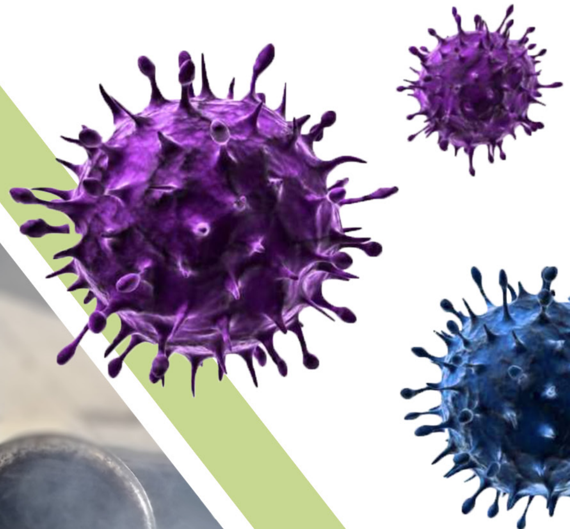

Food Industry Value Chain

A Market Study with Potential COVID-19 Impact Analysis

Supporting Resilient Livelihoods and Food Security in Yemen: A Joint Programme

July 2020

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Sida

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List of Acronyms

BDS	Business Development Services
ERRY	Enhanced Rural Resilience in Yemen
EU	European Union
IDP	Internally Displaced Person
INGO	International Non–Government Organization
KII	Key Informant Interview
MFI	Microfinance Institution
MSME	Micro, Small and Medium Enterprise
NGO	Non–Government Organization
SME	Small and Medium Enterprise
SWOT	Strengths, Weaknesses, Opportunities, Threats
UN	United Nations
UNDP	United Nations Development Programme
USD	United States Dollar
VC	Value Chain
YER	Yemeni Riyal

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FOOD INDUSTRY VALUE CHAIN

The food manufacturing industry is a crucial sector in the economy of every country. It is considered as one of the es–sential and important industries that contributes to secure food for humans and works to achieve greater self–suffi–ciency in food production. The sector provides opportunities for women who can leverage their gender norms to their advantage. The sector provides easy access for MSMEs to work and measure return with minimal risk. The over–all economy suffers weak purchasing power. Food tends to take the highest share of people's spending. Therefore, de–mand can be considered high for certain food products. The sector is mostly informal and can be described as resilient as it quickly adapts to market supply and demand chal–lenges due to the low cost of entry and minimal required fixed cost. While this can be an opportunity for interventions in the sector, the fact that it is informal makes it difficult to estimate impact.

Yemen imports more than 90% of its food, including wheat, rice, sugar, dairy products, canned food, oil, among others. Yemeni people consume local vegetables and fruits. While many would process food at home, there are several pro–cessed products that can be purchased in the market at rel–atively low price. The Yemeni food includes several products such as Taizian cheese and yoghurt, cake, cookies, sweets, juice, bread and other food items that can be made at home and sold in the local market. Restaurant businesses tent to grow with community disposable income as well as com–muters and travellers who have to dine outside their home.

The development of the food sector is related to the de–velopment of agriculture, as it is the primary source of raw materials for the food industry as well as the interface with branches of industry interest such as the packaging indus–try, paper and plastic and glass, as well as transport and communication.

According to the study, 92% of both men and women who work in the food sector operate their own businesses, and 76% of them have not receive any training in their business. The market of food manufacturing is highly competitive as 41% of actors have 2–5 competitors in the same area. There is high potential for expanding the food manufacturing value chain, as 91% would like to expand their business in the next few years; however, there are some obstacles that prevent actors from expanding their business. 67% of the actors in the chain think that the lack of qualified labour is a limitation for growth. Lack of capital is another barrier faced by many actors. In addition, most of the actors do not have marketing strategies as 74% of them depend more on word–of–mouth to make customers aware of their prod–ucts. There is a good opportunity for women to join food manufacturing as 78% of respondents think that working in the food sector can be considered an opportunity for income generation for vulnerable women, especially as producers and distributers.

Food manufacturing can be improved through training of the actors on management, marketing and customer relations in order to be able to produce and market products effi–ciently and effectively. Furthermore, coordination between the actors, MFI and BDS to facilitate taking loans and easily getting information about the market is needed. In addition, providing the market and the actors with modern machines and equipment to enable food production in a professional and healthy manner, for items such as cheese, cake and sweets.

Industry Highlights

Taizian cheese is one of the most traditional industries in Yemen, which has maintained its traditional character and resilience in the face of processed cheese, made by mod–ern methods, despite its diversity and cheapness compared with the Taizian cheese, which has its name linked to tra–dition. Different districts in Taiz such as Al–Taziah, Albrah, Makbana and many other districts produce this kind of cheese, made at home by using the milk of livestock they raise. There are different names for this cheese; Al–Awsha–ki is considered the most famous one, Al–Hamili, Alkazehi, and Alowb are other names. These names are related to the villages that the cheese is made in, but all kinds have the same quality and method of manufacturing. Many Yeme–ni people buy this cheese as a gift when they go to other countries. Many families depend on producing or selling this cheese to improve their income.

Cakes and cookies are another kind of the Yemeni food that is made at homes or small shops. They are done in different governorates in Yemen. In general, they are made using flour, oil, sugar, salt and eggs. This food can be eaten as a snack or even breakfast. Also, it is used at weddings and parties.

Another kind of a Yemeni food in the market is Zalabia. Many shops in Yemen sell this kind of food for being a year–around demand, especially in Ramadan. It is famous in many governorates especially in Hodeida. It is made of flour, sugar, salt, and oil. Many families consider producing and selling Zalabia their main source of living.

Food manufacturing activities are also found in kiosks. Kiosks around market places and schools and at busy street locations offer French fries, sandwiches, sesame products, etc, selling food items to average community members. They serve snacks and quick meals for those on the run.

Food manufacturing includes several heterogeneous products involving different activities, risks and opportunities. The products also differ across locations due to local tastes and preferences. This study highlighted Taizian cheese to present the sector. The Yemeni menu always included tomato sauce with cheese. The Taizian cheese is a unique product that can attract many MSMEs to work. In addition, intervention in this sector can yield higher value chain growth for improved employment and food security. Taizian cheese is a unique Yemeni product that can be further exported with an international comparative advantage.

Food Industry Sector Value Chain Map

Symbol Key:

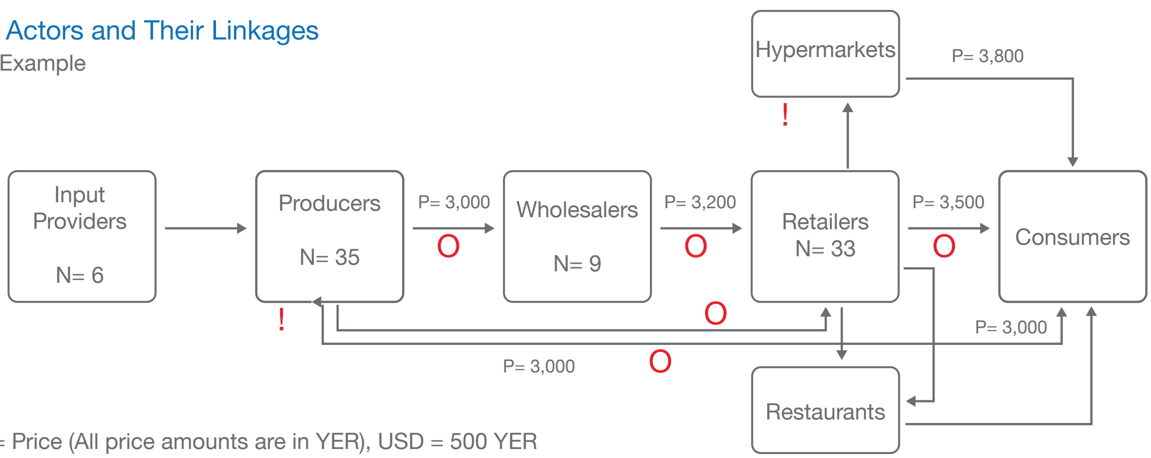
Critical Issue !
Major Disruption X
Partial Disruption O

Market Environment:

Institutions, Rules, Norms and Trends

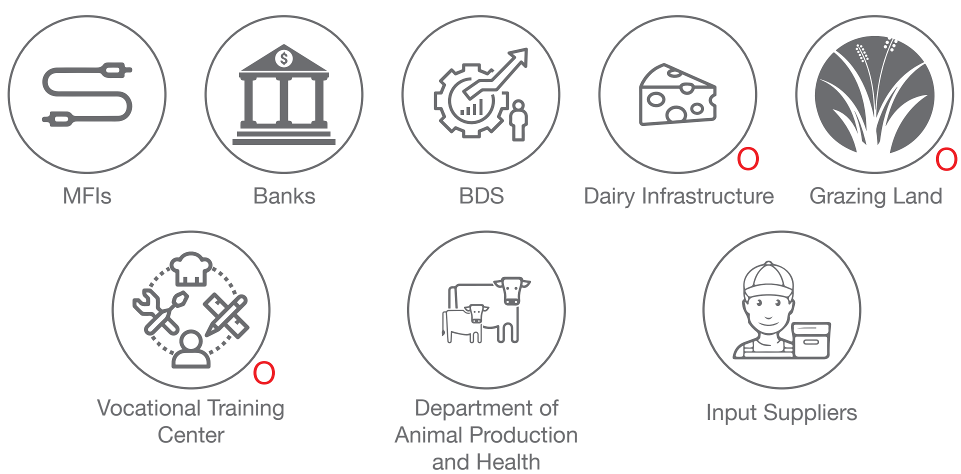
Market Actors and Their Linkages

Cheese Example



*P= Price (All price amounts are in YER), USD = 500 YER

Key Infrastructure, Inputs and Market Support Services



The food value chain map in Yemen is limited and food items in many cases decay if not sold within a day. Traders often purchase according to daily demand because food products have specific shelf life to be consumed. Food is not a specialized business activity, particularly retailers are not specialized. The producer is the dominant actor in the food chain. All food chain actors can be classified as SMEs. The main destination for food items is the domestic market.

