The project also engaged four University of Nairobi PhD students who each worked on a research study relevant to their PhD studies and to Farm Shop.

³ See the paper, "Using Statistics to Model a Social Franchise's Path to Scale" developed by the project team describing the financial modeling methodology in detail.

⁴ See the app at <https://datassist.shinyapps.io/FSApp/>.

⁵ All strategies and learnings are described in detail in the article "Farm Shop: Lessons Learned from Scaling a Social Franchise."

In 2017, Farm Shop designed a quasi-experimental research study in 13 communities – 10 Farm Shop communities and three non-Farm Shop communities. Data was collected from a total of 835 randomly selected farmers from the 13 communities in March 2017 and from 880 farmers in the 13 communities in September 2017. Although the data between March and September 2017 cannot be strictly compared due to seasonality differences, many indicators measured such as farmer satisfaction with agricultural inputs, their attendance at Farm Shop farmer trainings, their crop production, and their wellbeing showed an increase. Data showed a higher level of milk production (10.1 liters per day on average vs 8.9 liters per day) in Farm Shop communities vs non-Farm Shop communities. A further analysis showed that higher milk production was correlated with attending Farm Shop trainings. Farm Shop communities also showed a greater understanding of good poultry management practices.

Knowledge generation

Gender. Important elements of Farm Shop’s business model have been designed with women farmers in mind, including employment opportunities, products, shop locations, timing of events, and access to credit. As part of the project, gender consultants Dr. Maureen Miruka and Dr. Alice Murage gathered information to identify gender issues in Farm Shop’s value chain and provided gender training to Farm Shop staff, franchisees and shop assistants. Two Farm Shop staff were identified as gender leads.

Sustainable Agriculture. Farm Shop has done a considerable amount of work to ensure the pesticides, fertilizers and veterinary drugs it sells are used in a safe and responsible manner. Dr. Stephen Roderick of the Duchy Agricultural College in the UK conducted a comprehensive Environmental Audit of Farm Shop in January 2017 and Farm Shop has implemented over 90 per cent of his 23 recommendations.

Findings. Ultimately, since Farm Shop has not yet reached break-even, our findings cannot be considered conclusive. However, given what we’ve learned, we believe that the hypothesis that a social franchising model in the agricultural input sector can be scaled can be confirmed if at least three key conditions are met:

- The organization has a clear financial model accounting for costs and revenues on the path to breakeven
- The organization has adequate data gathering systems to inform the cost and revenue assumptions in the financial model
- The organization is able to test and validate the major assumptions in its financial and business model before preparing to scale

These findings are important as the social enterprise and social finance sector continues to grow (from a \$50 billion asset class today projected to reach \$1 trillion in the near future) and entrepreneurs and social investors seek to develop and invest in social enterprise and social franchising business models like Farm Shop.

2.0 The Research Problem

Globally, 795 million people are food insecure even though 70 per cent of the world's extreme poor live in rural areas and over one billion people are employed by the agriculture sector.⁶ The world's poor are highly dependent on agriculture as a source of income and food security and if supported correctly, growth in this sector can be a highly effective tool in alleviating poverty and improving the lives of smallholder farmers.⁷ However, agriculture-led growth that can contribute to sustainable development, poverty reduction and food security requires a productivity revolution in smallholder farming including increasing access to productivity-enhancing inputs and knowledge for smallholder farmers.⁸

In Kenya, agriculture is the main livelihood for 75 per cent of the population and is directly responsible for 26 per cent of Gross Domestic Product (GDP) and indirectly responsible for a further 27 per cent of GDP through linkages with other sectors.⁹ The Kenyan government's Agricultural Sector Development Strategy (2010 – 2020) recognizes that sustained agricultural growth is the key to uplifting the living standards of the majority of Kenyans as well as contributing to overall economic growth.¹⁰

Perceiving these challenges, various donors have developed projects to support agricultural input shops; however, these initiatives have not been financially sustainable or successful in achieving scale.¹¹ In this context, Farm Shop introduced an innovative social franchise business model as a way to sustainably improve the food security and prosperity of smallholder farmers through increased productivity and incomes as a result of access to quality agricultural inputs, knowledge, and services. When Farm Shop surveyed 875 farmers in March 2017, it found that 28% of respondents reported not having enough food at some point during the year (see Appendix 4.10). Farm Shop's target market and beneficiaries are these smallholder farmers, especially women.

⁶ FAO, (2015). *The State of Food Insecurity in the World*. Rome: Food and Agriculture Organization Publications; International Fund for Agricultural Development, (2016). *Rural Development Report*. Rome: International Fund for Agricultural Development; International Labour Organization, (2014). *World of Work Report 2014: Developing With Jobs*. Geneva.

⁷ Agricultural growth is at least twice as effective in reducing poverty as growth originating in other sectors, see Mondiale, B. (2008). *World Development Report: Agriculture for Development*. Washington DC: The World Bank, page 6.

⁸ Mondiale, B. (2008), page 12.

⁹ Government of Kenya. (2012). *Agricultural Sector Development Strategy (2010 – 2020)*. Nairobi: Ministry of Agriculture; Government of Kenya. (2015) *Economic Review of Agriculture*. Nairobi: Central Planning and Project Monitoring Unit: Ministry of Agriculture, Livestock and Fisheries.

¹⁰ Government of Kenya. (2012). *Agricultural Sector Development Strategy (2010 – 2020)*. Nairobi: Ministry of Agriculture; Government of Kenya.

¹¹ See, for example, "The ADAPT Project in Zambia: Successes and Lessons in Building a Scalable Network of Rural Agro-Dealers to Serve Smallholders" (2010). Atlanta: CARE USA. Farm Shop board members Farouk Jiwa and Christian Pennotti served as advisors to this initiative.

3.0 Progress toward Milestones

In the first section of our grant agreement, the following statement of objectives is given, based on our original project proposal:

The overall objective of the Recipient in relation to the Project is to expand Farm Shop franchises to increase the productivity, food security and incomes of smallholder farming households in Kenya. The specific objectives of the Project are as follows:

1. To scale up Farm Shop in Kenya to 150 franchisees
2. To test models and approaches for achieving financial break-even of the Farm Shop franchisor
3. To inform African decision-makers, business and local community leaders on scalable models for facilitating farmers' access to inputs
4. To build capacity of smallholder farmers to adopt productivity enhancing technologies to improve their food security

In the third section of our grant agreement the following milestones are included organized under three revised objectives and based on conversations with our IDRC program officers between the acceptance of our proposal and signing of our grant agreement.

1. Smallholder farmers have access to affordable, quality agricultural inputs
2. Increased smallholder capacity
3. Knowledge generation

Progress toward each milestone (under each of these objectives) is given in the table below.

