# <u>D-Lab 1 Final Report:</u> Business Plan for a Startup Poultry Farm in the Dornod Province of Mongolia Using the Canvas Business Model

# Organic Protein LLC Selenge Chadraabal Owner & CEO

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#### Executive Summary:

Mongolia is a country located in north-central Asia, Organic Protein LLC is located in the Dornod Province the easternmost part of the country. Mongolia has a growing population of 3 million people. The economy in Mongolia is agriculture based with livestock as the traditional form of husbandry. Within the country, the focus is on sheep, goat, cow, horse, and camel. Traditionally, poultry is not consumed by Mongolians, but recently with more knowledge on the health benefits of consuming poultry over red meat, many citizens are changing their dietary choices in favor of chicken.

Due to the growing demand for poultry in Mongolia, the country now spends approximately \$1.1 million per month on imported poultry from China and Russia which results in an enormous amount of economic capital exiting the country. To help remedy this problem, one single poultry farm was established in Mongolia in 2013. This is a closed operation, unwilling to share its knowledge or resources with others interested in growing the poultry business within the country. This one business is not enough to meet the country's demand for poultry, in fact, it only supplies a small portion of the total market demand of the capital city, Ulaanbaatar.

Although individual households do tend to grow their own chicken, turkeys, ducks, and geese, this is only enough to meet their individual needs. With the main goal of helping the people and economy, Organic Protein LLC is looking to expand into broiler hen production by establishing a large scale poultry farm. The goal is to provide not only an opportunity for Mongolians to learn poultry farming, but also to provide better quality chicken meat, and reduce the amount of capital leaving the country from poultry imports.

#### Introduction:

Finalized project statement:

An easily adaptable Canvas Business Plan was created for the expansion of Organic Protein LLC to include a large-scale poultry production facility by the UC Davis D-Lab. Throughout the course, the team has been in close collaboration with the client, Selenge Chadraabal, who is the owner and CEO of Organic Protein LLC and UC Davis Hubert H. Humphrey fellow. Mrs. Chadraabal's original project proposal to D-Lab focused on the feasibility and analysis of two different farm models, an education plan, plot map, market analysis, and financial projections. After some consideration, it was decided that within the scope of the ten weeks spent on the project the focus should be on crafting a Business Model that the client can edit as the company evolves to aid in securing financial opportunities *Background information:* 

Organic Protein LLC currently produces quail eggs for sale in and around Ulaanbaatar, the capital of Mongolia. The company is looking to expand to a large-scale poultry farm.

Organic Protein LLC currently owns a two hectare plot of land but requires the infrastructure to become a successful business. The estimated startup cost is \$300,000.

#### Methodology:

To complete our These were made using the four-lenses approach, which focuses on the technological, environmental, financial and social aspects of a project. In order to best cover the needs of Organic Protein LLC within the scope of UC Davis D-Lab many different tools were utilized.

Organic Protein LLC needed a business model for the large scale poultry farm to be built in the Dornod Province of Mongolia. In order to fulfill the needs of the client the research team chose to use the Osterwalder Canvas business model. The Canvas business model was chosen because it is easy to use, widely accepted in the entrepreneurial world, easily adaptable so the client will be able to easily edit the document as the project develops. The Canvas business model is comprised of nine blocks: Customer Segment, Value Proposition, Channels, Customer Relationships, Revenue Streams, Key Resources, Key Activities, Key Partnerships, and Cost Structure. Two options were proposed to the client: have the team research three to four blocks in-depth or provide a brief overview of each block. The client chose the latter.

In addition to creating a business plan for the client, the research team also conducted a stakeholder analysis which was then later used to compose the Key Partners block. This analysis was used to identify the client's key partners and establish competitors. The stakeholders found the already established relationships that Organic Protein LLC has established with grocery stores and restaurants along with consumers, government, employees, potential students, and investors.