Food Chain Actors

Food Input Suppliers

They provide the producers with the raw materials and the tools needed to manufacture the products. You find the suppliers in the main market of the district or sometimes in another district or governorate, so producers find some difficulties related to transportation to get the materials easily.

Producers

There are many food producers in the targeted districts. Some of these producers make their products at home, such as cheese, cakes, cookies, yogurt and potatoes, and some have small shops to make their products. The producers sometimes sell their products directly to consumers or sell to retailers to be sold in their shops.

Most of the producers did not have training in their business, but they learn the business from some relatives. Also, they do not have marketing skills to attract more customers. Local producers still use traditional household tools and equipment for production despite availability of more sophisticated options that could improve quality.

Wholesalers

Depending on the specific food manufacturing, the wholesalers or brokers may buy from producers and pass food items to retailers. There are few wholesalers in the targeted districts because food products are mainly aimed at and sold in the local market of the districts.

Retailers

Food product retailer shops and stalls are present in small numbers in the targeted districts. Products are sold by the producers themselves to the customers. Some grocery shops from within the district buy products from producers and sell these on the market. They are shops, restaurants and markets that sell food in addition to many other products.

The Market Environment

Local Authorities

The food market is affected by local authorities with rules and regulations that control the movement of products between districts and other governorates. For example, taxes on expanding the business and establishing a shop lead producers to manufacture at home to avoid the cost of establishing a shop and expand their business.

Customs and Culture

There are many obstacles faced by the actors due to the Yemeni culture. For instance, it is not accepted for women to establish their own shop and do the business themselves to sell their own products, which makes it difficult for them to have any market share beyond their own village or district. In other words, women cannot be retailers, but they can produce food items in their own business unofficially.

Ministry of Industry and Trade

Food production and movement is affected by the rules and regulation of the Ministry of Industry and Trade. Actors face difficulties to establish their business formally or expand it, due to the regulations in place, such as taxes and the cost of having a trade name.

Transportation

Bringing raw materials from other districts or governorates and distributing products to other markets requires smooth transportation that facilitates movement in the market place and reduces difficulties of accessing markets. Nowadays, transportation is not always available or is costly, which leads to producers' inability to provide raw materials to produce more and the inability to distribute to other markets. On an average, transportation costs represent 10% of total product cost.

Agriculture

Food products mainly depend on raw materials related to agriculture, such as flour, potatoes and fodder for animals to produce milk. As input prices change, demand changes accordingly and people switch to alternatives for both supply and demand. Production of Tazian cheese is highly dependent on sufficient amount of milk.

The food sector in Yemen is still practiced conventionally/ traditionally and mostly because of limited consumer demand for processed food, lack of economies of scale, absence of governmental support, and collaboration or coor–

dination with NGOs and INGOs. Yemeni food chain actors –wholesalers and retailers– operate individually and are not organized. 60% of producers of food are woman.

Key Infrastructure Inputs and Market Support Services

MFIs

MFIs have a significant role in establishing food business by offering loans for different actors. However, the role of those MFIs is not effective in all districts and villages because they are far away from many actors who cannot reach them. Also, many actors are not aware of the loans given by MFIs or they do not have the eligibility to take loans according to regulations and rules. Furthermore, many are not able to afford paying the high loan interest. Actors are not familiar with the guarantee loan programme. It can be a great help if there is coordination to guide the actors to get benefits of such loans and MFIs. In general, MFIs, nowadays, play a very marginal role to support the food producers, especially after the crisis.

Vocational Training Centres

Actors of the food chain need to improve their skills by being trained in different issues that relate to making the food products in a modern way, using modern techniques for production of, for example, cheese and cake, running the business, marketing and management. Vocational training centres have a significant role in improving these skills. Such centres now exist only in the main governorates such as Sana'a, Aden and Hadramout. They are not available at district level.

Dairy Infrastructure

Producing food is highly related to dairy infrastructure, with the variety of products that can be made of milk, such as Tazian cheese and yogurt. Therefore, improving the dairy infrastructure helps in enhancing food production.

Banks

Banks provide opportunities to take loans and keep savings.

Department of Animal Production and Health

This Department has a significant role in increasing the productivity of food value chain producers.

Grazing Land

The food sector is related to breeding of animals for more raw materials to increase production and sales. These animals need fodder and grazing pastures.

Input Suppliers

Business Development Service is very important to strengthen the Yemeni food value chain with organized institutions. The BDS market is still unknown to SMEs/actors in the food value chain, especially in workforce development and business development aspects in administration, finance, public relations, sales, innovation, creativity and marketing.

BDS

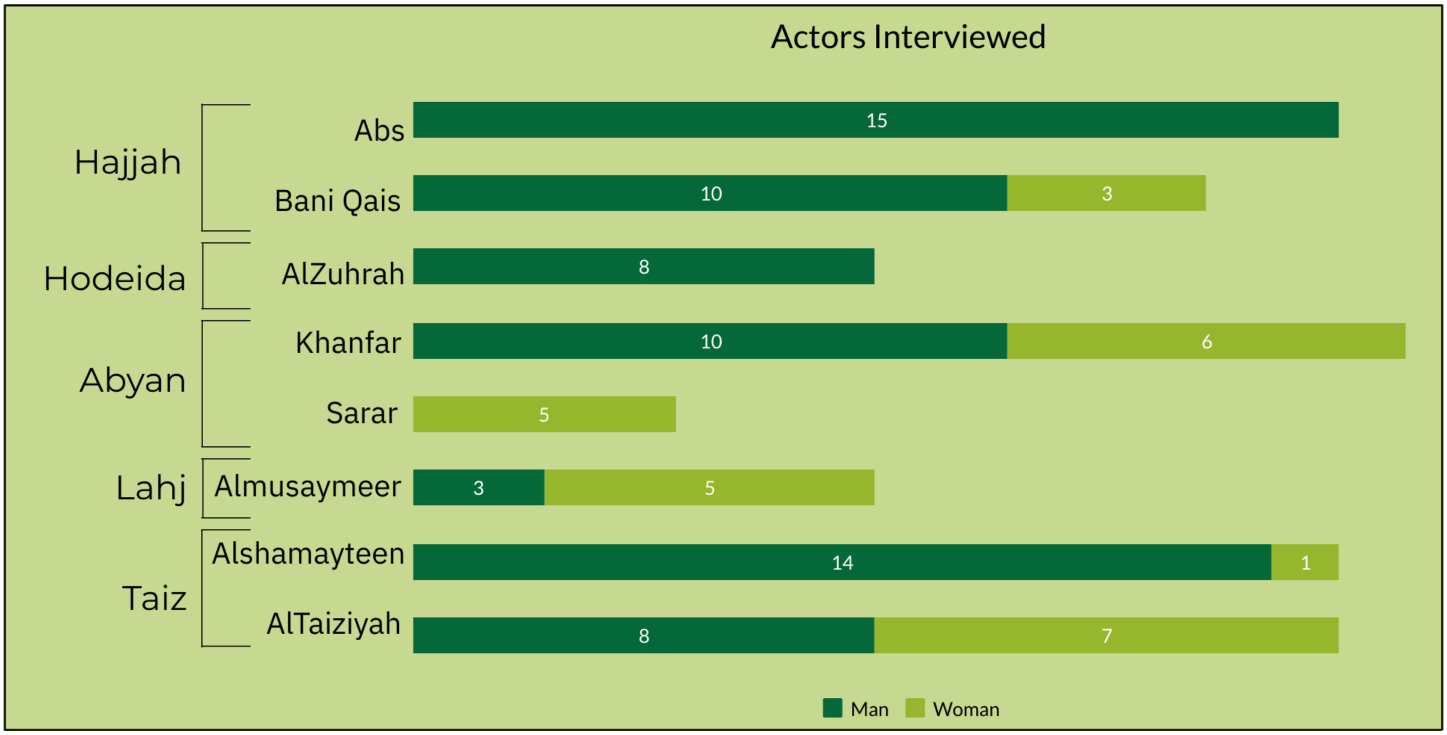
Business Development Service is very important to strengthen the Yemeni food value chain with organized institutions The BDS market is still unknown to SMEs/actors in the food value chain, especially in workforce development and business development aspects in administration, finance, public relations, sales, innovation, creativity and marketing

Food Value Chain Performance

The food sector has experienced a rapid growth in Yemen but seems to be stagnant in recent years due to the current war and crisis. The ordinary limiting factors – as usual – are the availability of modern methods and preservative materials, and packaging. Productivity has been unstable, and is in decline in recent years especially 2015–2019. Prices have risen steadily over the years due to the huge inflation of the Yemeni currency.