6 months: First joint technical progress report which reflects on the following milestones:		
Project level		
1.	Inception workshop held	Complete. Inception workshop held January 25-27, 2016. See Appendix 1.2, Inception Workshop Report.
2.	Key personnel on board, partner contracts signed	Complete. See page 35 of the Inception Workshop Report (Appendix 1.2) for the Farm Shop organogram with key personnel.
Objective 1 – Smallholder Farmers have Access to Affordable, Quality Agricultural Inputs		
3.	Shop recruitment and launch process reviewed and tested	Complete, after a review of the shop recruitment and launch process. See Appendix 1.3, First Technical Report, April 2016 revised June 2016.
4.	Review of current suppliers completed to assess perception of Farm Shop and commitment to long-term collaboration	Comprehensive review of suppliers complete including

		reduction of stock keeping units (SKUs) from 1,500 to 700. See Appendix 1.3, First Technical Report, April 2016.
5.	Farm Shop information systems requirements and phased strategy for IT development defined	Identification of information system requirements and strategy for IT system development complete . See Appendix 1.3, First Technical Report, April 2016.
Objective 2 – Increased Smallholder Capacity		
6.	Review and update farmer training materials and curricula	Complete . See Appendices 7.1 to 7.11 on farmer training including copies of the training manuals and curricula.
Objective 3 – Knowledge Generation		
7.	First round of research questions related to scaling up and systems needed to answer those questions defined	Complete . See Appendix 1.3, First Technical Report, April 2016 revised June 2016.
12 months: Second joint technical progress update which reflects on the following milestones:		
Objective 1		
1.	Process for surveying and assessing existing agrodealers in growth counties defined and tested and agrodealer database developed	Agrodealer database complete based on process for surveying and assessing existing agrodealers. See Appendix 1.4, Second Technical Report, October 2016.
2.	Supply chain (procurement / warehousing / distribution) strategy in place and aligned with Farm Shop growth plan	Supply chain strategy complete . See Appendix 1.4, Second Technical Report, October 2016.
3.	First phase of IT systems build out completed	Complete . Sage enterprise resource planning system installed and operational. See Appendix 1.4, Second Technical Report, October 2016.
Objective 2		
4.	Mix of farmer training and outreach events / shop / month tested to define scalable combination(s).	Complete based on continual improvements in efficiency in farmer outreach and training. See Appendix 1.4, Second Technical

		Report, as well as Appendices 7.1 to 7.11 on farmer training.
5.	Gender review and strategy development completed	Complete based on the work of gender consultants Alice Murage and Maureen Miruka together with the Farm Shop team. See Appendices 3.1 to 3.7 on gender training including the final gender strategy, Appendix 3.1.
Objective 3		
6.	Data collection systems to address research questions working well	Complete. See Appendix 1.4, Second Technical Report, October 2016.
7.	Farm Shop sustainability and growth model developed	Complete based on the financial model developed by Dataassist for the project. Methodology described in Appendix 1.3, First Technical Report and further expanded on in Appendix 10.1, Using Statistics to Model a Social Enterprise's Path to Scale.
18 months: Third joint technical progress report which reflects on the following milestones:		
Project level		
1.	Annual progress meeting	Complete. See Appendix 1.5, Midterm Meeting Report.
Objective 1		
2.	Farm Shop outlet performance levels (i.e. time to profitability; volume of transactions; degree of purchasing from Farm Shop) maintained even as the network has a growing number of outlets	Complete. At this time Farm Shop had grown to approximately 65 shops. See Appendix 1.6, Third Technical Report.
3.	Farm Shop core systems able to support the growing network while limiting growth in HQ costs	Complete, including adding a sub-warehouse at Kwa Haraka, which serves 20 shops in its local area. See Appendix 1.6, Third Technical Report.
Objective 2		
4	Effective mix of farmer training and outreach events / shop / month based on shop age and performance developed	Complete, based on the training and outreach events as documented in Appendices 7.1 to 7.11.

Objective3		
5.	Data collection system to assess Farm Shop sustainability and growth model fully developed and in use	Complete , as Farm Shop continues to invest in collecting information on its Key Performance Indicators (see Appendix 2.8) and the financial model continues to incorporate additional development in Farm Shop strategy (see Appendix 1.6, Third Technical Report).
24 months: Fourth joint technical progress update which reflects on the following milestones:		
Objective 1		
1.	Farm Shop expansion rate is on track to reach 150 shops during the project while also maintaining the quality of each individual shop and Farm Shop HQ services	This was one of the key milestones of the original proposal based on a number of key assumptions about costs, revenues, sales and overheads. The story of Farm Shop's journey towards scale and the key lessons learned are captured in the <i>article Farm Shop: Lessons Learned from Scaling a Social Franchise</i> (Appendix 10.2).
Objective 2		
2.	Gender strategy refreshed and changes made based on achievements in first year of application.	Complete. See Appendix 3.1, Farm Shop Gender Strategy and Appendix 3.7, Farmer Trainings and Gender Strategy, which identifies some of the existing work relating to employment, products, locations, hours of activities and access to credit that Farm Shop has built into its business model.
3.	Review of outreach and cost-effectiveness of farmer training activities conducted	Complete. See Appendix 1.7, Fourth Technical Report. By the end of the project, Farm Shop had trained 26,578 farmers (52% women).
Objective3		
4.	Farm Shop sustainability and growth model updated with actual performance data and analysis complete	Complete. See the final description in Appendix 9.1: Plan for sustainability and growth;

		Appendix 10.1, <i>Using Statistics to Model a Social Enterprise's Path to Scale</i> and the interactive web based application developed.
30 months: Fifth joint technical progress report which reflects on the following milestones:		
Project level		
1.	Event hosted to share key findings with stakeholders	Complete. Final project meeting held in Nairobi Feb 26-27, 2018.
Objective 1		
2.	Over 75% of Farm Shop franchisees are profitable	Complete. 100% of the 75 Farm Shop outlets that are active or in conversion as of February 1, 2018 (see Appendix 2.4, List of Farm Shops) are profitable.
3.	Farm Shop has a five-year sustainability plan informed by the analysis of Farm Shop's sustainability and growth model	Complete. See Appendix 9.1: Plan for sustainability and growth as well as Appendix 10.1, <i>Using Statistics to Model a Social Enterprise's Path to Scale</i> .
Objective 2		
4.	Farm Shop has a sustainable model for training farmers in the communities around shops	Complete. See Appendices 7.1 to 7.11 on farmer training.
5.	Farm Shop trainings and services are equally accessible to female and male farmers	Complete. See Appendix 3.7: Farmer Training and Gender.
Objective 3		
6.	Research findings converted into engaging communication materials	Complete. See the videos: Farm Shop Profile The Story of Farm Shop Scaling a Social Enterprise: Lessons Learned from Farm Shop
7.	Research findings published in articles read by the business, social enterprise, donor community	Two articles have been prepared for publication: 1) Krause, H. <i>Using Statistics to Model a Social Enterprise's Path to Scale</i> (see Appendix 10.1) 2) McKague, K., Harji, K. and Jiwa, F. <i>Farm Shop: Lessons Learned from Scaling a Social Franchise</i> (see Appendix 10.2)

4.0 Synthesis of Research Results and Development Outcomes

This section synthesizes the main research results of the project. It is organized in three sections according to our project objectives, 1) that smallholder farmers have access to affordable, quality agricultural inputs, 2) that smallholder farmers increase their capacity and 3) that we generate knowledge on scaling a social franchise.

