

**Kenya**

**Preparatory Survey for BoP Business Promotion  
Preparatory Survey on BOP business on  
producing a low cost preserved food by  
utilizing sorghum  
(Kenya)**

**Final Report (Summary)**

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**Japan International Cooperation Agency (JICA)**

**Nissin Foods Holdings Co. Ltd.**

**PricewaterhouseCoopers Sustainability Co. Ltd.**

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## 1. Study Overview

This report is a summary version of “Preparatory Survey on BOP business on producing a low cost preserved food by utilizing sorghum”fa conducted by Nissin Foods Holdings Co. Ltd., further described as Nissin Foods HD, in cooperation with Pricewaterhousecoopers Sustainability Co.

### 1.1 Background and Objective of the Study

#### 1.1.1 Background of the Study

Momofuku Ando, the founder of Nissin Foods HD, had envisioned that to establish a peaceful world, first, access to food which is safe, nutritious, high preservation, and easily available must be secured. This idea had led to the invention of the world’s first instant noodle, “Chicken Ramen.” With such a historical background, Nissin Foods HD provides high quality food to more than 80 countries around the world.

As one of Nissin Foods HD’s many activities, Nissin Foods HD launched an “Oishii Project” in Kenya on 2008. In this project, Nissin Foods HD collaborated with Jomo Kenyatta University of Agriculture and Technology (JKUAT) to develop a new instant noodle product for the local market. Nissin Foods HD also set up a small laboratory, which allowed manufacturing of noodles, using local wheat, up to 900 foods per day. The manufactured products were then distributed to 11 schools as school lunch using mobile kitchen-car. The project had successfully distributed over 63,000 noodles around Kenya.

Chart 1.1-1 Oishii Project



Chart 1.1-2  
Established a small-sized  
laboratory in JKUAT



Reference: Nissin Foods HD Website

Chart 1.1-3 A mobile kitchen  
car with water equipment



Reference: Nissin Foods HD Website

Chart 1.1-4 Distributed free  
lunch to elementary schools  
in Nyeri suburb



Reference: Nissin Foods HD Website

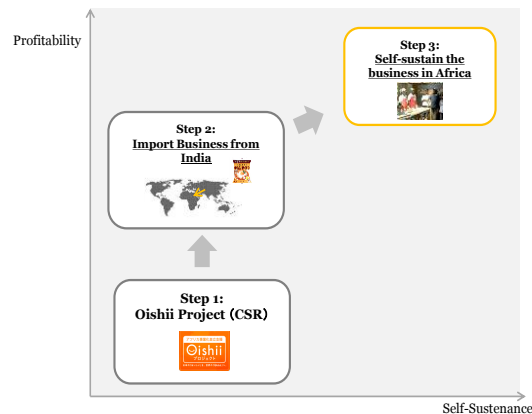
Through this project, Nissin Foods HD believes that contribution to social issues, such as poverty and low production of agricultural goods, is essential to succeed in the Kenyan market. Hence, Nissin Foods HD has decided to conduct a feasibility study to find a business model which would not only benefit financially, but at the same time, would contribute to the reduction of poverty and other local social issues.

### 1.1.2 Objective of the Study

The objective of the study is to create a business model which is self-sustaining in Kenya. This includes local procurement of raw materials, local production, and local sales.

Hence, this study will focus on the feasibility of supplying locally grown raw materials and feasibility of sales to local BOPs.

Chart 1.1-5 Steps to self-sustaining business model



Reference: Made by Research Team

### 1.1.3 Target Product in this Study

The target product of this study is Nissin Noodles, which first appeared in the market in October, 2013. There are two flavors, chicken and nyama choma, a local barbeque. The price per pack is 30KES and its size is 70 grams per pack.