About Food Processing Businesses

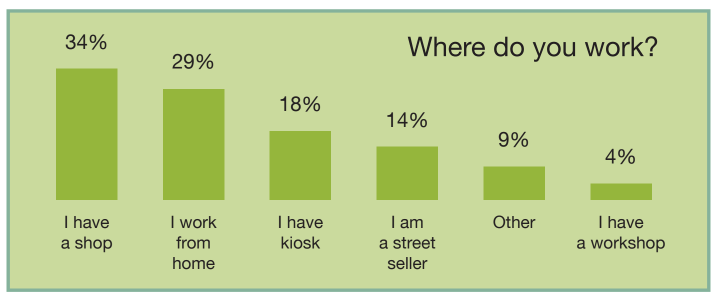
The study covered eight districts (Abs, Bani Qais, AlZuhrah, Khanfar, Sarar Almusaymeer, Alshamayteen, and Altaziyah). Numbers of interviewed actors in each district are shown below:



More women than men produce and sell food, while more men resell the food and provide services. It is related to the culture that women cannot go out to the market the same way men do. However, women play a role in making food items at home and selling to customers in their own houses or at the market.

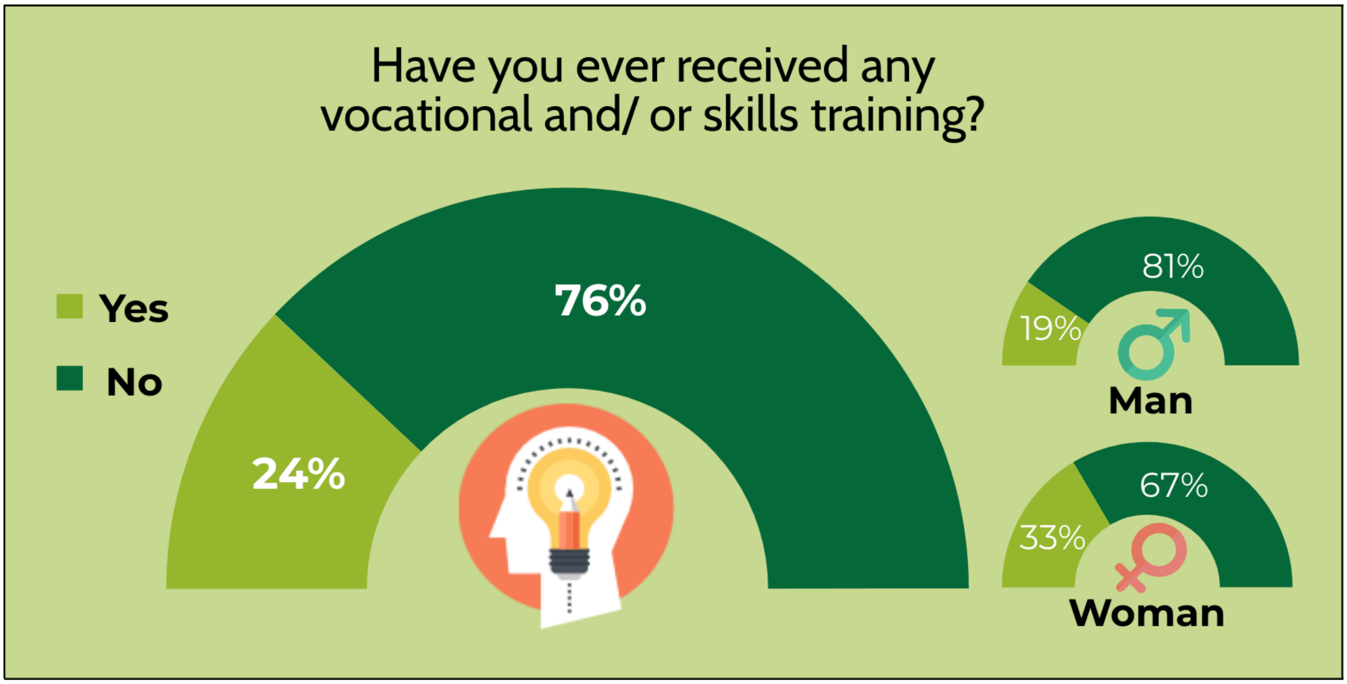
92% of both men and women who work in the food sector operate their own businesses; only 8% work for others. Cost of entry is very low, and many can operate from home. Sales are typically targeting few close customers within short distance for limited quantities with very limited marketing capacities. 55% sell their products in the same district and 41% in the same village. 3% of men sell in the governorate and only 1% in other governorates.

34% of the actors have a shop and the vast majority of shop owners are men. 29% work from their homes and most of them are women. 18% have a kiosk; the vast majority of them are men. 14 % are street sellers, women more often than men. 43% of people directly sell their products to customers in their own shop, especially men. 30% sell their products directly to customers at other public or private locations. 20% sell directly to customers in their homes, especially women. 10% sell to retailers or shop owners. 5% sell products to traders and 3% to brokers. This indicates that producers do not have marketing skills to increase market share. Especially women follow traditional sale methods.



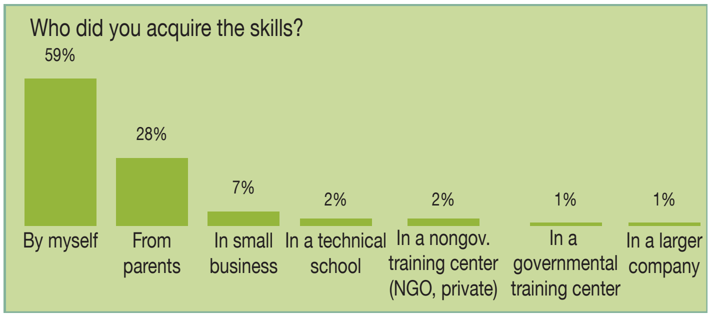
Business Development

76% of people who work in the food sector did not receive any training in their business. Most of the actors (59%) learnt the business by themselves and 28% learnt from their parents, while only 24% received training in technical schools, non–governmental organizations, governmental sector or from large companies. In general, women received training more often than men. 99% of those who received training found it useful in their work. BDS is not available at district level, but exists at the governorate level. BDS does not reach districts to support food manufacturing actors, especially during the past few years due to the crisis and the closure of roads in some districts, like Alhuwbaan in Taiz. Overall, there is lack of coordination between BDS and food manufacturing actors in all districts.



Most producers (43%) sell their products directly to customers, from their houses or from small shops. That indicates that they have a specific market around them. They do not have enough capital and marketing skills to enlarge their market niche.

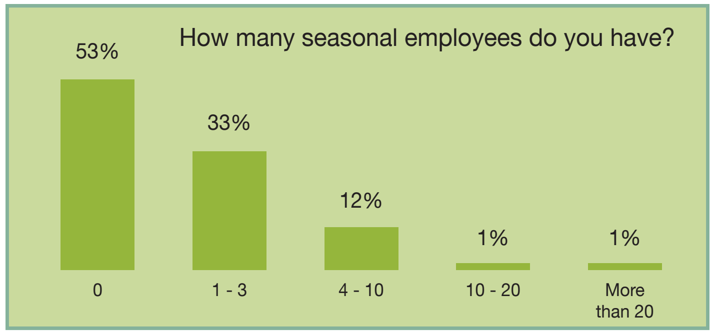
According to the KIIs, many BDS providers are established and offer training. That indicates the lack of coordination between the BDS and food chain actors.