A SWOT analysis was conducted between the biggest competitor, Capital Market LLC, which imports poultry from China. The SWOT analysis discusses the strengths, weaknesses, opportunities, and threats of both companies. When comparing the two entities, it is evident that the weaknesses of the competitor were the strengths of Organic Protein LLC. This tool illuminated the weaknesses and strengths of Organic Protein LLC. The client can utilize the strengths as a focus for advertising to gaining more customers. By knowing the weaknesses of the company the client will know exactly what problems to prioritize to improve the product and

marketing. Knowing the strengths and weaknesses of the company will assist Organic Protein LLC to appeal to investors and/or grants. The SWOT analysis will demonstrate how this project is different from the rest, why will it succeed, and why it is different from other producers to potential investors. Similarly, the analysis will outline what the risks of the project are and what the potential failures are, recognizing what the client must do to mitigate or avoid those issues.

An analysis of the policies in Mongolia was conducted to identify the policies the client should be aware of. The types of policies/regulations that were researched into include water, waste management, and requirements many of Mongolian banks needed to be fulfilled by the loaning party. Utilizing these policies will assist in planning the poultry farm so the client does not face negative ramification due to improperly following the policies of the area.

Due to the high amount of startup capital needed, the team decided to research potential ways that the client can raise sufficient funds. The client expressed a desire to avoid loans so the focus of the research was grants. Although the grants will not be sufficient to fully fund the project, the funding can be utilized by the client to begin construction.

#### Results and Discussion:

The results of the stakeholder analysis reflected the vast network of established stakeholders that will both be positively and negatively affected by the company. For instance, the client has many established relationships with grocery stores and restaurants in Mongolia and most have already discussed interest in continuing partnering to include the sale of poultry. The present ties Organic Protein LLC has with grocery stores and restaurants will also benefit the consumers. They will have greater accessibility to purchase much more nutritious and better quality chicken products. Other stakeholders that will also benefit from the establishment of this

project are the employees and the future students the project hopes to help start up their own poultry farm. The stakeholders that will not benefit from the poultry sales are the companies importing poultry and the single poultry farm in Mongolia. These companies will have another competitor within country that is producing product that is much more nutritious, better quality, and is open to sharing their knowledge with others. By doing so Organic Protein LLC will be creating job opportunities and actually cater to the desires of the Mongolians making her product more desirable.

The the SWOT analysis depicts Organic Protein LLC compared to its biggest competitor Capital Market LLC, a poultry importing company from China. It is illustrated that the strengths and opportunities of Organic Protein LLC are the Capital Market LLC's weaknesses and threats. This analysis also shows the client their own shortcomings so focus can be put on ways to improve the business. For instance, the company is not currently financially able to have a full scale large poultry farm and would not fairly compete with the large scale importer. Additionally, this tool shows Organic Protein LLC its greatest assets that can be further exploited like consumer trust.

The analysis of financial opportunities provided to the client illuminated many concerns with funding the entire project through grants. Because Organic Protein LLC is a for-profit organization, it will not provide more affordable chicken than what is already on the market. Because Organic Protein LLC will not have any immediate effects on the education of the local people, the amount of grants the company can apply to is severely limited. Although the research team found three potential grants that the client can apply to with the hopes of securing funding, the amount of funding is significantly less than the estimated start up cost of \$300,000.

The policy analysis provided much insight as to what the client needs to consider when construction begins on the farm. The research suggests that the client should keep in mind the waste that the company will accumulate; it was concluded that one of the best ways that the client could mitigate this is by reusing the waste for compost. The client already expressed an interest in selling the compostable waste to the farmers and miners in Mongolia. The only issue with composting waste is that, as seen with many other large scale poultry farms, there is usually more waste made than can be sold to local farmers. For this reason, further research needs to be done to determine how big the market would be for this type of compost. Other policy based research done was on the Kherlen river which the client explained to be the nearest waterway to the site of the project. In the research it was found the waterways of Mongolia had protection zones of between 200-500 meters where it is prohibited to excavate, construct, cultivate, or remove natural resources from. The client's site will be 30,000 meters away from the Kherlen River and will therefore not endanger the waterway and its protection zone.