Chart 1.1-6 The package of Nissin Noodles

#### Package Design



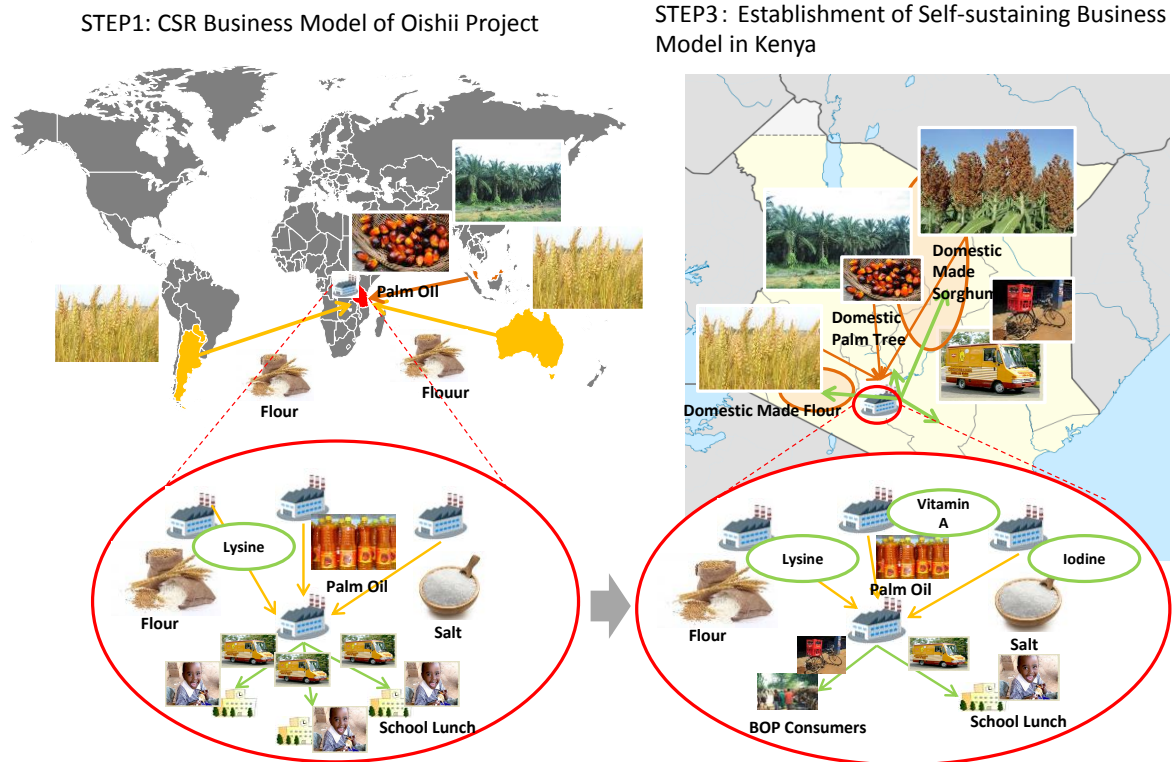
Reference: Cited from "Nissin Food Holdings launches instant noodles business in Kenya under a partnership with JKUAT" (Accessed on 2014/28/4) [http://www.kenyarep-jp.com/news/13/130522\\_e.html](http://www.kenyarep-jp.com/news/13/130522_e.html)

### 1.1.4 Hypothesis of the Business Model

The business plan of Nissin Foods HD in Kenya is made from three steps. The first step is the CSR activity, "Oishii Project," which began in 2008. The second step is a business model, which imports already made Nissin Noodles from the Indian factory and sell to MOPs and upper BOPs for 30KES/pack. Lastly, the third step is a business model which the joint venture with JKUAT, JKUAT Nissin Foods Ltd., establishes a local plant for the local production of Nissin Noodles. This will allow a cheaper instant noodle production which would be targeted at lower BOPs in the future. In addition, the current supply of raw materials strongly relies on imports, whereas the initial procurement plan of Nissin Foods HD is to purchase from local farmers to further reduce cost. The comparison of the first

step and the third step is described on the diagram below.

Chart 1.1-7 The Comparison of bussiness models Step1 and Step3



Reference: Made by Research Team

Below is a chart which defines and explains the characteristics of each step.