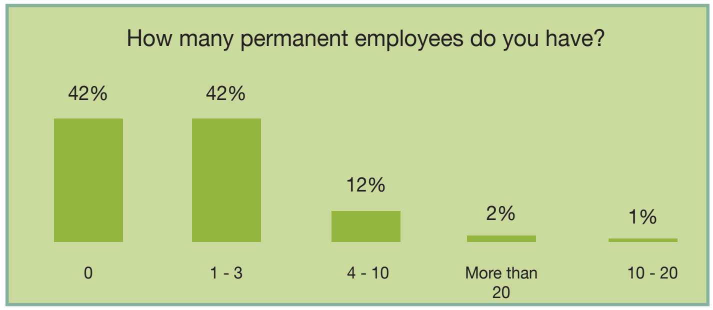


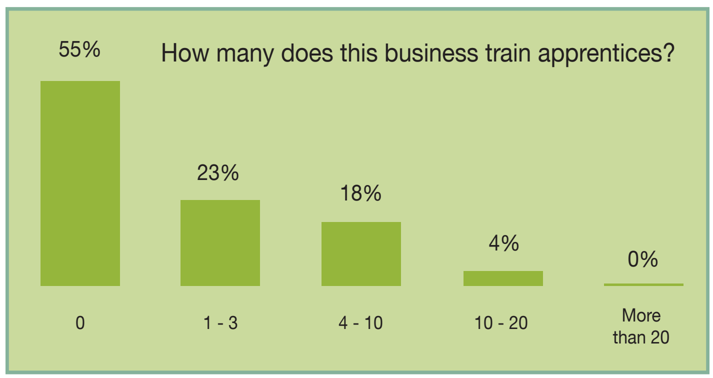
Employment

As shown in the charts below, most respondents operate the business themselves and they do not have seasonal employees (53%). 33% have 2–3 seasonal employees, 12% have 4–10 seasonal employees, and only 1% have more than 20 seasonal employees and it is in Hodeida. 42% of respondents do not have permanent employees, they operate the business themselves, especially those from Lahj; however, the respondents from Hodeida do not operate the business by themselves. Another 42% of respondents have 1–3 employees, especially those from Hajjah. 12% have 4–10 permanent employees. 2% have 10–20 employees and 1% have more than 20 permanent employees. The last two groups are in Hodeida only which indicates the high potential for such business and the lack of capital for many people to start their own business, so that they work for others.

75% of employees have not completed vocational training, and 18% have 1–3 trained employees and 7% have 2–3 employees who have completed vocational training. Most respondents who have trained employees are in Taiz. Lahj has no employees who are trained according to the respondents. That indicates that there is lack of training in all governorates, but especially in Lahj.



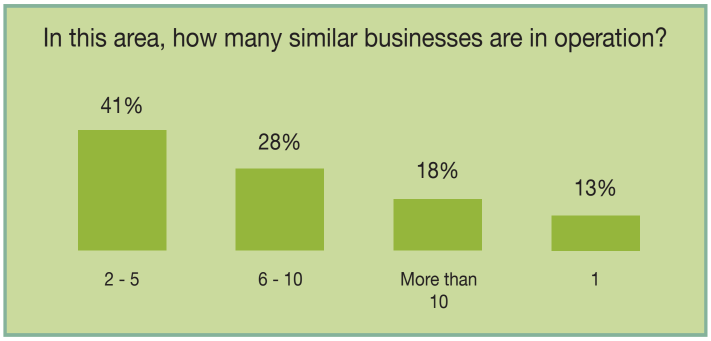




Competitiveness

Overall, the market is competitive. 41% have 2–5 competitors in the same area, 26% have 6–10 competitors, more common for men than women. 18% have more than 10 competitors, especially women.

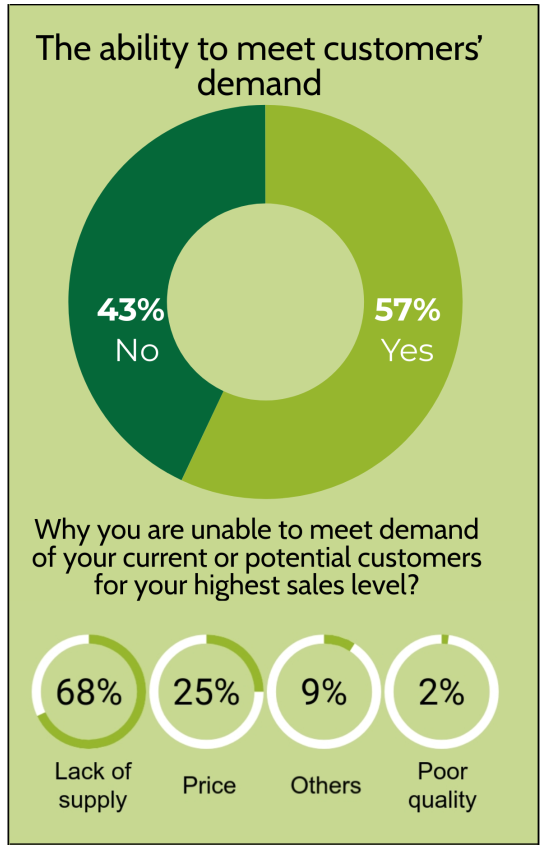
93% of respondents declared that what makes their products different from competitors is the quality. 28% said that the price makes the difference and 15% that upholding availability of the product is crucial, especially in Hajjah and Lahj.



57% of actors are unable to meet the demand of their current or potential customers, especially in Taiz and Lahj. The main reason for being unable to meet demand is the lack of supply, especially for dairy products, as 68% of the respondents declared. Also, prices are a reason for unmet demand, considered by 25% of respondents. This indicates that the prices of raw materials are high and that the purchasing power of people in Yemen is weak.

26% of respondents are unable to meet demand every few days, especially those who are in Hajjah and Lahj. 22% do not know how often they cannot meet demand, which indicates that the business is not well managed and needs more management skills to know the strengths and weaknesses.

The reason for not meeting demand is mainly lack of money to buy more; especially for suppliers and producers, it is one of the main reasons that prevents them from meeting demand. 26% think they cannot meet demand because of the lack of sources to buy stock. Transportation is one of the obstacles that prevent actors from meeting demand.



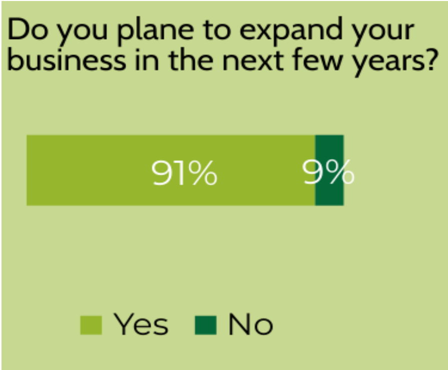
The vast majority of respondents (62%) think that they are unable to compete and the main reason for that is lack of capital. Having less quantity and being far from the market is another reason for being unable to compete. The lack of trained and skilled workers also prevents the actors from competing in the market. 72% of respondents think that receiving training would make them more capable to compete.

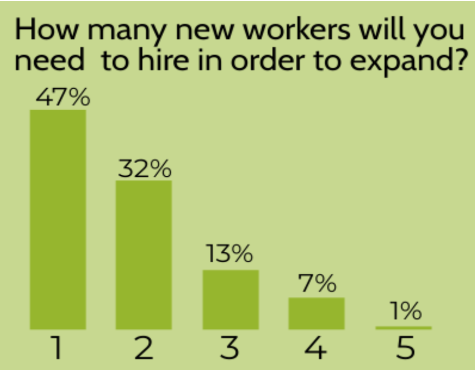
Business Expansion

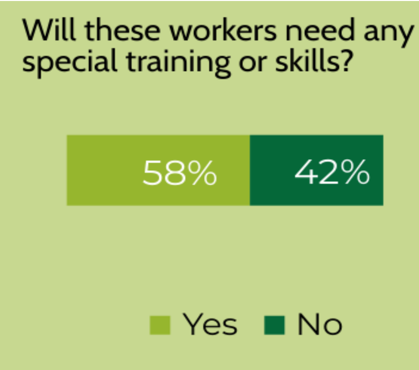
91% would like to expand their business in the next few years, with 47% who need 1–3 workers and 32% needing 4–10 workers; around 58% of them believe they would need to train them. 67% of the actors in the chain think that the lack of qualified labour is a limitation for growth. 74% of all actors of the chain depend more on word-of-mouth to make customers aware of their products. It indicates the need for trainings on marketing for those who can meet customer demand (43%). The lack of capital is another main reason for not expanding the business.

Establishing new business is the easiest at the production stage as it does not require a lot of capital (an investment of YER 300,000, USD=500 YER) and the skills of operating the business can be acquired within a short time. Production businesses can also be smoothly expanded in short time, responding to fluctuations in demand. The production stage represents the best opportunity for women to be engaged in food business, since they can operate and manage such businesses themselves, often home–based.

Based on findings of this study, strategies to enable business growth would include employment of additional skilled staff, procurement of modern production equipment/technologies, sourcing of credit, improved packaging to extend the shelf life of food items, keeping sufficient quantities of raw materials in stock to be able to rapidly respond to sudden peaks in demand.