The overall business model outlines each block and includes diagrams and appendices to clearly explain each section. This model was created with the intention of briefly addressing each of the nine blocks to provide the client with a starting point and direction. The following is the finalized business model outline crafted by the research team.

#### **Customer Segments**

Currently, Organic Protein LLC's customer segment is a niche market but in the future, the company could extend to a mass market segment. The target market is people who are willing to pay slightly more for poultry because it is of better quality and would support the local economy. The business is projected to be successful in this customer segment because there is

currently wide support for local businesses and better quality meats. There has also been an upward trend in poultry consumption in Mongolia in recent years and the market is continuing to grow. The niche segment is divided into the distributors (restaurants and grocery stores) and the individual customers. Individual customers are the target market but because Organic Protein LLC will not be selling directly to the consumers, the avenue of sale will be through restaurants and grocery stores.

#### Value propositions

Compared to competitors the poultry industry both in and importing to Mongolia, the poultry of Organic Protein LLC will be of better quality which will be of great benefit to customers. The target audience in Mongolia already does not trust the meat from the importing competitors due to evidence showing its lesser quality such as the bones of imported chickens which are brown as opposed to white due to lack of essential nutrients. Additionally, the poultry from this site will be slaughtered closer to the site of consumption, meaning that the meat will be more fresh and there is a decreased risk of adverse health effects due to spoilage. For people who want to eat poultry because of the dietary benefits, the value provided would be increased accessibility to poultry and the reduced health risks of eating the competitor's poultry which is of poor quality. For customers who want to support the local economy, this business will create moral value - these consumers will buy Organic Protein LLC's poultry because they highly value a moral responsibility to support local companies.

#### Key Partnerships

An integral partnership Organic Protein LLC has is with the local government. The company has established a very close relationship with both the governor of the Dornod Province

and the Head of Division Policy Department at Governor's office. With this relationship Organic Protein LLC will have government support and have a relatively smooth transition to poultry farming.

Because of Organic Protein LLC's involvement in the Humphrey Fellowship program at UC Davis, key partnerships were established between the company and UC Davis D-Lab. UC Davis D-Lab encourages Development via Dialogue, Design & Dissemination and is an asset due to their educational components and extensive network. Additionally, through opportunities provided at UC Davis, Organic Protein LLC has a network of educational resources as well as connections with existing poultry operations.

Organic Protein LLC's key sale partners are the owners of the various restaurants and grocery stores with which relationships have been developed. Other key partners of Organic Protein LLC include the businesses that will supply the equipment and services necessary for the company's operation; this would include veterinarians, feed supply, technology and machinery suppliers. The employees of Organic Protein LLC with be crucial for the operation to run successfully and are therefore also considered key partners to the business.

Potential partnerships can be formed with mining companies who can purchase both the poultry meat for consumption as well the manure for environmental remediation projects.

Because of the health benefits of eating lean chicken over other meats, other potential partnerships can be formed between the company and various healthy living and special diet clubs/organizations. Eventually, the company will expand to include an educational component so other potential partnerships are with the prospective students. These students will be individuals from the local area who are interested in beginning their own backyard operations.

those who already have backyard chicken operations and want to expand, and those who become informed and encouraged through government channels.

For additional information, please reference appendix 1.

#### Channels

The channels provide a point where the consumers receive the poultry meat and other products from key partners. Key channels identified for Organic Protein LLC are each individual grocery store and restaurant that have an established or growing relationship with Organic Protein LLC. Another associated channel is Organic Protein LLC itself in regards to providing other stakeholders with consumer funds.