Chart 1.1-9 Features on Each Step for Self-Sustaining the Business in Africa

	Step 1 : Oishii Project	Step 2: Import Business from India	Step 3: Self-Sustain the Business in Africa
Key Point	<b>CSR Project</b>	Startup a business aiming MOP and upper level of BOP	Shift the production base in Africa to reduce the costs. In addition to the upper level of MOP and BOP, <b>construct a value chain within BOP</b> , aiming to self-sustain the business locally. Targets the lower <b>level of BOP</b> as well.
Procurement	<ul style="list-style-type: none"> <li>• <b>Flour</b>: Procure from the local flour mill (<b>80% of them are imported flour</b>)</li> <li>• <b>Palm oil</b>: Purchase from the local oil plant (<b>Almost 100% import raw materials used</b>)</li> <li>• Salt: Purchase from a local self refinery</li> </ul>	<ul style="list-style-type: none"> <li>• Raw materials are all imported from India and other neighboring countries</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Flour</b>: Purchase from the local flour mill (<b>Technical support for domestic flour producers and recommend to use their productions</b>)</li> <li>• <b>Sorghum</b>: Purchase from the local sorghum mill (<b>Technical support for domestic sorghum producers and recommend to use their products</b>)</li> <li>• <b>Palm oil</b>: Purchase from the local oil plant (<b>Technical support for domestic palm oil producers and recommend to use their products</b>)</li> <li>• Salt: Purchase from a local self refinery</li> </ul>
Manufacture	<ul style="list-style-type: none"> <li>• Manufacture in the small-sized laboratory at Jomo Kenyatta University of Agriculture and Technology campus.</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacture in Nissin Foods Processing Factory of Noodle Products in India</li> </ul>	<ul style="list-style-type: none"> <li>• Establish a new factory in Jomo Kenyatta University of Agriculture and Technology</li> </ul>
Distribution	<ul style="list-style-type: none"> <li>• Supply school lunch to elementary schools in Nyeri area by a mobile kitchen car equipped with water-supply gear</li> </ul>	<ul style="list-style-type: none"> <li>• Sales through an <b>agent</b> to the upper level of MOP and BOP</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Use a bicycle or stall</b> to distribute and sell in <b>in the areas of BOP</b></li> </ul>
Consumption	<ul style="list-style-type: none"> <li>• Free distribution to school children as CSR</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Sell one meal around 20 Yen</b> to the upper level of MOP and BOP mainly in urban areas</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Sell one meal around 15 Yen</b> to BOP</li> </ul>
Product	<ul style="list-style-type: none"> <li>• Add lysine to help the absorption of protein</li> <li>• Manufacture shorter noodles to meet the preference of local consumers</li> <li>• Manufacture chicken flavor noodles to meet the taste of local consumers</li> <li>• Use the package design from the competition by the local university students</li> </ul>	<ul style="list-style-type: none"> <li>• Add lysine to help the absorption of protein</li> <li>• Manufacture shorter noodles to meet the preference of local consumers</li> <li>• Manufacture chicken and <b>nyama choma</b> flavor noodles to meet the taste of local consumers</li> <li>• Use the package design from the competition by the local university students</li> </ul>	<ul style="list-style-type: none"> <li>• Add <b>lysine, vitamin A, and iodine</b> to help the absorption of protein</li> <li>• Manufacture shorter noodles to meet the preference of local consumers</li> <li>• Manufacture chicken and <b>nyama choma</b> flavor noodles to meet the taste of local consumers</li> <li>• Use the package design from the competition by the local university students</li> </ul>

Reference: Made by Research Team

## (1) Procurement of Local Raw Materials

The procurements of four raw materials were studied: wheat, sorghum, palm oil, and artificial nutrients. Since the contribution and social impact to local farmers is a key factor in this business, these raw materials are to be made locally in Kenya.

## (2) Sales to BOPs in Kenya

The success of sales to BOPs in the Kenyan market strongly relies on distribution. Hence, the initial idea is to utilize local kiosks and street vendors in low income areas to access to BOPs. The involvement of local community is also a key factor to integrate BOPs as sales representatives.

## 1.2 Study Method

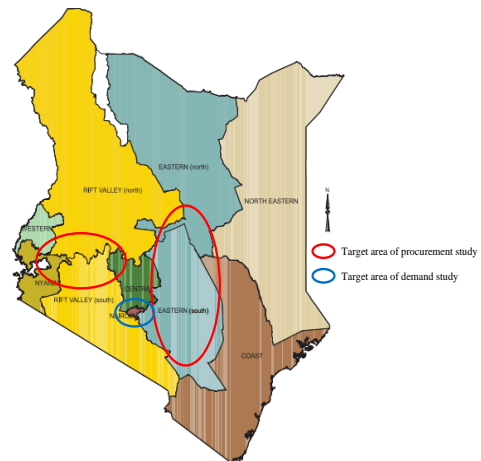
### 1.2.1 Study Area

The areas of study can be divided mainly into two areas. The first area is an area which focuses on the study of procuring local raw materials. The second area is an area which focuses on the study of local demands.

The study of supply was done in Nairobi, Eastern province, and Rift Valley province. These three areas were selected because Nairobi has many offices for a government branch, NGO, and millers and Eastern and Rift Valley province was a main production area of sorghum. In specific to palm oil, since a palm oil production was not found in Kenya, the study was conducted in the next closest production area, which was Jinja, Uganda.

The study of demand was conducted in Greater Nairobi. In Nairobi, homes of BOPs were spread either in slums or low income areas. In this study, Kibera, Kawangware, Huruma, and Dandora were targeted as the Nairobi slums, while Embakasi and Umoja were targeted as the low income areas.