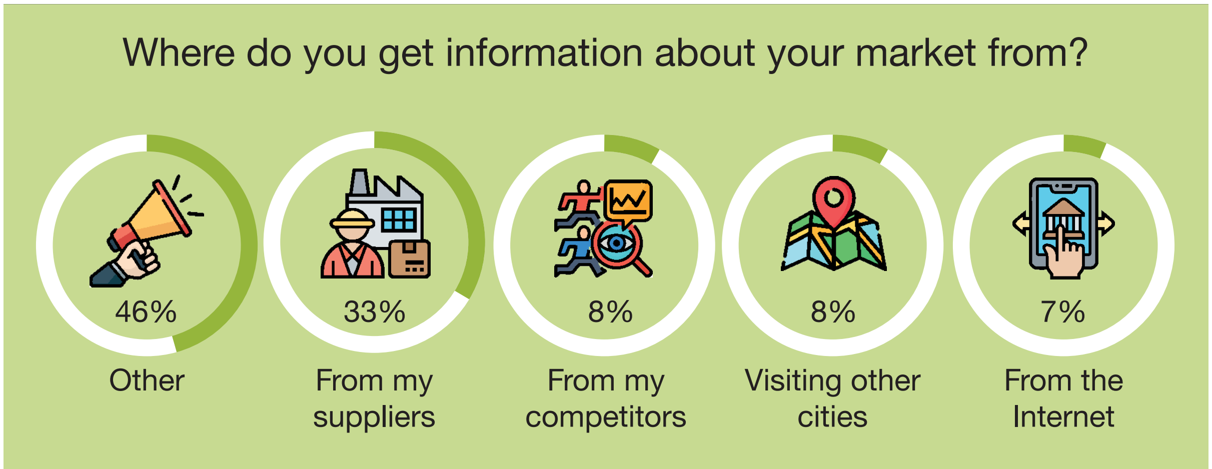






Getting Information and Raw Materials

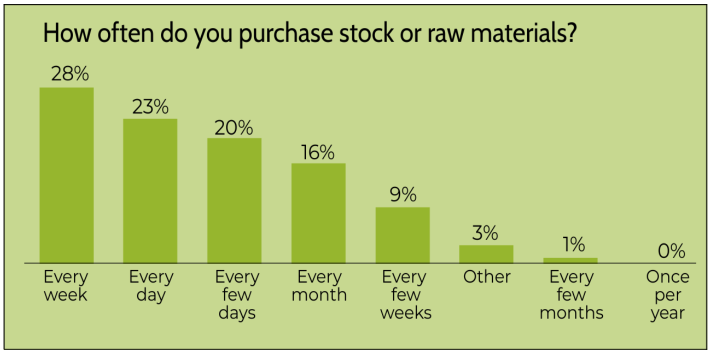
33% get information about the market from suppliers, and 8% from competitors. This indicates the cooperation between the actors and the mutual benefits they get from each other. 46% get the information by visiting the market, personal relations and friends. In addition, they can get information from the clients. Due to the lack of resources, nowadays, the Ministry of Agriculture and Irrigation Offices do not play a role in improving food business. Furthermore, actors are not aware of the existence of such offices.



There is not specific union that provides the actors with information needed. Therefore, there is a need to activate systematic methods that update market trends.

51% bring raw materials from producers outside their district, 47% from producers in the district, 20% from retailers or wholesalers in the district, 5% from distributors in this district, 3% from distributors outside the district, and only 1% from another country. Producing more raw materials within the district is a real opportunity for local SMEs and farmers. Obvious examples of locally produced raw materials for the food industry are flour, milk and potatoes.

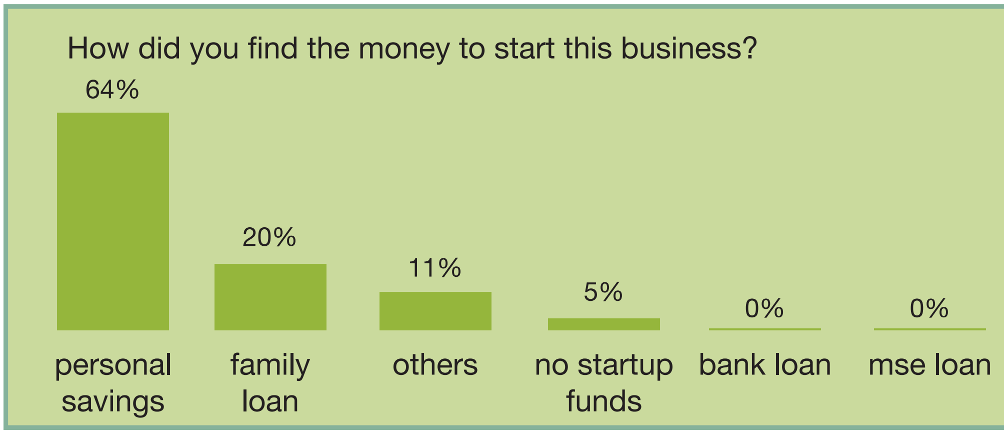
77% of respondents are satisfied with the suppliers/wholesalers, and 9% declared that there are not enough traders. 9% said that they do not need to deal with suppliers especially in Lahj and Abyan, while 3% are not satisfied because of the lack of supply of goods.

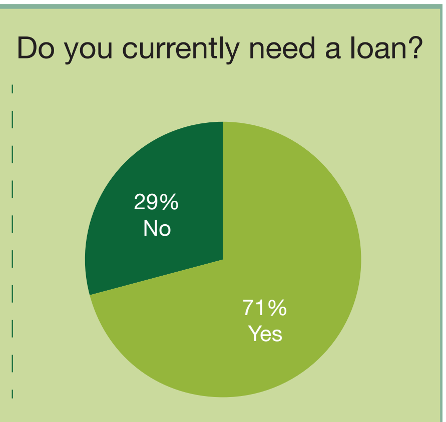


According to the chart, 28% purchase stock or raw materials every week. 23% do it every day, and 20% every few days especially those who are in Hodiada, which indicates that their purchasing power is limited. 16% purchase every month, especially those who are in Taiz. 9% do it every few weeks and 1%, those who live in Hajjah, buy every few months.

Finance

While 64% of the respondents started their businesses by personal savings and 20% borrowed from their family, 71% indicated that they need loans and the average amount needed is YER 500,000. It is estimated that starting up a small enterprise requires a minimum investment of YER 300,000. Most actors indicated that lack of capital was one of the obstacles to expanding their businesses. There seems to be limited access to MFIs. One of the main obstacles from the respondents' point of view is the absence of lending organizations. Besides, several actors perceived themselves ineligible for loans from MFIs.





Partnerships

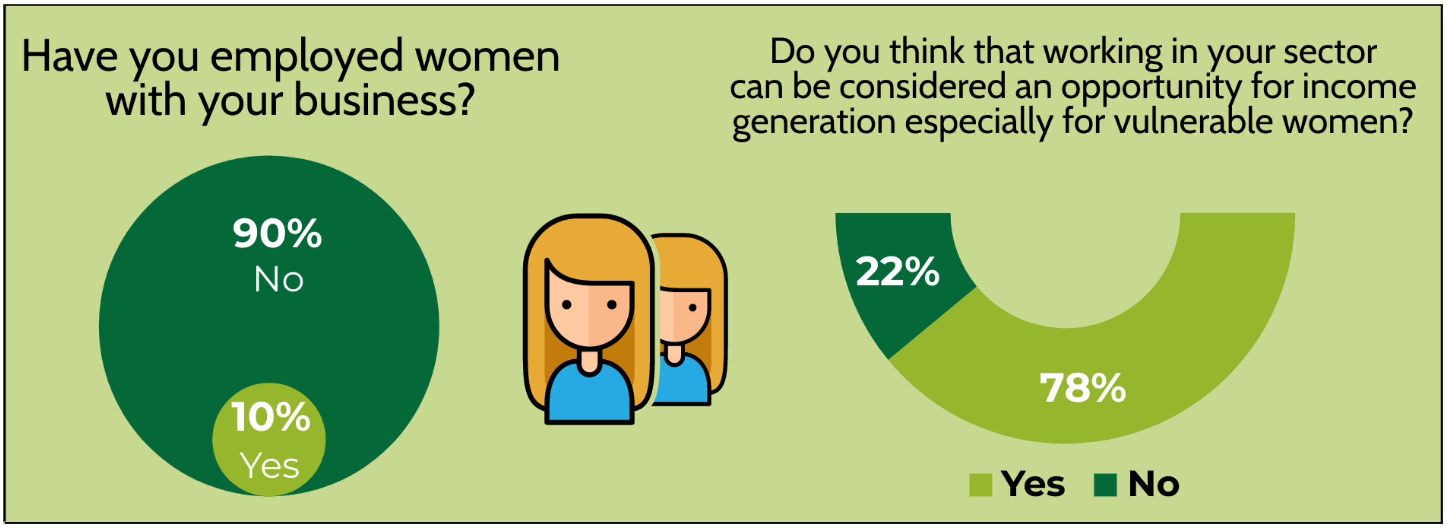
92% of respondents have not established a partnership or joint venture with other business. The lack of capital is a reason that prevents actors from establishing partnership with others. Even those who have had partnership considered it unsuccessful experience due to the lack of trust, dishonesty of some people or unequal dependency of one partner on the other partner. For instance, one of the partners may depend on the other to manage the business while the other does not have sufficient experience, which leads to business loss or insolvency. Therefore, actors prefer to have individual business rather than having partnership.

98% of respondents declared that there is no cooperative union for the food sector. Actors do not seem to be aware of the role of unions and cooperatives to improve the business community or develop the value chain actors' capacities and access to information. Many considered that the role of unions is not effective.

52% have not involved local government offices or authorities interested in improving the sector. There was an overall mistrust of any regulatory authority 84% of respondents have experienced negative impact and loss of capital due to the current crisis. Several referred to increased cost of transportation, access to markets and interrupted supplies 16% considered IDPs as a valuable market for their products.