## Sample Product Flow



Value Proposition

Channel

Key Partners

#### <u>Customer Relationships</u>

The direct customers for Organic Protein LLC have already been established with restaurants and grocery stores in Mongolia, indirect customers the company wishes to target are the people buying poultry from these providers. Organic Protein LLC has already established a personal relationship with the stores buying the product, Organic Protein LLC renews contracts

with the stores and restaurants on a yearly basis while maintaining contact with them throughout the year and sending friendly holiday and greeting cards. The main person of physical contact will be the employee delivering the product so ensuring that this individual is well-informed and able to convey messages to and from the company.

For the individual buyers, Organic Protein LLC will be geared towards customers who are interested in purchasing healthy and nutritious food. The outreach methods for reaching these customers will be personal visits to local health clubs and nutrition groups. In these visits the benefits and comparisons of poultry from Organic Protein LLC and competitors will be shown and explained to the potential customers. Through this, a personal relationship will be fostered with the initial contact of going to the customers and advertising the product first hand.

#### Revenue Streams

The revenue that the company will receive for the product will ultimately be from the individuals that buy the poultry from the stores and restaurants. The revenue from restaurants will be received 2 weeks after delivery of product and for grocery stores Organic Protein LLC won't see the revenue for 2-3 months after each delivery. The revenue process for restaurants differs from grocery stores in that it is received much faster. The process is initiated when Organic Protein LLC delivers the product to the restaurants and after delivery it takes 2 weeks to process and use the product. Then after this time the payment of product is received.

The revenue stream for grocery stores is different from restaurants because not only does it take more time to receive the payment, but product delivery is a much bigger quantity than for restaurants. The product is delivered in bulk and after a month, the store notifies Organic Protein LLC how many chickens were sold. Based on the number of chickens sold, the store and

company will agree on a price for payment and the company will receive a payment about a month later. If not all of the product was sold from the previous delivery, the products will roll over to the next month and the grocery store and company will repeat the above process.

#### Key resources

In order to run this company, the most essential resource will be infrastructure. Since Organic Protein LLC currently only outsources quail eggs, there is a need for completely different buildings, equipment, services, and operations. See below for a detailed outline of the materials necessary. It will also be important to have physical evidence such as data and photos to show the product's superiority to customers. The operation already secured two hectares of land to utilize with a nearby river. The company currently has 4 employees and will only need to hire on two extra people to accommodate the expansion.

For additional information, please reference appendix 2.

#### Key activities

There will be various activities that Organic Protein LLC will need to perform in order to start and maintain the company business. The first step will be to obtain and construct all necessary infrastructure. Following the infrastructure, the company will need to hatch, vaccinate, slaughter and send the poultry to the distributors. It is imperative that the parent flocks are managed correctly to maintain a large flock and constant flow of broiler hens. To market the poultry, the company will make personal visits to health clubs, support groups, and other interest groups to share data and personal narratives. The company will need to maintain contacts and be receptive to feedback as well as continually evaluate marketing, production and operations.

For additional information, please reference appendix 3.

## Cost Structure

Since Organic Protein LLC already has land, the startup cost will be the cost of infrastructure. Ongoing costs include feed, gas for transport, salary, taxes, veterinary cost, and electricity.

## Strength, Weakness, Opportunity, Threat Analysis and Comparison

## Organic Protein LLC

Strengths	Weaknesses
<ul> <li>Have already established distribution routes</li> <li>Have some experience in the industry</li> <li>10 hours from UB - no contact with other birds (no diseases)</li> <li>Already have employees set up</li> </ul>	<ul> <li>Financial resources</li> <li>New to the broiler hen industry</li> <li>10 hours away from UB - transportation is difficult, increase the cost to get feed and deliver the product</li> <li>Higher cost</li> <li>Employees need training (will be trained by Selenge)</li> </ul>
Opportunities	Threats
<ul> <li>More trust for the product</li> <li>Customers value supporting local economy</li> <li>Local governmental support</li> <li>Don't have to pay the import/customs taxes</li> <li>Lower tax; 10% normally but 1% for agriculture on earnings</li> </ul>	<ul> <li>Disease</li> <li>Not experienced veterinarian experience</li> <li>Potential pushback from the importers because taking their business</li> </ul>