Chart1.2-1 The Subject Areas of Kenya for Investigation



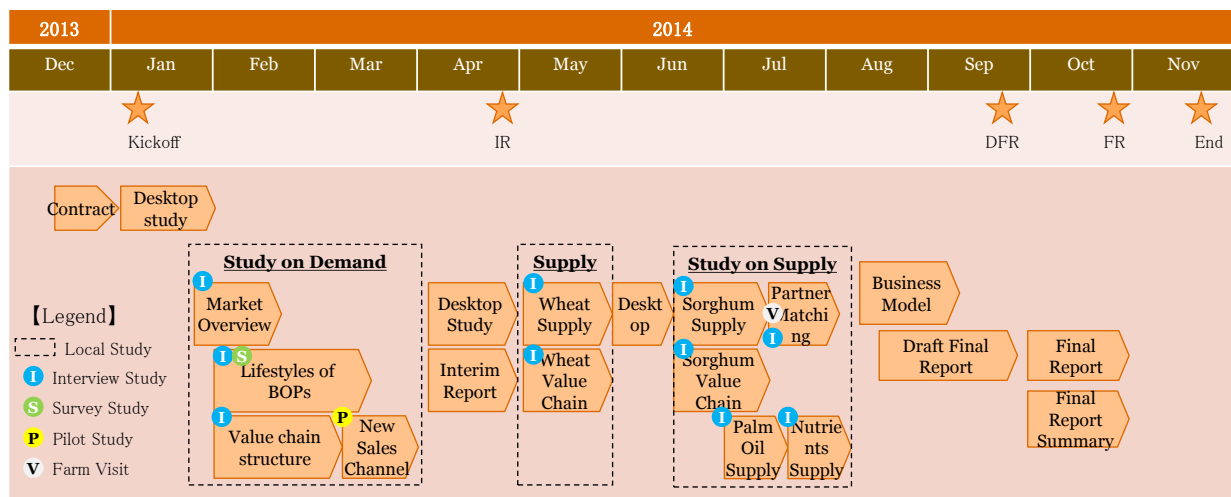
Reference : CBS, World Bank, SIDA, SID "GEOGRAPHIC DIMENSIONS OF WELL-BEING IN KENYA WHO AND WHERE ARE THE POOR? A CONSTITUENCY LEVEL PROFILE VOLUME II", The Regal Press Kenya Ltd. (2005) p.13

### 1.2.2 Study Plan

#### (1) Study Plan

This study was conducted under the following plan described below.

Chart 1.2-2 Study Plan



Reference: Made by Research Team

## (2) Study Schedule

This study was conducted from January to November of 2014. The study in Kenya was mainly divided into two, supply and demand. First, the research team focused on studies related to sales and distribution strategy. This was done mainly from February to March. Then the team focused on study of supply from May to July. Based on the study results, development of the business plan was done from August to September. Though there was a small delay of schedule, due to the local insecurity caused by terrorists, overall the study was executed as planned.

## (3) Study Method

The study was done using 5 methods: desktop study, interview study, survey study, pilot study, and on-site inspection. These study methods were used based on the study plan described above.



## 2. Result of the Study

### 2.1 Conclusion

#### 2.1.1 Feasibility of the Business

Based on this feasibility study, the research team concludes that this business can be commercialized. In terms of procurement of raw materials, wheat, palm oil, and artificial nutrients had issues either on the quality or quantity of production and were considered infeasible for this business. However, the procurement of local sorghum was concluded feasible. Also, instant noodles had strong demands from BOPs in the urban areas. With the right distribution strategy, a certain amount of sales could be expected. Hence, the final business model is a model which procures local sorghum while importing other raw materials, manufacture locally, and sell to local BOPs.

#### 2.1.2 Reason for the Feasibility Study Result

There are two main parts to the reasoning of this conclusion. The first is the procurement of four raw materials and the second is the demands from local BOPs.

##### (1) Procurement Study Result

For each raw material, the research team defined three conditions that must be met for the procurement of local raw materials to be feasible. The first condition is the production of specific variety required for manufacturing. The second condition is a stable production in both quantity and quality. The third condition is cost effectiveness, in comparison with importing. As a result, we have found that while sorghum could be procured locally, while other raw materials could not.

Chart 2.1-1 Supply Investigation Upon Judgment Conditions for the Commercialization

Raw Materials	Required Conditions for the Commercialization	Result
Wheat	Hard wheat, which is required for instant noodles, is produced	△
	Stable production in both quantity and quality	△
	Price for local procurement is cheaper than import	△
Sorghum	Sorghum suited for instant noodles is produced	○
	Stable production in both quantity and quality	○
	Price for local procurement is cheaper than import	○
Palm Oil	Palm suited for palm oil is produced	×
	Stable production in both quantity and quality	N/A
	Price for local procurement is cheaper than import	N/A
Artificial Nutrients	Artificial nutrients (lysine, iodine, vitamin A) are produced	×
	Stable production in both quantity and quality	N/A
	Price for local procurement is cheaper than import	N/A

Reference: Made by Research Team

First, we studied the feasibility of wheat procurement. Through this study, we have found that local production of hard wheat, which is the type of wheat required for instant noodles, was very limited in

Kenya. Also the production and quality was unstable and the cost of wheat did not have a significant difference in comparison with imported wheat. Due to this result, since the three conditions were not met, we have concluded that procurement of wheat is infeasible.

Second, we studied the feasibility of sorghum procurement. We have found that there are locally improved varieties that could be used for instant noodle production. Also since sorghum is a dry resistant crop, the production is stable, and cheaper than importing from foreign countries. Since the three conditions were met, we have concluded that the procurement of sorghum could be realized.