4.1 Objective 1 – Smallholder Farmers have Access to Affordable, Quality Agricultural Inputs

Farm Shop was initially established as a non-profit Trust in Kenya in 2011 by Farouk Jiwa and Madison Ayer to provide smallholder farmers with timely and quality agricultural inputs at affordable prices through a comprehensive and innovative social franchise model. The social franchise model was designed to incorporate localized agricultural knowledge and smallholder farmer needs with standardized management and marketing processes, technology and aggregated input supplier relationships. The success of smallholder farmers in Africa depends on the ability of agricultural input supply shops to consistently provide farmers with information and access to affordable quality agricultural inputs. To do this, Farm Shop's founders knew that the entire agro-dealer sector had to be modernized and transformed into well-run businesses to better serve smallholder farmers. Farm Shop has worked with local entrepreneurs to convert or set up small shops in rural areas and sell agricultural and veterinary inputs (e.g., seeds, fertilizers, animal feed, medicines) and sell or provide referrals to services (e.g., soil testing, spraying, home delivery, artificial insemination, animal health care) that can enhance smallholder farmer productivity and incomes, especially for women farmers.

Farm Shop has developed systems and processes for inventory management, financial management, quality control, performance measurement and supply management (see Appendix 2.1: Franchisee Operations Manual; Appendix 2.2: Farm Shop Franchise Agreement; and Appendix 2.3: Farm Shop Business Training Manual). Farm Shop also provides franchisees with access to technology, both hardware and software, to allow them to operate more efficiently and better serve their customers. Farm Shop trains shop owners in customer service and modern business practices (inventory and cash flow management, marketing, record keeping) and provides training and education to farmers so that they can use products and services effectively (see Appendix 2.3). Farm Shop employs a team of business, agricultural and veterinary specialists who support and regularly train shop owners and their staff in a number of areas including customer service, modern business practices and technical aspects of crop and livestock management. Farm Shop is continually refining its business model and supply chain to provide access to high quality affordable products including over 850 products from 30 different suppliers (see Appendix 2.5 and 2.6).

Through a network of 59 Village Level Demonstration Centers that it has established adjacent to the network of shops, Farm Shop also provides hands-on practical training in crop and livestock management directly to small-holder farmers (see Appendix 7.10 for a list of demonstration sites). There are currently 75 shops in the network (see Appendix 2.4 for the full list of Farm Shops). All of the shops are owned by local entrepreneurs except two strategic locations, which are owned by Farm Shop headquarters itself.

Based on a survey of 835 randomly selected smallholder farmers across Farm Shop's Counties of operation in March and 880 farmers in April 2017, farmers typically own less than one acre of land and purchase small ad-

hoc amounts of inputs on a weekly basis for livestock or on a seasonal basis for crops (see Appendix 4.9). Their purchasing behaviour is primarily influenced by the limited cash they have at any time and the lack of access to external financing. Dairy cows and poultry (both layers and broilers) were the most commonly kept livestock; however, farmers also reported keeping pigs, rabbits, ducks, sheep, goats, and geese. Maize, potatoes, and beans were the three most common crops grown, but farmers also reported growing cabbages, spinach, kale, peas, onions, tomatoes, carrots, bananas, arrowroot, macadamia, tea, and coffee. The survey also captured demographic data on farmers as indicated in the figure below:



As a social franchise serving smallholder farmers, Farm Shop faces unique challenges that come with serving low-income farmer-customers. These challenges include the geographically distributed locations of farmers, their vulnerability to losses, their attitudes toward risk, their low levels of cognitive functioning and literacy, and distrust of many businesses.¹² Additional challenges include changes in the mix of crops and livestock from region to region due to agro-ecological soil and climate conditions and local contextual factors such as the proximity to markets. Notably, women farmers face additional social constraints such as additional limitations in mobility, access to and control over land, income and finance, and a heavy time burden based on social expectations for household as well as farming responsibilities.¹³ This introduces a high level of complexity in ensuring that the right mix of inputs are delivered to the right location in a timely manner to meet the specific demands in each geographic region.

Farmers are very risk averse, not only because of these conditions in low-income market contexts, but also because it is difficult for farmers to reverse many of their decisions (e.g., what variety of seed to plant or medicine to administer). It is essential, then, that organizations seeking to change farmer behaviour (such as using improved inputs or adopting new agricultural practices) build mutual trust with farmers.¹⁴ It must be clear to farmers that there is an advantage to adopting new practices or technologies. This advantage is best conveyed by providing trusted advice to farmers at the shop level, and at training and demonstration sites.

¹² ACUMEN and Bain and Company. (2014). Growing Prosperity: Developing Repeatable Models. Available at: <http://acumen.org/growing-prosperity/>; HYSTRA Hybrid Strategies Consulting (2015). *Smallholder farmers and business: 15 pioneering collaborations for improved productivity and sustainability*

¹³ McKague, K. (2015). "Gender" in McKague, K., & Siddiquee, M. (2014). *Making Markets More Inclusive*. New York: Palgrave MacMillan.

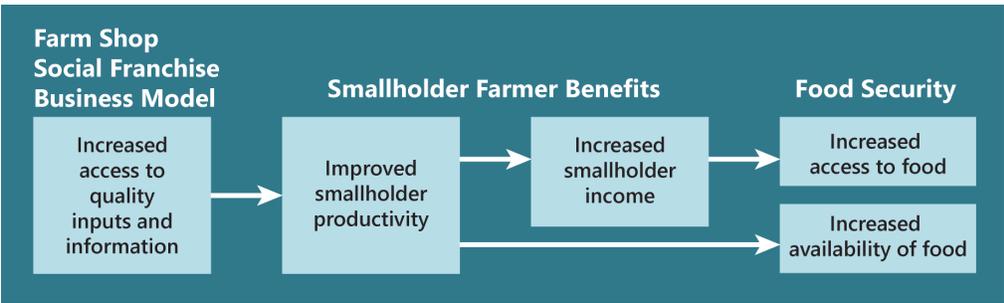
¹⁴ HYSTRA Hybrid Strategies Consulting (2015). *Smallholder farmers and business: 15 pioneering collaborations for improved productivity and sustainability*

Farm Shop’s social franchise business model is developed to address the challenges of serving smallholder farmers while also benefitting franchisees, shop assistants, Farm Shop’s employees, and the broader agricultural agribusiness ecosystem.

In the market-based pathway to scaling social impact, the assumption is that a social franchise will optimize social impact wherever possible in the various aspects of its business model while ensuring that the organization is financially sustainable. If the enterprise goes out of business, no social value will be created. Balancing the tension between optimizing social and economic value creation is the central challenge for all social enterprises like Farm Shop and requires many difficult choices and trade-offs.