Capital Market LLC (China-based poultry business)

Strengths	Weaknesses
<ul> <li>Financially sustainable</li> <li>Experienced</li> <li>Cheaper price because not actually farming the chickens</li> <li>Don't have the risk of mortality</li> </ul>	<ul> <li>People don't trust quality of their chicken</li> <li>Stigma that China's quality is much worse, because they choose the cheapest option</li> <li>Imported from china - takes 3 or 4 days to get to UB</li> <li>Don't have control over farming practices</li> </ul>
Opportunities	Threats
<ul> <li>Economic crisis in Mongolia</li> <li>Very few suppliers 2-3 importers, 1 major operation in Mongolia</li> <li>Chicken consumption has increased, fast food (fried chicken, etc.)</li> </ul>	<ul> <li>Customer attitude to consume healthy product</li> <li>Have to pay a customs tax (crossing borders)</li> <li>Higher risk of transportation problems</li> <li>Potentially shut down for some time if there is an outside disease</li> </ul>

Although Capital Market LLC is able to sell their poultry for a lesser cost, Organic Protein LLC will be a more trusted brand and will not have to pay as many taxes and has a lower risk of being shut down due to disease. Even though Capital Market LLC is more established and has more experience with broiler hen farming once established, Organic Protein LLC, has vast connections with local markets and government support. Additionally, Organic Protein LLC has educational assets in poultry farming from UC Davis and past business experiences.

### Financial Opportunity Research

#### **Women and Minorities in STEM Fields**

*Link:* https://researchfunding.ucdavis.edu/#announcement/5082

*Amount:* up to \$100,000

Deadline: Wednesday, March 28th 2018

Description:

participation by women and underrepresented minorities from rural areas in STEM. NIFA intends this program to address educational needs, as determined by each institution, within broadly defined areas of food and agricultural sciences and related disciplines. Applications recommended for funding must highlight and emphasize a competent and qualified workforce to guide the food and agricultural sciences system. WAMS-funded projects should improve the economic health and viability of rural communities by developing research and extension initiatives that focus on new and emerging employment opportunities in STEM occupations. Hence, the goal of WAMS projects is to meet the national challenge to increase the

The purpose of this program is to support research and extension projects that increase

having a food and agricultural sciences workforce representative of the nation's population).

number and diversity of students entering food and agriculture-related STEM disciplines (i.e.

Projects that contribute to the economic viability of rural communities are also encouraged.

Requirements: Any individual(s) with the skills, knowledge, and resources necessary to carry out the proposed research as the Program Director/Principal Investigator (PD/PI) is invited to work with his/her organization to develop an application for support.

For the FY 2018 award cycle, NIFA intends to support projects with a target audience of K-14 students (kindergarten through twelfth grade plus two years of post-secondary schooling (e.g., vocational technical institutions or community or junior colleges). 4 year undergraduate, graduate and post-doctoral focused projects will not be awarded under this grant announcement.

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Projects with a primary target of 4 year undergraduate, graduate and postdoctoral studies should

consider NIFA's workforce and development focused programs. More information is available

here: <a href="https://nifa.usda.gov/resource/nifa-reinforces-agriculturaleducation-pipeline">https://nifa.usda.gov/resource/nifa-reinforces-agriculturaleducation-pipeline</a>

*Note:* This may be something to look into next year - the focus may be different

**Asia Foundation Grants** 

*Link*: https://asiafoundation.org/wp-content/uploads/2016/04/grantguidelines-2.pdf

Amount: TBD

Deadline: TBD

Description:

The Asia Foundation undertakes grant making with organizations as a collaborative process of

problem identification and strategic planning within our areas of programming interest. Our

programs address critical issues affecting Asia in the 21st century—governance and law,

economic development, women's empowerment, environment, and regional cooperation. In

addition, our Books for Asia and professional exchange programs are among the ways we

encourage Asia's continued development as a peaceful, just, and thriving region of the world.