Gender Dynamics

According to the respondents, 90% have not employed women in their business, and only 10% have employed women; only in Taiz and Hajjah. Most participants declared that they do not employ women because they do not need employees since they do not have the capital to expand the business. Also, it is not suitable for women in Yemen to go to the market and sell; however, they can make the products at home. Therefore, 10% employ women to make the products at home like cheese and cake.



78% of respondents think that working in food sector can be considered an opportunity for income generation for vulnerable women, especially producers and distributers. The governorate with most respondents encouraging women to work in the sector is Abyan. Respondents have declared if women join this sector, they would face socio–cultural barriers as well as gender inequality. 67% of respondents think that food sector can be a good opportunity for vulnerable women to start up their own business specially those from Abyan and Taiz.

Women can be actors as producers, retailers and distributers. Respondents actually go much beyond the food manufacturing sector in their suggestions of suitable business opportunities for women. They think that there are many different trades where women can start their business, such as sewing, producing and selling cheese, hairdresser, selling clothes at home, producing cakes and cookies, and engaging in the health sector.

Constraints and Solutions

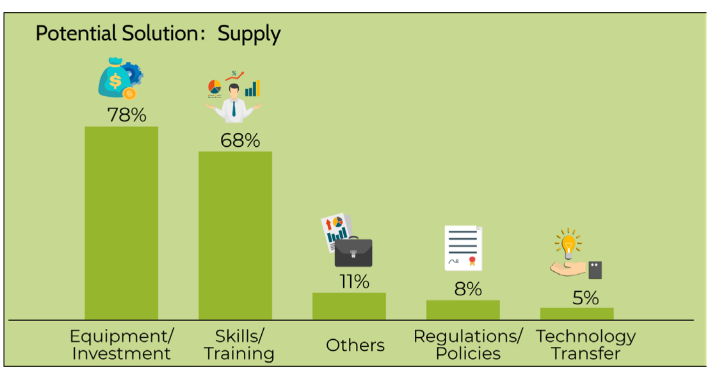
Suppliers

Constraints

- Inadequate market information.
- Limited access to finance, limited growth and limited capacity to meet demand.
- Poor consumer purchasing power.
- Increased costs for, specially, needed imported inputs due to currency devaluation.
- Shortage of supplies and quality inputs due to the con–flict.
- Lack of marketing and administration skills to manage operations and acquire customers.
- Increased transportation cost and limited access to mar–kets.
- Increased taxes and ineffective regulatory policies to support the industry. Current tax levels are almost 50% higher than before the war. This is a barrier for expansion of home–based business that never gets to go beyond the close market of the immediate locality.

Solutions

- Activate the role of MFIs by coordinating with actors and raising their awareness, facilitate access to capital and devising affordable loan products.
- Activate the role of BDS to coordinate and provide train–ing courses on management, marketing, customer rela–tions and so forth.
- Facilitate the method of transporting products from one district to another through coordination with related par–ties.



Production and Processing

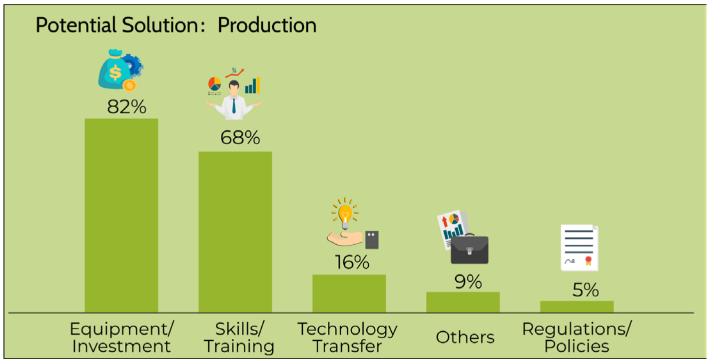
Constraints

- Lack of capital for investment and limited financial ser–vices offered in the sector.
- Lack of infrastructure facilities such as ovens for making cakes, gasoline, refrigerators to keep cheese, platforms for cheese and cake, and services such as electricity.
- Lack of knowledge of animal husbandry techniques for cheese and yoghurt products.
- Inability to produce larger quantities.
- The lack of experienced and skilled labour.
- The lack of raw materials in the market.
- The lack of agriculture and animals to bring the raw ma–terials.
- Lack of access to and experience in using modern tech–nology.
- Lack of good management and manufacturing practices for product handling and packaging. For example, cheese and cakes can be produced in different shapes and sizes and be packaged differently for different markets.
- Lack of knowledge about consumer markets and trends.
- Lack of awareness about product hygiene, quality control and safety.

Solutions

According to the respondents, the most important solutions for improving production stage are:

- Improving equipment used for production such as mod–ern machines to produce and shape cheese, ovens and moulds or platforms to shape cake and cookies, refrig–erators to keep the ingredients of the production.
- Getting finance for investment in improved equipment.
- Improving the skills of the producers through training.
- Transfer of improved production technology.
- Facilitate regulations and policies.
- Increase the awareness of the actors about product hy–giene, quality control and food safety through training, workshops and advertisement.
- Train the producers on marketing skills and strategies to improve their packaging and marketing techniques to increase their market share.



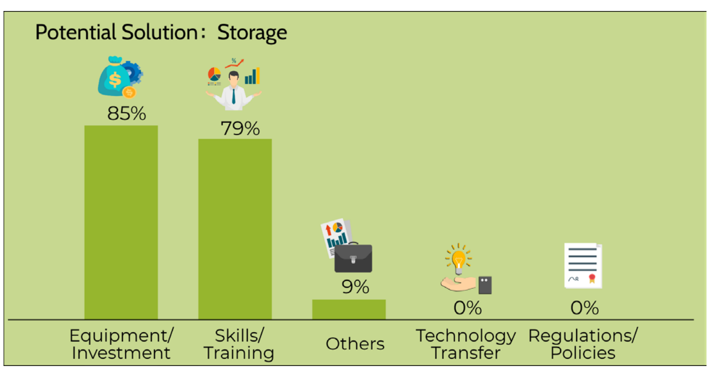
Storage

Constraints

- In general, the food sector has no storage process because the products are made according to daily demand.
- The lack of electricity to store food in refrigerators.
- The lack of experience in the techniques of storing food.
- The lack of the preservation substances.

Solutions

- Providing the market with preservative materials to be able to keep the products for a longer time and be able to distribute them to other markets, and suitable containers to put the food in, such as containers for cheese and cake.
- Training the actors in the technical methods to store food through good packaging.



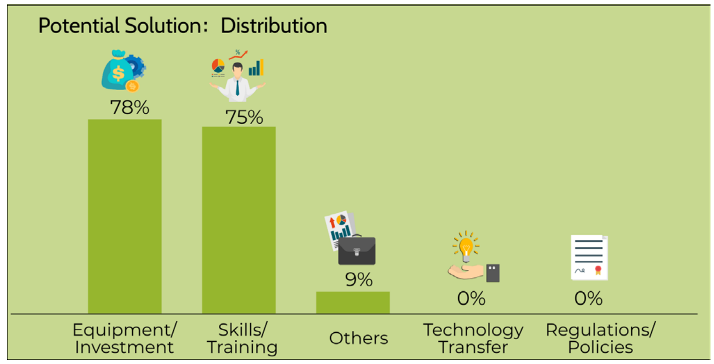
Distribution

Constraints

- The distribution of food products is according to the daily demand only.
- The high prices of transportation.
- The existence of many competitors can force low–price sub–standard deals as a competitive strategy.
- Problems to access the market due to closure of the entrance to some districts due to the political situation.

Solutions

- Facilitate the transportation and access to markets by opening the roads for the actors to import raw materials and export their products to different districts and sub–districts.
- Train the actors in new markets to distribute to and have good relationships with customers.



Marketing

Constraints

- The lack of marketing techniques and strategies.
- Having many competitors .
- Having a small market niche.
- Problems to access the markets because of closed roads due to the political situation.

67% do not sell imported products, especially producers selling only their own products. 33% of respondents, especially suppliers and distributors, sell raw materials that are imported or products related to them.

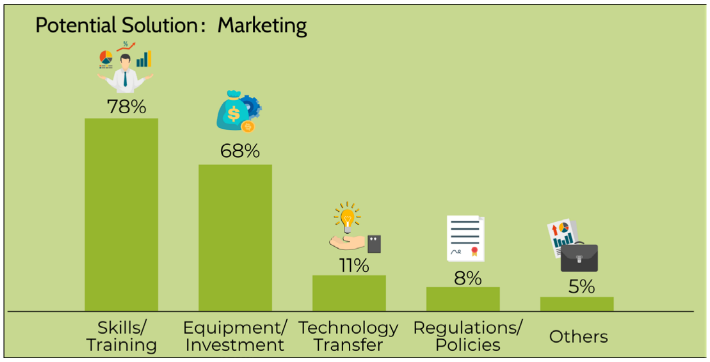
87% of respondents do not use the services of middlemen, especially the wholesalers.

78% of respondents do not sell their products outside the narrow area where production takes place. Remaining 22% sell their products only to other villages and districts, very few to other governorates and just 1% to Saudi Arabia. This indicates that exporting is not encouraged internally or externally.