If a social franchise is creating more social value than the status quo agro-dealers or large companies in the market (because it targets smallholder farmers, especially women, it guarantees quality and provides farmers with trusted information, etc.) then growth in the business is inherently creating more social impact than the alternatives. But how can we evaluate Farm Shop’s social value creation? First, we can consider Farm Shop’s logic model (below) for how it addresses food security. Farm Shop addresses food security through two of the Food and Agriculture Organization’s (FAO’s) four dimensions:¹⁵

- *Availability of food.* Farm Shop increases the availability of food by increasing farmer productivity and incomes. As the FAO states, “The more income a household or individual has, the more food (and of better quality) can be purchased.”¹⁶
- *Access to food:* Farm Shop increases access to food by making better quality inputs and information available to farmers through their franchised network of shops. As recognized by the FAO, “Smallholder productivity and profitability are often held back by ... significant input market failures, especially for seed and fertilizer in sub-Saharan Africa.”¹⁷



Logic Model for How Farm Shop Contributes to Food Security

Improved food security for smallholder farmers is only one dimension of how Farm Shop creates social impact. Farm Shop’s social impact can be understood to operate at four levels: headquarters, franchisees, farmers, and stakeholders in the broader market and institutional ecosystem (as summarized below).

¹⁵ Food and Agriculture Organization of the United Nations. (2008). *The State of Food Insecurity in the World 2008*. Rome: FAO.
¹⁶ Food and Agriculture Organization of the United Nations. (2008). *The State of Food Insecurity in the World 2008*. Rome: FAO, p. 75
¹⁷ Food and Agriculture Organization of the United Nations. (2008). *The State of Food Insecurity in the World 2008*. Rome: FAO, p. 82

Social Value Created at Farm Shop Headquarters (Management and Staff)

- Employment
- Professional development in management and technical skills
- Opportunities to work in a business that has the potential to improve smallholder farmers

Social Value Created for Franchises (Managers and Shop Assistants)

- Lower-risk and more profitable business opportunities through the Farm Shop network than available as an independent shop owner
- Opportunities for capacity building through Farm Shop training opportunities and networking events
- Jobs for shop assistants, including recent graduates, women and youth
- Opportunities for shop assistants to move up to become franchisees or store managers

Social Value Created for Farmers

- Increased income, reduced costs and reduced risks
- Capacity building at dedicated training events
- Information from knowledgeable and trustworthy franchise managers and shop assistants
- Accessible products that are of better quality than alternative suppliers (no fillers, expired drugs, poor quality seeds, etc.)
- Empowerment and equality for farmers, including women, based on respect for smallholders as valued and appreciated customers

Social Value Created for the Broader Market and Enterprise Ecosystem

- Inspiring other enterprises in the marketplace to adopt practices that benefit farmers (transparent pricing, open shops, franchising model, etc.)
- Work with government to raise industry standards

These and other measures are captured in Farm Shop's Key Performance Metrics (see Appendix 2.8). If more social value is created through Farm Shop's products, services, and business activities than alternatives in the marketplace, then growing the business through more shops, more sales, and more farmers served creates a more positive social impact than would otherwise be the case. The theory of market transaction is that if a smallholder farmer purchases inputs from Farm Shop and, being satisfied, returns to purchase more, by their actions and choice they are indicating that each purchase is giving them benefit from the value of their hard-earned money. Otherwise they would not choose to make the purchase.

Since inception, Farm Shop has undertaken a number of activities and studies to assess farmer impact (see Appendix 4.1, Farmer Level Impact Measurement Learning Journey). In 2012, Farm Shop began to develop internal tools and processes to track smallholder farmers' level of satisfaction with the goods, services and trainings that Farm Shop was providing. This was with a view of better understanding farmers' needs as value-seeking customers and clients and in order to better respond to their requirements. These tools included short, simple surveys and informal discussions with farmers in shops or at various events. This very adequately served the needs of Farm Shop in these early days and provided sufficient information on changes and improvements needed to better serve these customers. In parallel, Farm Shop also developed simple and effective tools to measure the performance of franchisee shops (see Appendix 6, Farm Shop Franchisee Categorization Tool).

In 2015, Farm Shop began a collaboration with Dr. Robert Newberry of Plymouth University which included a longitudinal panel survey (see Appendix 4.2 Household Questionnaire) of 120 farmers which was designed to compare two Farm Shop communities with two non-Farm Shop communities. However, in one Farm Shop

community the Farm Shop closed and in the other Farm Shop community the shop performed very poorly, leading to inconclusive results (see Appendix 4.1).

In 2017, Farm Shop designed a quasi-experimental research study in 13 communities – 10 Farm Shop communities and three non-Farm Shop communities as the control group. Data was collected from a total of 835 randomly selected farmers from the 13 communities in March 2017 and from 880 farmers in the 13 communities in September 2017. The non-Farm Shop communities were communities where an existing shop was scheduled to convert into a Farm Shop in the future. Data was collected on demographic data, types and frequency of inputs smallholder farmers purchased, where farmers purchased inputs, the types of crops grown and livestock kept, whether farmers attended Farm Shop training events, farmers’ primary sources of income (farm vs non-farming activities) and farmers’ overall life satisfaction (for detailed findings see Appendix 4.9 and 4.10). The top five challenges mentioned by farmers were: weather and climate (61%), lack of finances (54%), pests and diseases (54%), lack of market (41%), health problems (30%). The study also identified an increase in inputs between March and September of 2017, as summarized in the table below (see Appendix 4.9).

Inputs	Farm Shop Community	
	March N=637	September N=725
Mineral supplement	0	13.5%
equipment	0	0.6%
Vet Medicine	10.70%	11.0%
Chemical Spray	8%	17.7%
Poultry Feeds	31.20%	30.5%
Seeds	21.50%	22.2%
Fertilizer	17.40%	35.9%
Dairy Feeds	29.40%	30.8%

Although the data between March and September 2017 cannot be strictly compared due to potential differences due to seasonality, many indicators measured such as farmer satisfaction with agricultural inputs, their attendance at Farm Shop farmer trainings, their crop production, and their wellbeing showed an increase. Data was analyzed to compare Farm Shop communities vs non-Farm Shop communities. Although the non-Farm Shop communities were communities where the existing shop would become a Farm Shop they could not be considered pure control communities as the shops were in the early stages of beginning to sell Farm Shop products, Farm Shop communities showed a higher level of milk production (10.1 liters per day on average vs 8.9 liters per day). A further analysis showed that higher milk production was correlated with attending Farm Shop trainings (with a coefficient of 0.9). Farm Shop communities also showed a significantly higher understanding of good poultry management practices.

4.2 Objective 2 – Increased Smallholder Farmer Capacity

Farmer Training

Farm Shop has achieved the objective of increasing smallholder farmer capacity through directly training 26,578 farmers (52 per cent women – see Appendix 7.1 for a list of training events). Farm Shop organizes three kinds of farmer training events:

- 1) **Demonstration Trainings** (also known as demo trainings) where Farm Shop agronomists and/or veterinarians provide specific trainings in crop or livestock management, usually hosted at the farm of a lead farmer or demonstration site;
- 2) **Clinics** where veterinarians or animal health workers are present at individual Farm Shops to advise farmers and assess and treat livestock that farmers bring to the clinic; and,
- 3) **Promotions** (or promo days) where Farm Shop organizes an information session from a company on the use of their products.

As part of the farmer training process, Farm Shop's technical team of agronomists and veterinarians, led by Dr. Kennedy Otingah, has also developed training manuals for farmers on maize, dairy, poultry, and tomatoes (see Appendices 7.2-7.5). Farmers' feedback on the value and effectiveness of trainings are collected semi-annually via a questionnaire and focus groups (see Appendix 4.5 for data gathering tools).