Please review our country programs highlights and current Project Lists to see if your project

falls within the scope of the Foundation's current programs. The Foundation directs its support to

activities that are within its current interests and are likely to have a wide effect. Most of the

Foundation's grants are made to organizations in Asia. The Foundation does not make grants

either to individuals or to U.S-based organizations.

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*Notes:* This is a grant that requires some steps before the call is released. It is encouraged to do

the following:

1. Review The Asia Foundation's program areas.

2. Submit to the appropriate office a brief letter of inquiry to determine whether the Foundation's

present interests and funds permit consideration of the request. The letter of inquiry

should include: a very brief introduction about the grant-seeking organization, a brief

project description, and budget estimate.

3. After receiving the letter, Foundation staff may reply informing the grant seeker as to whether

or not the project fits within the The Asia Foundation's interests. If it does, Foundation

staff may ask the grant seeker to submit a formal proposal and/or raise questions for

clarification of proposed project. There is no grant application form.

**Alumni Impact Award** 

*Link*: <a href="https://www.humphreyfellowship.org/Alumni">https://www.humphreyfellowship.org/Alumni</a> Opportunities

*Amount:* up to \$10,000

Deadline: TBD

Description:

The Humphrey Program offers two grant programs for alumni. The *Alumni Impact Award* offers

up to \$10,000 to alumni to implement a project in their home country or region. The *Professional* 

Development Grant provides funding for alumni to attend a conference, workshop or other

professional activity.

Humphrey alumni are also eligible to apply to receive funding to implement an Alumni Regional

Workshop. These workshops, designed for alumni from a given world region, should be

"action-based" and focus on a topic which is relevant across multiple professional fields.

Alumni interested in learning more about these opportunities can complete the contact form here

and an IIE staff member will be in touch.

Humphrey Program alumni are encouraged to connect with the alumni of other Department of

State programs through International Exchange Alumni.

*Note:* This only available for alumni.

Recommendations:

Moving forward, the research team has assembled recommendations for the business as it

evolves into the poultry farm. The team would like the client to consider renaming the business

because the use of "organic" in the name may mislead the consumer to think that the company is

using certified organic practices to raise and produce the poultry. The concern is that this name

may cause marketing problems in the future. Because of the large amount of funding the project

requires, the research team recommends that the client look into microfinance and small loans.

The client could also start with the minimal amount of infrastructure needed then increase the

business as the business turns a profit. It would be beneficial for Organic Protein LLC to focus

more marketing resources specifically toward women because they manage both the finances and

shopping for Mongolian families.

The research team concluded it would be of the client's best interest to conduct more

research on the demand and market of utilizing chicken byproducts (manure, feathers, deceased

hens, etc.) as fertilizer/compost. It was clear the interested groups would be the local farmers and miners, but as aforementioned, the client needs to determine if there will be an excess of waste. For this reason, it would be beneficial for the client to seek out the established market for such a product and determine if the market is sufficient. If not, the client must plan other means of waste management before undertaking composting and fertilizer as the only means of waste management.

Additionally, the research team has compiled a list of recommendations for the client to consider when adapting the business model. It would be extremely beneficial for the client to include a logo to reinforce the company's legitimacy and professionalism. If a logo exists, the team recommends inserting it on the cover page of the business plan. If Organic Protein LLC does not have a logo, the team recommends either creating one or contracting a graphic design company to craft one. The research team highly encourages the client to continue to research and adapt the business model as the project evolves. The current business model is by no means an exhaustive, complete document and was designed with the intention of being easily changed and expanded by the client.

#### Works Cited

Chadraabal, Selege. "BROILER FARM." Manuscript.

Chadraabal, Selege. "Bio Selenge-Final." Manuscript.

DEMBEREL, D. "Law of Mongolia on Water." 17 May 2012.

"Mongolia ." Food and Agriculture Organization of the United Nations.