Third, we studied the feasibility of palm oil. Since the production of palm oil in Kenya is close to zero, we studied the possibility of importing from a neighboring country, Uganda. However, throughout the interviews, we learnt that Ugandan palm oil is only intended for local consumption and not for exportation. Hence, we had concluded this as infeasible.

Fourth, we studied about the feasibility of artificial nutrients. However, there was no local manufacturing company and all artificial nutrients were being imported from overseas. Hence we have concluded this to be infeasible as well.

## (2) Demand Study Result

To study the demand of instant noodles, we have specified four conditions to decide whether there are demands from BOPs in Kenya. As a result, the four conditions were met and we have concluded that there are demands of instant noodles by BOPs in Kenya.

Chart 2.1-2 Demand Investigation Upon Judgment Conditions for the Commercialization

Strategy	Required Conditions for the Commercialization	Result
Distribution Strategy	Distribute Nissin Noodles to BOP residential areas' TT in the urban district.	○
	The product price(30KES) is acceptable for BOPs in the urban district.	○
Sales Strategy	Nissin Noodles/instant noodle is recognized among the BOPs in the urban district.	○
	Nissin Noodles is accepted in the eating habits of BOPs.	○

Reference: Made by Research Team

The first condition is to distribute not only to modern trades, such as hyper markets, but also to traditional trades such as kiosks in low income areas. Through this study, we have found that there are existing distribution networks for fast moving consumer goods in Kenya. Hence, with the right distribution strategy, it allows to distribute amongst traditional trades in Kenya.

The remaining three conditions are related to sales strategy. The second condition was to set the price of Nissin Noodles as 30KES/pack, aiming to be accepted by BOPs in Nairobi. The research team conducted a survey to over 1,000 people in Nairobi, and the result states that 83% of the people consume more than 1 instant noodle in a week. This includes other competitor's product, Indomie as

well since the price range is 25KES to 30KES with a slight difference to Nissin Noodles, we have concluded that this proves 30KES/pack is acceptable to BOPs in Kenya.

The third condition was that BOPs are aware of Nissin Noodles. Based on the survey result, we have discovered that 73.9% of the people know about Nissin Noodles. Thus, this condition was met without an issue.

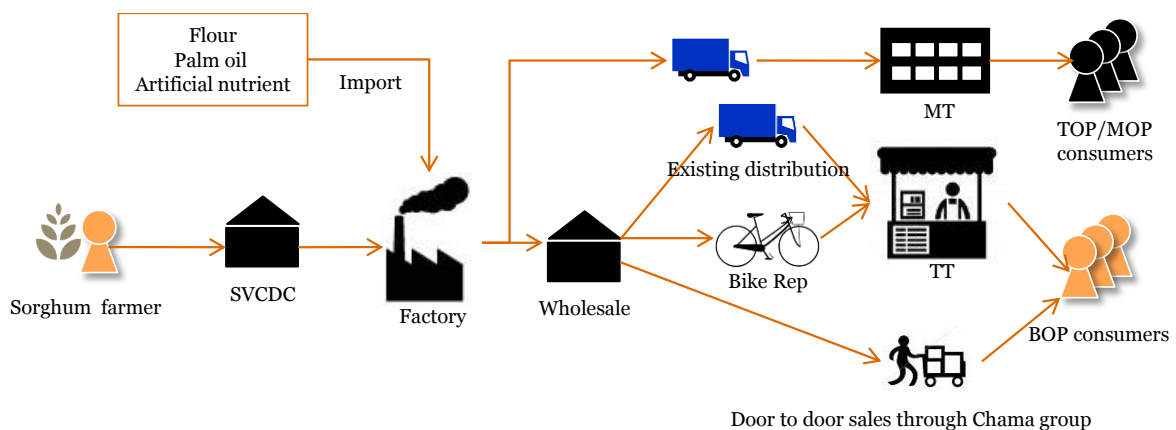
The last condition was whether Nissin Noodles could be accepted into their eating habits. Considering the fact that there are 32 million packs being sold in a year, we had decided that instant noodles are fairly accepted to people of Kenya. Also from the survey result, we had found that Nissin Noodles is considered more tasty and healthier than Indomie. With a proper market positioning, Nissin Noodles could very well be accepted in Kenyan's dietary habits.

## 2.2 Business Model

### 2.2.1 Overview of the Business Model

The business model will procure sorghum from local farmers while wheat, palm oil, and artificial nutrients will be imported. With the collected raw materials, the Nissin Noodles will be manufactured in Kenya. Then the products will be sold to TOPs/MOPs through modern trade, and to BOPs through local distribution channels. In this model, BOPs are integrated in the procurement (sorghum farmers) and distribution process.