81% of respondents have not implemented any marketing strategy, especially those who are in Hodeida. Only 19% have implemented a marketing strategy, especially distributers and suppliers. This indicates the lack of marketing skills and awareness.

Solutions

- Training in marketing to improve the skills required to expand the market.
- Encouraging the use of electronic marketing, like Helmi for honey, Abu Ehab for cake, Al–Ankha for sweets.



Consumption

Constraints

- The purchasing power of customers is weak.
- Customers live far away from the retailers or producers.

Solutions

- Having distribution channels for food products to reach all consumers.

Relationship

51% do not have long term standing relationships with suppliers and clients, especially producers. 49% have long term relationships with suppliers and distributers. According to the respondents, 73% of suppliers do not provide certain services specially for producers. 27% of suppliers provide services such as marketing, loan, training or maintenance. There is lack of cooperation between the actors.

SWOT Analysis

- Easy market entry and exit
- Low labour costs and availability of skilled labour
- The sector is suitable for both men and women to work in
- Plenty of consumers

WEAKNESSES

- Underdeveloped and disorganized food production and processing system with insufficient infrastructure facilities and services
- Limited access to modern technology
- Lack of structured organizational capacities together with insufficient business and technical capacities
- Insufficient production system
- Poor marketing strategy
- Unskilled workers
- Low purchasing power
- Women cannot have the opportunity to work in the sales phase
- Shortage of capital and access to financial services
- There are no cooperatives for the food enterprises
- Low economics of scale

OPPORTUNITIES

- Improving infrastructure facilities (such as cooling and storage facilities) and services
- Efficient food sector supply chain management, with focus on market linkages and promotion (packaging, branding), but also related to supply of raw materials, a system of collection points, etc
- Enhancing the quality of food products through training and awareness
- Adopting good management and good manufacturing practices through Total Food Quality and Safety Management System
- Business and technical capacity building of small food producers
- Organized structures, eg food producers' associations and/or cooperatives

- High increase in the production and operation costs
- Limited inputs as markets closed because of the conflict
- Adopting food quality control regulations without appropriate services, facilities and technical capacities throughout the supply chain
- Market competition for dairy products

RECOMMENDATIONS

- Improve the organizational structure of the value chain
- Support the establishment of Food Producer Association
- Provide business (administration, management) and marketing training
- Increase the effectiveness of the value chain:
  - Upgrade infrastructure and services through investment and/or provision of capital grants to purchase assets (ovens) and equipment (containers, gloves)
  - Develop technical capacities in food production
- Enhance the efficiency of the value chain:
  - Strengthen the supply chain management by reinforcing the integrity of the cold chain (with provision of assets, e.g. refrigerators, processing (cheese and cookies platforms, electronic mixers, cookers, etc.) and packaging (storage boxes, tools for packaging, etc.)
  - Establish collection centres/points in the villages, product stalls in the main niche markets and mobile product markets
  - Adopt the 'Total Food Quality and Safety Management System' promoting adequate management and good manufacturing practices
- Foster an enabling environment for the value chain
- Facilitate market linkages and product distribution channels
- Ensure self–sufficiency and sustainability of the value chain
- Strengthen partnerships between food producers in the private sector, and among the food producer associations
- Increase linkages with the microfinance institutions
- Improve consumer awareness through extensive advocacy/outreach programmes to shape the product image

Food Value Chain

Gover–norate	District	Gender	Products	Market potential (high/medium/low)	Demand (high/medium/low)	Supply (high/medium/low)	Go/No go
Hajjah	Abs	Man	Zalabia	Medium	Low	Medium	Go
		Woman	Zalabia	Low	Low	Low	No go
	Bani Qais	Man	Cake and Sweets	High	Low	Medium	Go
		Woman	Cake and Sweets	Medium	Medium	Low	Go
Hodeida	AlZuhrah	Man	Cake and Flour	High	High	Low	Go
		Woman	Cake	Low	Low	Low	No go
Abyan	Khanfar	Man	Cake	High	High		Go
		Woman	Cake and Cookies	High	High		Go
	Sarar	Man	Cake	Low	Low	Medium	No go
		Woman	Cake	Medium	Medium	Medium	No go
Lahj	Almu–saymeer	Man	Cake	High	High		Go
		Woman	Cake	High	High		Go

Gover-norate	District	Gender	Products	Market potential (high/medium/low)	Demand (high/medium/low)	Supply (high/medium/low)	Go/No go
Taiz	Alsha-mayteen	Man	Cheese	High	High	Medium	Go
		Woman	Cheese	High	High	Medium	Go
	AlTaiziyah	Man	Cheese	High	High	Medium	Go
		Woman	Cheese	High	High	Medium	Go

Gover-norate	District	Gender	Market Po-tential (High/Medi-um / Low)	De-mand (High/Medi-um / Low)	Supply (High / Medi-um / Low)	Go / No Go	Women Engage-ment (If Yes, Where in the Value Chain)	Women Roles (What Do Women Work with in the Chain)	Youth Engage-ment (What Can Youth Work with)
Hajjah	Abs	Man	Medium	Low	Medium	Go		• Man are mainly engaged in the busi-ness	• Mainly men are engaged in the busi-ness
		Woman	Low	Low	Low	No go	• Women do not join the business		
	Bani Qais	Man	High	Low	Medium	Go			• Mainly men are engaged in the busi-ness
		Woman	Medium	Medium	Low	Go	• Few wom-en are engaged in the business	• Women produce some products and sell them to customers	• Youth partic-ipate in the production stage • They make cakes and sell them to customers

Gover-norate	District	Gender	Market Po-tential (High/ Medi-um / Low)	De-mand (High/ Medi-um / Low)	Supply (High / Medi-um / Low)	Go / No Go	Women Engage-ment (If Yes, Where in the Value Chain)	Women Roles (What Do Women Work with in the Chain)	Youth Engage-ment (What Can Youth Work with)
Hodeida	AlZuhrah	Man	High	High	Low	Go			• Mainly men are engaged in the busi-ness • They can work in producing yogurt and sweets and in buying and selling, marketing and supplying the market with raw materials
		Woman	Low	Low	Low	No go	• Women are not engaged in the business, except few of them who are work-ing in the produc-tion stage	• Women do not have important role in the value chain	

Governorate	District	Gender	Market Potential (High/ Medium / Low)	Demand (High/ Medium / Low)	Supply (High / Medium / Low)	Go / No Go	Women Engagement (If Yes, Where in the Value Chain)	Women Roles (What Do Women Work with in the Chain)	Youth Engagement (What Can Youth Work with)
Abyan	Khanfar	Man	High	High		Go		• Women produce cakes and cookies	• Man (youth) are engaged in the business • They supply raw materials and buy and sell cakes and cookies
		Woman	High	High		Go	• Women are engaged in the value chain		
	Sarar	Man	Low	Low	Medium	No go		• Women produce cakes and sell them directly to customers	• Man (youth) are engaged in the business • They supply raw materials and buy and sell cakes and cookies
		Woman	Medium	Medium	Medium	No go	• Women are engaged in the business		
Lahj	Almusaymeer	Man	High	High		Go			
		Woman	High	High		Go	• Women are engaged in the business	• Women produce some products and sell them to customers	• Youth are the main group to join the business

Gover–norate	District	Gender	Market Po–tential (High/ Medi–um / Low)	De–mand (High/ Medi–um / Low)	Supply (High / Medi–um / Low)	Go / No Go	Women Engage–ment (If Yes, Where in the Value Chain)	Women Roles (What Do Women Work with in the Chain)	Youth Engage–ment (What Can Youth Work with)
Taiz	Alsha–mayteen	Man	High	High	Medium	Go			• Men provide raw materials to the market and sell prod–ucts in the same district
		Woman	High	High	Medium	Go	• Wom–en are engaged in the business	• Women produce cheese at their own houses and sell directly to custom–ers or to retailers in the same village	
	AlTaiziyah	Man	High	High	Medium	Go			
		Woman	High	High	Medium	Go	• Wom–en are engaged in the business	• Women produce cheese at their own houses and sell directly to custom–ers or to retailers in the same village	

Gover–norate	District	Main Difficulties in the Value Chain that Can Be Tackled by UNDP	Proposed interventions	Proposed training
Hajjah	Abs	• The lack of capital • The lack of skilled and trained actors • The lack of raw ma–terials such as pota–toes • The high prices and difficulties of trans–portation	• Provide the actors with raw materials and enhance the growing of potatoes to supply the market • Provide financial support to help actors improve their business and follow up improvement • Facilitate the coordination of access to markets and transportation	• Marketing • Management skills • Communication skills • Accounting • The modern techniques of making food products
	Bani Qais	• The lack of capital • The lack of skilled and trained actors • The lack of raw ma–terials such as pota–toes • The high prices and difficulties of trans–portation	• Provide the actors with raw material • Provide financial support to help the ac–tors improve their business and follow up the improvements • Facilitate the coordination of access to markets and transportation	
Hodeida	AlZuhrah	• The lack of capital • The lack of skilled and trained actors • The lack of raw ma–terials such as pota–toes • The high prices and difficulties of trans–portation • The lack of electricity	• Provide the actors with raw materials • Provide financial support to help the ac–tors improve their business and follow up the improvements • Facilitate the coordination of access to markets and transportations • Encourage women's role in producing food products	• Marketing • Management skills • Communication skills • Accounting • The modern techniques of making food products
				• Techniques of making food products and selling them to customers