"Mongolian Sustainable Finance Principles Agriculture Sector Guideline." International Finance Corporation, July 2014

www.ifc.org/wps/wcm/connect/46e26800476d9d7985b2f5299ede9589/MBA\_Agricultu e-Sector-Guideline Final.pdf?MOD=AJPERES.

"Waste Management." Poultry Hub,

www.poultryhub.org/production/husbandry-management/housing-environment/waste-management/housing-environment/housing-en

Williams, C. (2018). [online] Fao.org. Available at:

http://www.fao.org/docrep/013/al715e/al715e00.pdf

Yv igneur. Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers. Hoboken, John Wiley & Sons, Inc., 2010.

# Appendices:

# Appendix 1:

Sector	Stakeholder Name	Interest (+), (-), (?)	Potential Impact High: Essential to involve Medium: Desirable to involve Low: Involve if possible	Level of involvement Informed, Consulted, Partners, Controlling	Position/ Role	Interests
Restaurants	Soyol tuv	(+)	Medium	Informed	900/month	Purchasing quail eggs; potential interest in broiler hen meat
	Shangri La	(+)	Low	Informed	300/month	Purchasing quail eggs; potential interest in broiler hen meat
	Kempinski	(+)	Low	Informed		Purchasing quail eggs; potential interest in broiler hen meat
Grocery	Nomin 5 LLC	(+)	High	Partners, consulted, and Controlling	many branches in UB and 5 provinces	Retailing quail eggs currently; interest in broiler hen meat
	Minii delguur	(+)	High	Partners, consulted, and Controlling	branches in UB	Retailing quail eggs currently; interest in broiler hen meat
	Good price	(+)	High	Partners, consulted, and Controlling	4 branches in UB	Retailing quail eggs currently; interest in broiler hen meat

Sansar	(+)	High	Partners, consulted, and Controlling		Retailing quail eggs currently; interest in broiler hen meat
Khanburgedei	(+)	Low	Partners, consulted, and Controlling	2 branches in UB	Retailing quail eggs currently; interest in broiler hen meat
Sarnaih	(+)	Low	Partners, consulted, and Controlling		Retailing quail eggs currently; interest in broiler hen meat
Mercury	(+)	High	Partners, consulted, and Controlling	1 store	Retailing quail eggs currently; interest in broiler hen meat
Olixon	(+)	Medium	Partners, consulted, and Controlling	4 branches in Dornod	Retailing quail eggs currently; interest in broiler hen meat
Deeshleh nar	(+)	Medium	Partners, consulted, and Controlling	1 store in Dornod	Retailing quail eggs currently; interest in broiler hen meat
Narlag	(+)	Low	Partners, consulted, and Controlling	1 store in Dornod	Retailing quail eggs currently; interest in broiler hen meat
AISVN	(+)	Low	Partners, consulted, and Controlling	1 store in Dornod	Retailing quail eggs currently; interest in broiler hen meat
Naran	(+)	Low	Partners, consulted, and Controlling	1 store in UB	Retailing quail eggs currently; interest in broiler hen meat

	Home Plaza	(+)	Medium	Partners, consulted, and Controlling	2 branches in UB	Retailing quail eggs currently; interest in broiler hen meat
	Undug	(+)	Low	Partners, consulted, and Controlling	1 store in UB	Retailing quail eggs currently; interest in broiler hen meat
	Eco market	(+)	Low	Partners, consulted, and Controlling	1 store in UB	Retailing quail eggs currently; interest in broiler hen meat
	Azjin	(+)	Low	Partners, consulted, and Controlling	1 store in UB	Retailing quail eggs currently; interest in broiler hen meat
	EFES	(+)	Medium	Partners, consulted, and Controlling	3 branches in UB	Retailing quail eggs currently; interest in broiler hen meat
	Eastren Foods	(+)	Medium	Partners, consulted, and Controlling	4 branches in Dornod	Retailing quail eggs currently; interest in broiler hen meat
Consumers	Shin Shin LLC (mining company)	(?)	Low		about 500 employees	Potential consumer
	Petro Dachin Tamsag (mining company)				about 1000 employees	
	Special diet groups at Facebook	(+)	Medium	Informed		Potential consumer