Chart 2.2-1 Overview of the Business Model



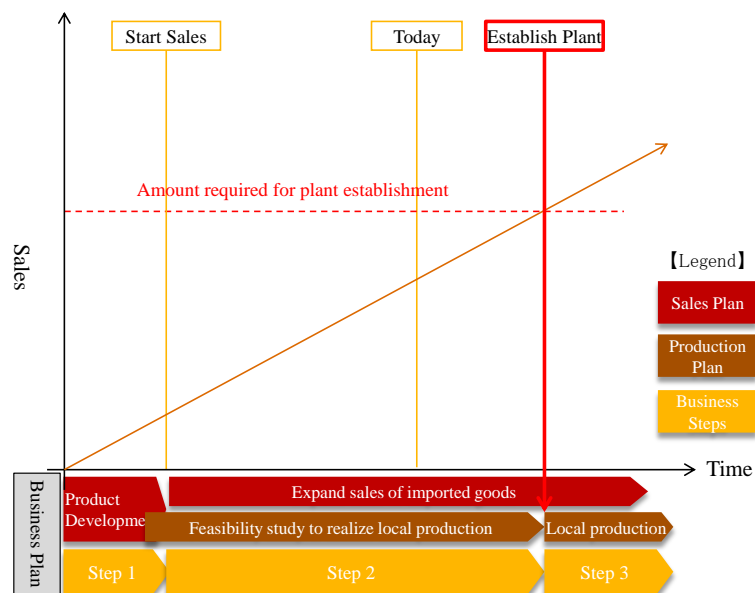
Reference: Made by Research Team

## 2.2.2 Future Schedule

This business is made of three steps. Step 1 is the CSR activity, “Oishii” project. Step 2 is the business in which imports already made products from Indian plants and sell in Kenya. The last step is to build a self-sustaining business model in Kenya where raw materials will be supplied, manufactured, and sold all locally.

The current business belongs to the stage of Step 2. For Nissin Foods HD to move up on Step 3, there are two conditions that must be met. The first condition is to have a certain sales size. The second condition is to have a feasible business model for local procurement and sales. Since the second condition was met through this feasibility study, Nissin Foods HD will continue to put effort on expansion of sales in Kenya.

Chart 2.2-2 Future Schedule



Reference: Made by Research Team

## 2.3 Value Chain Plans

### 2.3.1 Procurement of Raw Materials

As described earlier, this business requires four main raw materials: wheat, sorghum, palm oil, and artificial nutrients. Based on the study, sorghum will be procured locally in Kenya while other raw materials will be imported from overseas.

Chart 2.3-1 Procurement of Raw Materials and the Plan

	Procuring Method	Outline of Procurement Plan
Wheat	Import	•Local procurement of wheat flour is infeasible and will continue to utilize the existing supply chain of Nissin Foods HD.
Sorghum	Local Procurement	•Local procurement of sorghum is feasible, and will partner with SVCDC to establish a sorghum value chain.
Palm Oil	Import	•Local procurement of palm oil is infeasible and will continue to utilize the existing supply chain of Nissin Foods HD.
Artificial Nutrients	Import	•Local procurement of artificial nutrients is infeasible and will continue to utilize the existing supply chain of Nissin Foods HD.

Reference: Made by Research Team

The procurement of sorghum is planned to be realized through a partnership with a local sorghum company. The selected local partner is Sorghum Value Chain Development Consortium, SVCDC<sup>1</sup>. SVCDC has commercial villages to have stable production and it is also partnering with JKUAT, similarly to JKUAT Nissin Foods Ltd.

To select the local partner, we had studied whether the requirements could be met from four aspects. First is the stable procurement of sorghum, specifically 100 tons per year. Second is the price competitiveness in comparison with importing sorghum, which would roughly estimate to 35KES/kg. Third is the realization of sorghum value chain specific for these instant noodles. Fourth is to have social impact to local sorghum farmers.

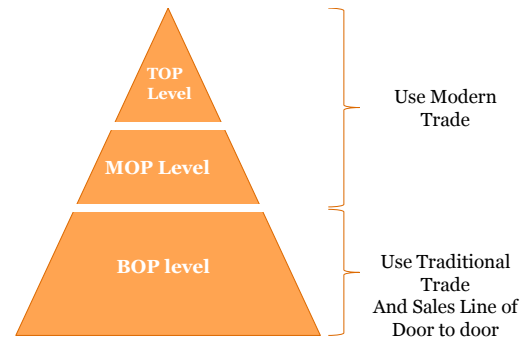
In discussion with SVCDC, we have confirmed that these four requirements could be met through the partnership. SVCDC has also showed a strong interest in the use of sorghum for instant noodles and currently are discussing details to conclude the partnership.