Gover–norate	District	Main Difficulties in the Value Chain that Can Be Tackled by UNDP	Proposed interventions	Proposed training
Abyan		• The lack of modern equipment to make cakes and cookies • The lack of skills in making cakes and cookies in different shapes and sizes and the method of pack–aging	• Enhance the producers' skills and ability of making cakes and cookies with better quality and packaging method • Improve the marketing skills of the ac–tors • Encourage the business by facilitating access to markets and raw materials	• Marketing • Management skills • Communication skills • Accounting • The modern techniques of making food products
Lahj	Almusay–meer	• The lack of capital • The lack of skilled and trained actors • The lack of raw ma–terials • The high prices and difficulties of trans–portation	• Provide the actors with raw materials • Provide financial support to help food chain actors improve their business and follow up the improvements • Facilitate the coordination of access to markets and transportation • Encourage women's role in producing food products	
Taiz		• The lack of skills in marketing and get–ting more market share • The lack of the raw materials due to the lack of cows and sheep • The lack of modern machines to produce cheese • The absence of spe–cialized dairy to make cheese and distribute to different gover–norates • The difficulties of ac–cess to market due to the high cost of transportation	• Enhance the producers' skills and ability of making cheese of better quality and packaging method • Improve the marketing skills of the ac–tors • Encourage the business by facilitating access to markets and raw materials • Help in distribution of cheese to other governorates • Encourage agriculture and animal hus–bandry to provide more raw materials for food products	• Marketing • Management skills • Communication skills • Accounting • The modern techniques of making food products

Macro level Recom–mendations	Facilitate the regulations of establishing and expanding business Facilitate transportation
Meso Level Recom–mendations	• Support the establishment of a food association • Provide business (administration, management) and marketing training • Upgrade infrastructure and services through investment and/or provision of capital grants to purchase assets (oven) and equipment (containers, gloves) • Facilitate market linkages and product distribution channels
Micro Level Recom–mendations	• Actors at different levels of the food chain should: • Improve their marketing skills and know more about the market needs • Have a good relationship with different actors • Enhance their knowledge and ability to improve their business • Know more about the MFIs and banks to help improve their business through the services they provide
General Recommenda–tions for Development	Coordinate with the different actors, MFIs and banks to facilitate the work
Recommendation for MFIs (What Can Be Financed)	• MFI should have more coordination and let actors at different levels know about the pro–cedures of taking loans Also, decrease the profit margin so that actors are able to take loans and repay them • Producers can be financed to be able to produce according to demand and enhance their market niche USD 700 is the average needed loan amount by different actors

Potential Impact of COVID–19 on the Sector[1]

Value Chain

Demand for food will not decrease as a result of the pan–demic and with improved delivery services good opportu–nities to reach consumers may emerge for food industry actors However, consumer behaviour has changed; people more often eat at home as crowded restaurants are no–go areas Many prefer to eat canned food for hygienic reasons, with an emerging need for more food processing business for canned products Most food products in Yemen are not well packaged and consumers are likely to avoid eating tra–ditional food that is not hygienically packaged

As many consumers have lost jobs and income due to the economic crisis caused by COVID–19, they have been forced to reduce the quality of food and/or the number of daily meals Food prices are likely to increase as demand increases and the movement of goods continues to be re–stricted at local level Prices of basic staple food items such as sugar and wheat have increased For some weeks in June 2020, there has been severe shortage of fuel in northern Yemen, increasing the price of all goods and services

With difficulties to deliver products and services to custom–ers due to quarantine checkpoints between governorates, actors in the value chain are faced with choices of dealing with suppliers in the same local area, selling at higher prices or maintaining the previous prices but lowered quality

Local crop production continues as normal, but there is a drop in consumer demand for more expensive fruit Premium fruit are sold at up to 70% less than normal at the farmer's end, with prices slightly decreased at retailer end With some volatility in demand, there is also increased risk of loss for perishable food items

Awareness programmes about business continuity can be valuable to keep the value chain operating smoothly Net–works and associations can play a key role in connecting the value chain actors for coordination via telecommunications

1 For a more comprehensive analysis of the potential COVID–19 impact on micro, small and medium enterprises in Yemen, see a synthesis report at this link: https://wwwyeundporg/content/yemen/en/home/library/a–synthesis–report–on–micro––small–and–medium–enterprises–in–yem

Actors may develop work plans that engage other actors to do the same

MSMEs

Many MSMEs will lose business due to the increasing costs and decreasing demand of unpackaged food items The re–striction of movements with quarantine checkpoints and closure of crowded market places that consist mostly of small food shops will affect the food industry sector neg–atively and the income of many businesses will decrease dramatically The closure of schools and crowded market places have forced MSMEs to find new nearby customers Especially, MSMEs dealing in not properly packaged food products made at home or in small shops are going to face serious disruption of business, possibly facing a 40% re–duction of sales Several market retailers have already ex–perienced more than 40% drop in sales

Costs and risk for MSMEs will increase; however, with over 20 million people facing food insecurity in Yemen, and a staggering 10 million at risk of famine, actors in the food industry will continue to deliver products and services Those dealing in perishable food items are very vulnerable to pro–longed distribution slowed down by quarantine checkpoints and other supply chain disruptions, whilst the business of MSMEs trading canned food may thrive For well packaged food products, current supply is not actually demanded

Yemen's infrastructure has been devastated by five years of conflict, leaving little capacity, energy and liquidity to re–spond to COVID–19 Overall shortage in access to finance is expected There is need for accelerated efforts aimed at ex–panding access to financial services, including through the deployment of technological innovations, and with an em–phasis on financial inclusion Digital financial technologies are becoming necessary to expand credit supply

MSMEs will also have to consider adopting new distribution mechanisms such as online purchasing People will prefer to have the products delivered to the doorstep, so that they do not have to visit crowded market places Restaurants will continue to have less customers, so sales will decrease, but there will be more demand for take–away delivery services

Livelihoods

The pandemic is having unprecedented effects on employ–ment Workers engaged in collecting, processing, marketing and distributing food, including wholesale and informal retail sellers, are particularly vulnerable to COVID–19 exposure and disruption of their livelihoods

Especially those who own business of food made tradition–ally in homes or in small shops are going to lose their source of income 30% of the employees are likely to be laid–off and 50% will face reduced working hours Some restaurants and cafeterias, forced to close their dining in, and have fired up to half of their employees This underemployment situ–ation will continue to affect the actors many years after the pandemic Workers from impaired businesses will have to move towards expanding sectors

An interviewed woman used to sell baked potatoes to school children and teachers, now that schools are closed by the authorities, she makes only 25% of her past daily income by selling to those who come to her home to buy She waits for neighbour children to buy from her As baked potatoes are perishable, she delivers unsold potatoes herself to her nearby clients She does not feel confident to find clients online, and, also, not on the street due to prevailing social norms The strict social norms only allowed her to sell to schools, and now she has lost this opportunity She wishes schools reopen

Some recommendations on how to facilitate for MSMEs to respond to and ultimately recover from the COVID–19 cri–sis are given in the table below The recommendations are framed based on macro, meso and micro level perspectives

	Food Industry Sector Recommendations
Macro Level Outlook: Recom–mended government policies, relaxations and enforcement measures Also, the role of private sector to support the macro level outlook	• Government should abolish taxes paid for food products • Facilitate food business that responds to shifts in consumer demand and be–haviour • Support mobile money services to ease remote transfers of money and decrease face–to–face transactions • Establish a leading network of all food industry value chain actors to facilitate communication and coordination

	Food Industry Sector Recommendations
Meso Level Analysis: Recom–mended continuity measures to be taken to mitigate the impact, including the need for finance	• Provide financial assistance through MFIs – extending new loans and restruc–turing repayment of old loans – to assist value chain actors to overcome liquidity challenges • Support digital literacy, mobile transactions and e–commerce opportunities as–sociated with food production and processing • Support emergency plans to increase demand of locally produced food
Micro Level: Recommendations related to preparedness and plans to contain the impact of COVID–19	• Follow contagion prevention protocols and assess workers' capacity to work from home • Establish local networks for food industry value chain actors • Establish digital interaction between sellers and customers

REFERENCES

1 Agriculture in Yemen (2010) Investing in the food industry Retrieved from https://wwwyemen–nicinfo/agri/invo/chance/indstiryphp
2 Sateesh, M (2016) Market Assessment: Dairy Sector in Taizz Governorate Sana'a, Yemen: UNDP
3 Yeni Yemen (2019) Municipal cheese A delicious Yemeni meal and a generational industry Retrieved from https://wwwyeniyemennet/post/view/21842
4 Daham, M et all, (2015, April1) Yemen food imports disrupted, conflict pressures supply chain Retrieved from https://wwwreuterscom/article/us–yemen–security–food–exclusive/exclusive–yemen–food–imports–disrupted–conflict–pressures–supply–chain–idUSKBN0MS4QA20150401

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