Franchisee and Shop Assistant Training

In addition to providing training directly to farmers, Farm Shop also trains franchisees and shop assistants in agricultural knowledge. Franchisees and shop assistants are in contact with 200-400 farmers each as a regular part of their business. Therefore, Farm Shop works to ensure that franchisees and shop assistants are provided with knowledge in agronomy and animal husbandry that they can effectively pass on to their smallholder farmer customers. Franchisees receive trainings during monthly franchisee meetings, demonstration site and promotion day training events and one-on-one trainings by a Farm Shop representative at the shop level.

As of 31st December 2017, 44 franchisees had fully completed training on the maize-farming manual and another 44 had completed training on the dairy cow-farming manual. A total of 35 and 32 franchisees had completed training on the poultry and tomato farming manuals respectively while 19 franchisees have undergone training on best practices in use of pesticides, fertilizers and veterinary drugs. Thirty-five shop assistants had fully completed training on the maize farming manual and another 35 on the dairy cow-farming manual. A total of 32 shop assistants had completed training on both the poultry and tomato farming manuals while 21 have undergone the ongoing full manual training on best practices on use of pesticides, fertilizers and veterinary drugs.

4.3 Objective 3 – Knowledge Generation

Farm Shop's innovative social franchising business model was created as a way to sustainably improve food security and smallholder farmer prosperity through increased productivity and incomes as a result of access to quality agricultural inputs, knowledge, and services. The focus of this research was on one of the most important questions for Farm Shop and for the field: What are the barriers to, and enabling factors for Farm Shop's social franchising business model to achieve breakeven and scale so that its social impact can enhance the lives of smallholder farmers in Africa?

Building on information from Farm Shop's experience, the experience of other social franchises, and existing literature (see Appendix 1.1 for data sources), our research findings offer a perspective on the barriers to and enabling factors for scaling social impact that can support decision-making around scale for Farm Shop, other social franchises, and funders. The research was guided by a series of inter-related questions and used a mixed methods approach.

Ultimately, since Farm Shop has not yet reached break-even, our findings cannot be considered conclusive. However, given what we've learned, we believe that the hypothesis can be confirmed if at least three key conditions are met:

- The organization has a clear financial model accounting for costs and revenues on the path to breakeven
- The organization has adequate data gathering systems to inform the cost and revenue assumptions in the financial model
- The organization is able to test and validate the major assumptions in its financial and business model before preparing to scale

The quantitative research was led by Datassist and was based on gathering financial information from Farm Shop's monthly profit and loss statements and other related quantitative data. This analysis developed a financial model that could help Farm Shop make strategic decisions on its path to scale by identifying barriers and enabling factors, as well as strengths and weaknesses in the economics of the operations. The premise was that the analysis and financial modeling would both help the Farm Shop management team's strategic decision-making and develop knowledge transferrable to other social franchises hoping to scale.¹⁸ This financial model was used to create an online interactive app that is flexible and dynamic and allows the management team to consider the potential impact of each major variable and strategic decision on the path to breakeven and scale.¹⁹

The qualitative research was led by Kevin McKague and Jill McPherson at CBU and Karim Harji of Evalsys. It included gathering data from interviews, documents, and observation of Farm Shop management, staff, and franchisees (Appendix 1.1). Qualitative data included 52 interviews, 53 hours of observation, review of 9 types of quantitative data, and 817 pages of Farm Shop documents. Interviews with a number of other social franchises were conducted, and relevant literatures relating to social franchising, social enterprise, social impact measurement, entrepreneurship, and business strategy were reviewed.

Here we provide a summary of the answers to our research questions. For more detailed discussions, see Appendix 10.3, Answers to Research Questions.

What are Farm Shop's key cost and revenue drivers?

Farm Shop's key cost drivers are head office overheads, including the costs of social impact activities like research and development and social impact measurement. Farm Shop's key revenue drivers are volumes of sales and sales margins.

What does scale mean in this context?

Scale is about creating more benefits for more people. The OECD defines scale as "the most effective and efficient way to increase a social enterprises' social impact, based on its operational model, to satisfy the demand for relevant products and/or services." For an organization like Farm Shop, scale can be understood as expanding an organization's output and impact to better match the magnitude of the needs of smallholder farmers.

What is the role of profit in scaling a social enterprise?

In the market-based pathway to scaling social impact, profit is essential. If the enterprise goes out of business, no social value will be created. Balancing the tension between optimizing social and economic value

¹⁸ See the paper, "Using Statistics to Model a Social Franchise's Path to Scale" developed by the project team describing the financial modeling methodology in detail.

¹⁹ See the app at <https://datassist.shinyapps.io/FSApp/>.

creation is the central challenge for all social enterprises like Farm Shop and requires many difficult choices and trade-offs.

How do we understand the mechanisms by which scale is most effectively achieved?

There are three pathways to scaling a social innovation: 1) through knowledge diffusion, 2) through influencing government, and 3) through the market. There is no predetermined optimal pathway, and these pathways can overlap. However, some pathways are more suitable for some types of innovations than others.

What are the stages of business model development that need to happen before scale can be achieved?

Based on the work of Monitor and Acumen, social enterprises move through four stages toward scale: 1) blueprint, 2) validate, 3) prepare, and 4) scale.

What are the pros and cons of for-profit vs not-for-profit legal organizational forms?

Social franchises face a fundamental tension of aligning financial and social goals. The for-profit and not-for-profit legal forms were originally created to optimize for one or the other only. Farm Shop has resolved this by having both a for-profit and not-for-profit entity working closely together to more easily attract both donor and investment capital.

What are the pros and cons of conversion franchising vs de novo franchising?

Conversion franchising has proven better for Farm Shop than de novo franchising because conversions of existing shops introduce less uncertainty, reduce capital costs for Farm Shop, and reduce risks for franchisees. Farm Shop has also found advantages to having a few (currently two) company-owned shops in strategic locations alongside the majority of franchisee-owned shops.

How much centralization and/or decentralization of roles and functions should there be as Farm Shop continues to scale?

As Farm Shop moves to test and validate aspects of its business model, it may be beneficial to centralize decision making so that adaptations, iterations, and pivots to the business model can be made more easily. Once validated and ready for scale, business model elements, systems, and procedures can become more systematized and decentralized.

What is the best organizational architecture for the scaling of Farm Shop?

Although the answer is not yet exactly clear, one important lesson in making decisions around optimizing the organizational architecture is the importance of gathering accurate and timely data, including information on sales, inventory, costs and revenues.

What rate of growth is too fast?

Before a social franchise scales up, it must first validate its cost and revenue assumptions and the elements of its business model. This ensures that both the external environment is conducive to scaling and the organization is prepared internally for scale. Growth that gets ahead of financial and business validation creates risks for an organization by overextending or scaling itself out of business.

What are the implications for creating a pipeline from animal health programs so that graduates could become Farm Shop business owners?

After considering the importance of financial literacy and buy-in to Farm Shop values, the creation of a direct pipeline from animal health programs to Farm Shop franchisees does not seem viable at this point. Animal health graduates still must be screened for their financial management and business skills, their willingness

to collaborate with the franchise system, and their customer service skills, especially to serve smallholder farmers.