<sup>1</sup> The Sorghum Value Chain Development Consortium (SVCDC) Limited Agribusiness Incubator is an autonomous public-private partnership formed by participating institutions that include Jomo Kenyatta University of Agriculture & Technology (JKUAT), Kenya Agricultural Research Institute (KARI), AGRITRACE Consulting Ltd and Farming Support International (FASI) Ltd. The consortium brings together experience in agribusiness incubation, agricultural research, contract farming, linkages, fund raising, technology development, product development and commercialization, and entrepreneurship development.

## 2.3.2 Distribution

In this business model, the distribution is a key factor. To approach the whole pyramid, the research team had defined the target by sales channels. TOPs and MOPs are targeted through modern trades such as hyper markets. BOPs on the other hand will be approached through traditional trade such as kiosk and door to door sales.

Chart 2.3-2 Distribution Channels for Each Income Level



Reference: Made by Research Team

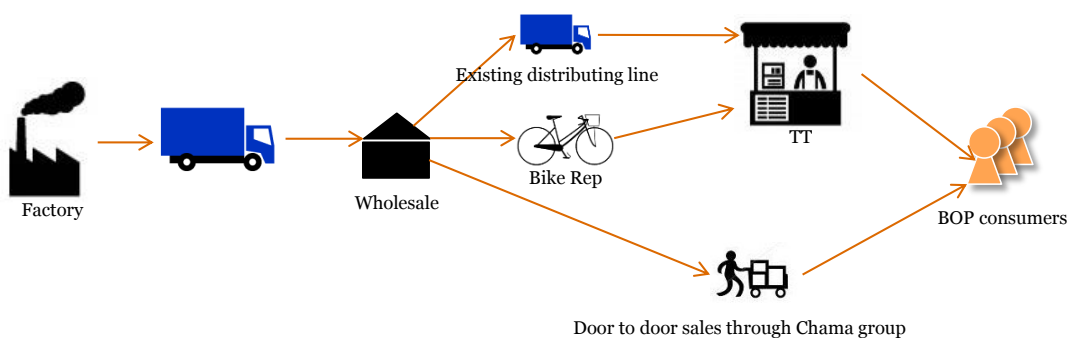
### (1) Distribution Channel for TOPs and MOPs

In Kenya, there are mainly four hyper markets, which are Nakumatt, Naivas, Tuskys, and Uchumi. Through these hyper markets, Nissin Noodles will target TOPs and MOPs.

### (2) Distribution Channel for BOPs

There are two distribution channels for BOPs, the distribution using traditional trades and distribution using door to door sales. The overview of the distribution methods to BOPs are described in the diagram below.

Chart 2.3-3 Outline Diagram of the Distribution



Reference: Made by Research Team

### Traditional Trades

The largest retail outlet to BOPs is the existing distribution network from local wholesale to traditional trades like kiosks. Nevertheless, in order to access to such outlets, first there must be awareness and demands from kiosk owners to the wholesalers. To realize such demands, Nissin Foods

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HD has formed a team of bike rep, sales representatives who will be selling the products to wholesalers and kiosks by bicycles. By using bike reps, Nissin Foods HD can directly reflect the sales promotions and also they can directly appeal the benefits of the products to kiosk owners.

### **Door to Door Sales**

To directly create demands from the consumers, in addition to distribution networks using traditional trades, we had studied the possibility of establishing door to door sales network in the slums. As sales representatives, we had decided to utilize chama groups, local women groups organized for mutual aid. Like bike reps, this would allow direct reflection of sales strategies and appeal benefits of Nissin Noodles to end consumers.

However, from the pilot test result, we have found that this requires high operational costs. Hence, further enhancement of the model is required. The operation cost is most required on money exchange. Since not all women in chama groups are trained in business, many do not follow the deadlines or payment due dates. This caused an additional individual follow up, which resulted in increase of operation costs. For this model to expand and scale up, further consideration such as mass-training is required.

## **2.4 Social Impact**

### **2.4.1 Situation of BOPs**

Through this business, social impact on sorghum farmers and end consumers may be expected.

There are approximately 700,000<sup>2</sup> sorghum farmers in Kenya. There is no large scale sorghum farmers in Kenya, meaning all 700,000 sorghum farmers are small scale farmers. Hence, their incomes are very low and many suffer in poverty. The average sorghum farmer's income is about 222KES a day. The average farm land is 3 acres and the average production rate is 333kg/acre. Considering the fact that the sales price of sorghum is 20KES/kg, this will result in about 19,980KES per season which is roughly three month. This level of income is considered as a BOP from Kenyan government standards.

The end consumers regarded in this situation are mainly BOPs in urban areas. However, urban poverty is an urgent issue and even just in Nairobi, there are over 1 million BOPs today. Many BOPs suffer lack of nutrients, especially minerals such as iodine, zinc, iron, and vitamin A. These four minerals are defined by WHO as most lacking minerals for children and women in poverty. Hence the approach to such issue is strongly required.