Employees	Onon	(+)	High	Controlling	Manager	Oversee daily operations
	Accountant Position	(+)		Controlling	Accountant	
	Enkh-Erdene	(+)	High	Controlling	Sales person	
					Worker	
	Byambatsogt	(+)	Medium	Controlling		
	Buyantsogt	(+)	Low	Controlling	Worker	
	Battsogt	(+)	Medium	Controlling	Worker	
	Additional Worker	(+)		Controlling	Worker	
Government	Badamsuren	(+)	Medium	Controlling	Governor	
	Enkh-Otgon	(+)	High	Controlling	Husband/He ad of Division Policy Department at Governor's	
	Agriculture Department	(+)	Medium	Controlling		
Investors	Grant	(?)	High			
	Private investors	(?)	High			
	Impact investors	(?)	High			
Potential students	Local population	(+)	Medium			

	Davis D-Lab	(+)	Medium	Partners		Have relation
Universities	Polytechnical college of Dornod	(?)	Low	Partners		Have relation
	UB company	(+)	Low	Partners	Laboratory	have relation
	Local company		High	Partners	Veterinary	no relation
	Local company		Medium	Partners	Maintenanc e	no relation
		(?)		Partners	Equipment	no relation
	Avia gen company branch in China	(?)	High	Partners	Chicks for parent flock	no relation
	Itgelt	(+)	High	Partners	Packaging	have relation
Supplies	Baylag Emeelt	(+)	High	Partners	Feed company	have relation
	Anjigana Orgio	(-)	High		Local	
	NVTs	(-)	High		Importer	
Other Competitors	Capital Market		High		Importer	
	chickens	(+)	High			
	People who already have backyard					
	Others recruited by Government	(+)	Low			

Agricultur	al				
University	' in				
Ulaanbaat	ar (?)	Low	Partners	No relation	

## Appendix 2:

Infrastructure	Specifics:	Quantity:	Size:	Price
Land				
	2 Hectares		2 Hectares	
	Perimeter Fence		600m	
Barn for the parent foul		1	6m x 30m	
	Feeding System			
	Feed Tank			
	Water Systems			
	Water Tank			
	Egg Laying Boxes			
	Light System			
	Heating System			
	Ventilation System			
Hatchery		1		
	Incubator	2		
Barn for Broilers		4	6m x 30m	
	Feeding System	4		
	Feed Tank	4		
	Water Systems	4		
	Water Tank	4		
	Egg Laying Boxes	4		
	Light System	4		

	Heating System	4		
	Ventilation System	4		
Processing Unit		1		
	Slaughter Cones	8		
	Hanger			
	Hot Water Tank	2		
	Feather Removing Spinner	8		
	Stainless Steel Table			
	Vacuum Package Machine			
	Knives			
Storage with Freezer		1		
	Freezer	6	Capacity of one ton	
Office		1		
	Computer Monitoring System			
	Computer			
	Printer/Copier/Scanner			
	Managerial Software			
	Office Tables			
	Office Chairs			
	Drawers			
Transportation				
	Truck with Freezer		Capacity of 2-3 tons	
	Truck			
Utilities				
	Well			

Transformer		
Generator		

## Appendix 3

#### **Activities and Duration**

- Building facilities
  - o 2 Months
- Purchasing parent fowl chicks
- Arising pullets
  - o 4 months
- Start laying eggs
- Collecting eggs for incubator
  - o 7 days
- Incubate eggs
- Raising Broilers
  - o 45 days
- Processing one barn
  - o 2 days
- Preparing barns for next flock
  - o 7 days
- Supply go market
- Make balancing with distributors
- Getting payments