How can farmer finance help organizations like Farm Shop achieve scale?

Farm Shop's base of franchisees and their farmer customers gives it a strong position in the market to experiment with and develop an innovative finance product that could simultaneously benefit smallholder farmers, franchisees and Farm Shop's bottom line. To this end, Farm Shop is developing a Cascade Agricultural Finance pilot tailored to smallholder farmers and franchisees.

How can Farm Shop work with government and youth?

In the newly instituted and shifting context of devolution of powers to county governments in Kenya, Farm Shop is looking for practical opportunities to work together with government toward common goals and interests. Farm Shop's long-term strategy is to work with governments and local development organizations to provide farmer training. When Farm Shop opens up a new franchise in a community, it invites local government extension workers and any other local government representatives in the area to become aware and involved. In addition to maintaining relationships with elected government officials, Farm Shop maintains a working relationship with the Kenya Veterinary Board, which has a direct oversight role to ensure compliance with regulations on the sale of veterinary medicines. Farm Shop aims to work with them to increase the standards of the industry overall to the benefit of all farmers beyond Farm Shop's existing customer base. Farm Shop also works with the Kenya Veterinary Board to place interns with franchisees and within Farm Shop.

What is the role of information systems in achieving scale?

Data collection and management systems are essential to achieving scale as they gather information that will test financial assumptions and validate elements of the business model. Unfortunately, they are costly in terms of time and money, and in the early stages of business model development, it is not always clear what the most important data points are to measure.

What can be learned from franchisees who fail or drop out?

The most common reason for Farm Shop franchisee failure is inability to manage cash flow in a disciplined way. Over five years, Farm Shop has opened 113 shops with about 35 percent of them exiting or failing. In developed markets, franchise exit rates are about 10 per cent per year. Farm Shop's failure rates are therefore better than average over the five-year period.

How can youth leaving the formal education system be encouraged to take agriculture as a business?

Youth tend to see farming as labour intensive and not very profitable. Youth are more attracted to opportunities to be employees, like shop assistants, or to run their own agriculture-related businesses like Farm Shop franchises. In this context, Farm Shop is creating opportunities for young people to do this.

4.3.1 How many shops are required for Farm Shop to break even?

Farm Shop's plan to grow and achieve financial sustainability has been informed by the breakeven and growth model developed by Datassist as well as Farm Shop's lived experience on the ground testing assumptions and developing its business model. The financial model was based on monthly financial (profit and loss) statements from Farm Shop from 2015 to 2017, as well as other quantitative and qualitative information, including sales volumes and sales margins for each product category, the total fixed costs for Farm Shop's overhead operations, the additional fixed cost of each new shop, the number of franchisee-owned shops and the number of company-owned shops.²⁰

²⁰ For the full description of the methodology, see the article "Using Statistics to Model a Social Enterprise's Path to Scale" prepared as part of this project.

Using this quantitative data and qualitative data on the business from interviews with Farm Shop's leadership, an influence diagram was created. This diagram represents the main factors that influence Farm Shop's profit or loss, taking into account the uncertainties and probabilities associated with each factor. An influence diagram is analogous to a logic model and is used in statistical financial modeling. This information aids in the creation of an algorithm to model Farm Shop's current financial state.

This financial model determines the number of shops in the network needed for Farm Shop to breakeven. Dataassist developed an interactive online version of this model²¹ that allows anyone to understand how breakeven is affected if various conditions and assumptions are modified. Thus, as a user changes a factor, such as additional cost per additional shop, annual rate of sales growth, or total average annual sales to each shop, the resulting number of shops required to breakeven changes accordingly.

Before it opened its first shop, Farm Shop gathered information from a detailed study of medium-sized agro-dealers in three different regions in Kenya. This study was conducted by an external consultant (Esther Njuguna) as well as a Farm Shop co-founder's experience with agro-dealers in Zambia through the Agro-Dealer Project implemented by CARE International and visits to agro-dealers in Mali and Uganda supported by the Rockefeller Foundation and the Alliance for a Green Revolution in Africa. From this information, Farm Shop reasonably estimated it would be able to sell KES 500,000 of product per month through each shop it opened. This was predicated on making small but critical improvements in the existing supply chain to improve management, reduce leakages, and increase efficiencies. Farm Shop estimated an average margin of 10 per cent across the various product categories. There was also sufficient evidence that this 10 per cent margin on average could be secured by leveraging aggregated demand from small shops to negotiate better prices from suppliers. These numbers were further corroborated when the co-founders of Farm Shop visited other organized networks of agro-dealers in India (including Choupal Sagar in Madhya Pradesh, Champion Agro in Gujarat, and Hariyali Kisaan Bazar in Uttar Pradesh) soon after the launch of the business. Farm Shop calculated that it would have a monthly overhead cost of approximately CAD 90,000 (KSH 1.08 million annually). This included the key categories of personnel costs, transportation, rent for warehouses and sub-warehouses, and working capital for inventory. Based on these numbers, it was calculated that at 150 shops, revenues would cover expenses and Farm Shop would break even.

As Farm Shop tested and developed its business model and as Dataassist developed the financial model, Farm Shop learned a number of key early lessons:

- The existing network of relationships between suppliers, distributors, wholesalers, and sub-distributors is a complex one and difficult to disrupt. In the face of these entrenched interests, the notion that Farm Shop can be a market disruptor by introducing supply chain efficiencies is much more difficult to put into practice.
- Suppliers are unwilling to give discounts on prices even in the face of volumes of purchases that Farm Shop was able to make. In some cases, the threshold of volumes that need to be reached before discounts can be secured is not possible even for a demand aggregator like Farm Shop.
- Selling agricultural inputs to smallholder farmers is a very low-margin business with average margins of 5 per cent on sales over all products.
- Feed, which makes up 75 per cent of sales has particularly low margins, at about 3.5 per cent.
- Microfinance institutions were unwilling to extend working capital finance to franchisees. This placed an unforeseen burden on Farm Shop's finances because the business had to extend financing to the franchisees both in the form of loans and inventory on credit.

²¹ See <https://datassist.shinyapps.io/FSApp/>

- Overheads including salaries are high due to the start-up nature of the organization and the commitment to many social impact activities.
- Supporting franchisees required much more Farm Shop staff time than expected.
- Fewer of the Farm Shop franchisees were as profitable as anticipated. In some cases, opening new shops were costing more than they were generating in sales margins once the indirect costs of marketing and support were factored in.
- In spite of the business training and intensive follow up and mentoring provided by Farm Shop, a number of the franchisees were unable to operate their business successfully. The high failure rate of these micro-enterprise businesses was greater than had been anticipated.
- Controlling costs has been challenging, including losses from inventory shrinkage, high cost of fuel, and nationwide shortages of some inputs such as bran and maize germ, leaving Farm Shop exposed to exorbitant prices from middlemen.
- During 2017 the political atmosphere in Kenya paralyzed timely collection and distribution of supplies, causing delays to trickle down to franchisees and to farmers.
- Adding Farm Shop-owned shops to the network requires a significant amount of additional working capital and management time.