### **2.4.2 Social Issue and Performance Index**

Through this business, social impacts to a) poverty of sorghum farmers, b) food security, and c) lack

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<sup>2</sup> The exact statistics of sorghum farmers were not found during the study. However, according to Cereal Growers Association, 13% of the farmers registered, out of 150,000 farmers, are sorghum farmers. By multiplying this percentage to number of total farmers (5,400,000 farmers) in Kenya, it could be estimated that there are approximately 700,000 sorghum farmers in Kenya.

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of nutrition is expected.

The first two issues would be realized through the establishment of effective sorghum value chain. By establishing such value chain, sorghum farmers would be able to sell at a higher price rather than selling to brokers at a cheaper price as it is today. Sales at higher prices lead to an increase of income. Hence, this would directly impact on the sorghum farmer's poverty issue.

Also since sorghum is a dry-resistant crop, the production of sorghum is more stable and easier to produce than other popular crops such as wheat or maize. Therefore, by contributing to expansion of sorghum market in Kenya, number of sorghum farmers and sorghum farm lands would increase, and could lead to increase of total cereal production in Kenya. This would impact the food security in Kenya. The third issue would be realized through proposal of balanced diet upon sales of Nissin Noodles. By proposing balanced healthy diet, we believe this business will contribute to nutritional issues.

Next, we set the performance index to measure the social impacts in the future. First to measure the contribution to poverty of sorghum farmers, change of sorghum farmer's income is the most sufficient index. Second, to measure the contribution to food security, sorghum production is an effective index. Lastly, in order to measure the contribution of nutrition, BOPs nutritional intake is an effective index. However, these indexes are very difficult for Nissin Food HD to measure continuously. Hence, though it may be indirect, an easier index is required for sustainable impact measurement. As another performance index, for the first two issues, we are considering of sorghum procurement amount and its price as the index. If the total purchase price of Nissin Foods HD rises, it indicates that as long as the farmers are on the same value chain, the incomes of the farmers will keep raising. Also the rise of the procurement amount will also raise the farm land acreages. Therefore this index may very well be a performance index to measure the social impacts.

For the lack of nutrients as the third issue, we believe the impact could be measured through number of sales. If Nissin Foods HD promotes recipes or healthy diet through door to door sales, then the number of sales will equal to number of people who have learnt about nutrition and possibly they will cook the recipes promoted. Although this is also not an exact figure, it is very much related and we believe it is adequate as a performance index.

### **2.4.3 Social Impact Scenario**

#### **(1) Social Impacts to the Sorghum Farmers**

In this business model, the plan is to create a social impact through the establishment of sorghum value chain in cooperation with SVCDC. Establishment of a sorghum value chain aims to increase the production efficiency of sorghum and efficiency of the distribution such as elimination of brokers. From this study, research team has found that sorghum farmers will benefit and have an income up to 14,967KES/month, which is above the BOPs income level<sup>3</sup>.

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<sup>3</sup> BOPs are defined as income below 12,750KES/month.



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As mentioned earlier, a sorghum farmer's average income is 19,980KES/month. However, SVCDC's contract farmers receive an agricultural training from JKAUT and KARI as well as advanced seeds from KARI. This will result in about 900 to 1,080kg/acre, well over average production productivity. Also the sales price would differ since the farmers would sell to SVCDC at 25KES/kg instead of brokers at 20KES/kg, leading to a difference of about 5KES/kg. With these numbers, farmers will be able to receive up to 44,900KES/season.

This business is considering of procuring sorghum up to 100 tons per year. Since the SVCDC's farmer produce 4.3 ton / season, about 24 farmers would be able to benefit the increase of their income. This number is based on the initial procurement amount; hence by increasing sales in Kenyan market, Nissin Foods HD will aim to increase the number of farmers benefitting from this value chain.

## **(2) Social Impact to End Consumers**

In this business model, Nissin Foods HD aims to propose a recipe of balanced diet upon sales of Nissin Noodles, to contribute to the nutritional issues. By cooking with other ingredients, Nissin Foods HD aims to appeal tastiness but also health benefits to the end consumers.

According to the National Nutrition Action Plan 2012-2017 by Kenyan government, a child below age of 5 lacks various nutrients: 51% lacks zinc, 69% lacks iron, 84% lacks vitamin A. Though this data is limited to child below age of 5, there is a same trend across children at other ages and women.

Based on this study, we have found that the main consumers of instant noodles are children and women. Using this consumer demographic, Nissin Foods HD plans to propose a balanced meal through distribution of recipes. The recipes are planned to be distributed either by including inside the pack, or through direct communication upon door to door sales. Recipes to be proposed are to be not only tasty but also be health conscious, especially around 4 lacking minerals described above. Nissin Foods HD will aim to impact BOPs through proposing balanced diet with Nissin Noodles.

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### 3. *References*

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