Based on Farm Shop's financial data from 2016 and 2017, the financial breakeven model indicated that Farm Shop would break even at about 500 shops. The implications of this analysis led Farm Shop to reformulate its long-term plan for achieving breakeven and sustainability based on increasing margins and revenues, reducing costs, and optimizing franchisee profitability.

Increase Revenues. Farm Shop's strategies for increasing margins and revenue include selling more higher-margin products and generating revenue from potential new lines of business. Feed is a low-margin product but comprises the majority of Farm Shop's sales. In an agricultural input shop, feed plays a similar function to milk in a convenience store: it is a way to attract farmers into the store to purchase other items. To work toward increasing margins, Farm Shop has introduced a monthly reporting system on product margins and product mix to monitor and increase margins wherever possible. Farm Shop sales managers have targets for average margins on each product category. Farm Shop is also making efforts to increase the sales of higher-margin products such as hay (25% margin) and maize bran (10% margin). Farm Shop hopes that increased access to finance for farmers will allow farmers to purchase higher-margin products like equipment, solar systems, and efficient cook stoves.

Reduce Costs. Farm Shop is pursuing three main strategies for reducing cost as part of its long-term plan to break even and scale. The first strategy is to make its supply chain as efficient as possible by eliminating unnecessary costs. This is the task of Farm Shop's new CEO whose background is in sales and distribution, marketing, supply chain management, and the logistics of managing a consumer product business.

The second main strategy to reduce cost is to complete the separation of Farm Shop's activities into those managed by Farm Shop Retail (the for-profit organization) and those managed by Farm Shop NGO (the not-for-profit trust – see the organization chart in Appendix 5). By separating activities between the two organizational entities, Farm Shop will be reducing the costs to Farm Shop Retail of the farmer training, research and development, and impact measurement functions, which will be funded through Farm Shop NGO.²² The third strategy to reduce costs is to reduce non-essential staff. During early 2018 Farm Shop laid off approximately 16 staff, significantly reducing overheads and making break-even closer to reach.

²² Also see the discussion in the section on the pros and cons of a for-profit vs not-for-profit organizational form.

Ensure Shop Profitability. The third strategy for Farm Shop’s business model is to continue to work to ensure the profitability of individual franchisees. When Farm Shop began to convert existing agro-dealers to new Farm Shop stores, it was assumed that most shops would be profitable, that each new store added to the network would increase the total revenues to headquarters and that each new shop added would take Farm Shop closer to breakeven. It was also assumed that, once launched, an individual Farm Shop franchisee would require relatively little ongoing intensive support from staff at headquarters. However, these initial assumptions turned out not to be the case.

In 2017, Farm Shop reduced the number of franchisees in its network in order to retain profitable shops and let go of shops that were consuming significantly more resources than they were generating for the system. Farm Shop has some high performing shops, the “gold” level performers that are providing needed inputs to farmers, generating livelihoods for themselves, and generating good sales and revenues for Farm Shop headquarters (see the Franchisee Categorization Tool, Appendix 6). The significantly underperforming and unprofitable shops were let go from the network. An ongoing management challenge, however, is supporting the franchisees that are somewhere in the middle so that they can be profitable. In these ways, ensuring that franchisees are profitable is a strategic priority for Farm Shop to both increase its revenues and reduce its costs on its path to breakeven and scale.

As a result of the project and Farm Shop’s strategic realignment, including efforts to increase revenues, reduce costs and ensure shop profitability, Farm Shop’s new CEO estimates that the organization may now be able to break even at 100 shops by the end of 2018.

5.0 Synthesis of Results Toward AFS Themes

In this section we report on Farm Shop’s contribution towards the AFS themes of 1) gender and 2) sustainable agriculture and environmental management.

5.1 Gender

As seen by the gender-disaggregated data in the table below, over the course of all Farm Shop’s activities, female farmers make up 55 per cent of Farm Shop customers and 52 percent of training participants, 51 per cent of franchisees and 54 per cent of shop assistants.

	Female	Male	Total
Headquarters			
Head office staff ²³	10 (38%)	16 (62%)	26
Company-owned shop managers and assistants ²⁴	4 (50%)	4 (50%)	8
Franchisees²⁵			
Shop owners (branded shops only)	38 (51%)	37 (49%)	75
Shop assistants	20 (54%)	17 (46%)	37
Farmers			
Farm Shop customers ²⁶	19,247 (55%)	15,749 (45%)	34,998
Training participants ²⁷	13,756 (52%)	12,822 (48%)	26,578
Market Stakeholders			
Government extension workers	8	13	21
Supplier companies	n/a	n/a	30

²³ As of February 1, 2018. Cumulatively 54 staff have been employed over the course of the project.

²⁴ As of February 1, 2018. Cumulatively 13 company-owned shop managers and assistants have been hired (46% women).

²⁵ As of February 1, 2018.

²⁶ Cumulative as of February 1, 2018. See the Farm Shop Customer Estimation Tool, Appendix 2.9.

²⁷ See Appendix 7.1, Direct Farmer Trainings.

Understanding gender issues as they relate to agricultural production is an important component of economic and agricultural development, and understanding how gender relates to Farm Shop's business model is an important aspect of its social performance. As part of the project, gender consultants Dr. Maureen Miruka and Dr. Alice Murage gathered information to identify gender issues in Farm Shop's value chain (see their gender strategy, Appendix 3.1). They conducted a focus group with 12 Farm Shop drivers and loaders (Appendix 3.2), surveyed 28 franchisees (Appendix 3.3), and interviewed and surveyed 40 Farm Shop staff (Appendix 3.4). Two Farm Shop staff, Peter Wainaina and Saida Nyambura, were identified as gender leads within Farm Shop. Maureen and Alice also conducted gender training sessions for Farm Shop staff and for Farm Shop franchisees and shop assistants (see Appendix 3.5). The gender consultants reviewed the survey and research methodology to assess impact on farmers (see Appendix 3.6). These findings, as well as interviews with farmers, franchisees, and Farm Shop management by the broader research team, identified important elements of Farm Shop's business model that have been designed with women farmers in mind, including employment opportunities, products, shop locations, timing of events, and access to credit, as summarized below.

Employment. Farm Shop has a human resources and employment policy that prohibits discrimination based on sex and other differences (see Appendix 2.7). Currently, 38 per cent of Farm Shop employees, 51 per cent of franchisees, and 54 per cent of shop assistants are women.

Products. The study by the gender specialists found that women Farm Shop customers tend to purchase products in smaller package sizes.²⁸ Franchisees accommodate this preference by repacking larger packages (of seeds or fertilizer for example) into smaller sizes.²⁹ Farm Shop is also experimenting with selling household goods such as soap and unga (maize) to reduce the need for women farmers to make multiple visits to different shops.

Locations. Farm Shop's business model is based on small stores in rural areas that are close to smallholder farmers so that the shops are accessible, especially to women who may face more constraints on their mobility and have less time available to travel because of heavy farm and domestic workloads and responsibilities. The locations of demonstration sites are also selected with accessibility of women farmers in mind.

Timing. The scheduling of training events and demonstrations are kept to mid-morning hours (generally from around 10:00 to 11:30 am) to maximize the participation of women farmers. Gender disaggregated data from training events show that training events attended by 54 per cent women.

Access to credit. The Farm Shop gender analysis found that more women (32%) than men (11%) purchased inputs from Farm Shop franchisees on credit.³⁰ Farm Shop's work to develop its Cascade Agricultural Finance model for farmer finance has the potential to positively benefit women farmers, so they can buy in larger quantities and reduce the number of times needed to travel to a Farm Shop to source inputs.

5.2 Sustainable Agriculture and Environmental Management

Farm Shop has done a considerable amount of work to ensure the pesticides, fertilizers and veterinary drugs it sells are used in a safe and responsible manner. Responsible and safe use of these products safeguards

28 Miruka, M. and Murage, A. "Franchisees and Shop Assistants' Gender Analysis Report," April 2017.

29 Miruka, M. and Murage, A. "Franchisees and Shop Assistants' Gender Analysis Report," April 2017.

30 Miruka, M. and Murage, A. "Franchisees and Shop Assistants' Gender Analysis Report," April 2017.

natural resources like water and soil, protects human health and preserves animal and plant habitats. If used safely and responsibly, these products can provide significant benefits to society, including reducing risks and improving productivity and incomes for vulnerable smallholder farmers.

Through its technical team, Farm Shop has provided training to its staff, farmers, franchisees and shop assistants (anyone who would come into contact with pesticides, fertilizers and veterinary drugs) on their safe handling and use. In addition to its own ongoing work in this area, Dr. Stephen Roderick of the Duchy Agricultural College in the UK conducted a comprehensive Environmental Audit of Farm Shop in January 2017. Farm Shop has developed a clear Action Plan in response to his findings and recommendations. Progress to date against each recommendation is included as Appendix 8.1. To date, over 90 per cent of his 23 recommendations have been implemented.

Topics of training for farmers, franchisees, shop assistants and Farm Shop staff cover a wide range of subjects from safe handling, use, storage and disposal of agrochemicals to soil conservation, composting and integrated pest management. The full list of topics covered with their respective training materials is included in Appendices 8.1 to 8.21.

5.3 Research Partnership

This project was a partnership between CBU, Farm Shop, the University of Nairobi and Dataassist. As a result of IDRC funding, the project contributed to stronger research partnerships between all of the organizations. The various partners have had their capacity built in the following ways:

Cape Breton University

- CBU alumni Jill McPherson graduated with a Masters in International Development Studies focused on food security. Working as a research assistant and manager on this project has allowed her to finish her Masters thesis and work directly in her field of study.
- CBU finance and accounting staff were able to develop experience and capacity around managing large international grants
- Kevin McKague was awarded the Canada Research Chair in Social Enterprise and Inclusive Markets, partly in recognition of this major research project

Farm Shop

Farm Shop's capacity has been built immensely through this project at various levels. This has included:

- Refining key features of its business model
- IT system development (hardware and software)
- Franchisee recruitment system development and performance tool development
- Value chain efficiency measures
- Enhanced farmer training including training manual development
- Understanding cost and revenue drivers on the path to breakeven

University of Nairobi

Four PhD students and two faculty members from the University of Nairobi were able to develop their research capacity on research questions that were of interest to Farm Shop. The PhD students' research was:

- "Scaling Through Franchising" by Tabitha Njuguna
- "Financial Literacy of Franchisees and Financial Performance of Franchises in Kenya: The Case of Farm Shop" by Margaret Kamakia

- “Application of Discriminant Analysis in Creation of Social Franchise Networks: The Case of Farm Shop” by Moureen Agunga
- “Effects of Working Capital Management Practices on Financial Performance of Social Franchisees: The Case of Farm Shop, by Paul Simidi

Dataassist

Data analysis and visualization consultancy Dataassist benefitted from the project by developing the first-of-its-kind statistical application for modeling a social enterprise’s path to financial sustainability and scale.

6.0 Project Outputs

This section summarizes the main research outputs of the project.

1. An article prepared for publication in *Stanford Social Innovation Review* titled *Farm Shop: Lessons Learned from Scaling a Social Franchise* by Kevin McKague, Karim Harji and Farouk Jiwa which tells the story of Farm Shop’s challenges and lessons on its journey towards break-even and scale (see Appendix 10.2).
2. An article prepared for publication in *Stanford Social Innovation Review* titled *Using Statistics to Model a Social Enterprise’s Path to Scale* (see Appendix 10.1) by Heather Krause and Irene Powell.
3. An interactive online application which allows users to adjust key assumptions in Farm Shop’s business model (e.g. sales volumes, margins, overheads, etc.) and observe the resulting change in the number of shops required to break even.
4. An MBA teaching case study titled “Scaling Through Franchising” by University of Nairobi PhD student Tabitha Njuguna and Kevin McKague is complete and has been submitted to the William Davidson Institute / Next Billion case competition.
5. A research paper titled “Financial Literacy of Franchisees and Financial Performance of Franchises in Kenya: The Case of Farm Shop” is under development by University of Nairobi PhD student Margaret Kamakia under the supervision of Dr. Erasmus Kaijage and Dr. Duncan Elly. A plan for finalizing access to the remainder of the data she needs was agreed between Erasmus Kaijage and Farm Shop CEO Farayi Ziswa at the final project meeting on February 27, 2018.
6. A research paper titled “Application of Discriminant Analysis in Creation of Social Franchise Networks: The Case of Farm Shop” is under development by University of Nairobi PhD student Moureen Agunga under the supervision of Dr. Erasmus Kaijage and Dr. Duncan Elly. A plan for finalizing access to the remainder of the data was agreed on February 27, 2018.
7. A research paper titled “Effects of Working Capital Management Practices on Financial Performance of Social Franchisees: The Case of Farm Shop” is under development by Paul Simidi under the supervision of Dr. Erasmus Kaijage and Dr. Duncan Elly. A plan for finalizing access to the remainder of the data was agreed on February 27, 2018.
8. The project generated three videos: [Farm Shop Profile](#), [The Story of Farm Shop](#) and [Scaling a Social Enterprise: Lessons Learned from Farm Shop](#).

9. The project generated answers to 18 research questions specifically related to lessons learned from Farm Shop on scaling social franchises (Appendix 10.3).
10. Future publications include a paper with Bob Newbury at Newcastle University tentatively titled “Social franchising as a solution to the rural entrepreneurial ecosystem development problem in low-income markets.”

7.0 Problems and Challenges

A significant challenge we faced was the complexity of the budget reporting. Farm Shop’s budget being in Kenyan shillings introduced what seemed to be many challenges to reporting and converting currencies.

Securing country clearance (and renewal) from NACOSTI for the research was a lengthy challenge.

Both of these challenges took considerable time and energy that could have been put to much more productive use if focused on the main activities of the project.

8.0 Overall Assessment and Recommendations

Thank you for this invitation to suggest administrative recommendations for IDRC.

We felt that the duration and the budget for the project were appropriate. Efforts to make the budget reporting process easier would be welcomed, especially reducing the complexity associated with having a budget in local currency, with associated exchange rate fluctuations and extra difficulties associated with working in two currencies.