

AMERICAN UNIVERSITY OF BEIRUT

CHALLENGES AND OPPORTUNITIES IN THE VALUE
CHAIN OF “KISHEK”: THE CASE OF RURAL WOMEN
PRODUCERS IN THE SHOUF CAZA, LEBANON.

by
FARAH HAFEZ ABI MOSLEH

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for the degree of Masters of Science
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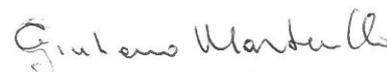
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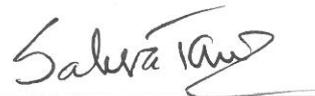
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AN ABSTRACT OF THE THESIS OF

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Major: Rural Community Development

Title: Challenges and Opportunities in the Value Chain of “Kishek”: The case of rural women producers in Shouf Caza, Lebanon.

Kishek is a traditional preserve or mouneh produced in the Lebanese rural areas. It is processed from burghol (cracked wheat) with fermented milk or laban (yogurt) from cows or goats. It is mainly processed by women in rural areas; however, commercial kishek can be increasingly found in supermarkets and urban areas. The Shouf region in Mount-Lebanon governorate is one of the Lebanese rural areas processing kishek for household food security and an income generating activity.

This thesis focused on women’s role in the kishek value chain. A value chain and a livelihood analysis were conducted. Data was collected from the value chain stakeholders, and analyzed using quantitative and qualitative methods. The value chain analysis focused on women’s role in the chain through mapping, identifying the actors and their linkages, and determining the strengths and weaknesses of the existing value chain; the livelihood analysis looked at the reasons behind women and smallholders’ marginalization (available livelihood assets and needs), and the effect of women’s kishek production on the household livelihood.

The value chain analysis identified the main stakeholders of the value chain: wheat producers, milk producers, mills, kishek processors, and retail (bakery, farmer’s markets, personal contacts), and its intermediate stakeholders such as local shops “dekkane”, dairy shops, milk collectors “hallab” and urban shops. In addition, the livelihood strategies detected the existing challenges and opportunities facing women processors and smallholders to recommend a policy framework to help and support marginalized women and smallholders in the Lebanese rural areas become main actors in the value chain.

The results showed that kishek is a secondary source of income for households mainly processed by women in the Shouf region. Women process small quantities; hence, their net revenues are low ranging between 366,000 LBP and 518,500 LBP per season. This thesis argues that in order to empower women, and help them achieve economies of scale in their communities, a kishek cooperative should be established. It will coalesce women processors production into a large production base that decrease production costs, improve marketing opportunities, build their leadership and entrepreneurship skills, and increase participation in the household decision-making. Furthermore, it will break the barrier facing milk smallholders from milk collectors and big investors controlling the market price.

Keywords: Kishek, Women, Rural, Food Value Chain, Livelihood Strategies

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GLOSSARY

Dekkane: A small convenience store located in small villages that stocks a range of everyday items such as groceries, snack foods, soft drinks, confectionery etc.

Forn: A small bakery that produces all types of manakesh/pies such as cheese, thyme, kishek, tukey and cheese etc. and pizza.

Labneh Serdele: A traditional cheese-like fermented dairy product that is prepared from cow's and goat's milk either through natural fermentation or controlled fermentation of heat (Saleh, 1991).

To the loving memory of my father

CHAPTER I

INTRODUCTION

Smallholders are the ones preserving and keeping the traditional and cultural aspects of Lebanese food production. They still produce the traditional preserve or mouneh in the same old way like their grandparents used to. One great example is kishkek.

Kishkek is a traditional preserve or mouneh product processed seasonally in the Lebanese rural areas holding the traditional and cultural features. It is considered a rural staple processed mainly at the household level by women in small quantities. The Upper Shouf is one of the main rural areas in Lebanon processing kishkek seasonally, where it is processed into a fine powder or circular balls stuffed with red pepper and walnuts and dipped in oil (Massaad, 2010). Kishkek processing serves as one of the main seasonal income generating activities to the households. It usually covers one of the household's annual expenses such as education, diesel, annual water fees and medication.

Siham is a 50-year-old woman that processes kishkek seasonally besides other types of mouneh. She is really an active woman that works around 18 hours a day during mouneh seasons to produce as much as possible to generate a good income through participating in most of the festivals and markets in the rural and urban areas. She is married to a man, who owns orchards of apples and apricots and grows different kinds of vegetables for their own

consumption and mouneh processing. Siham has two girls that graduated from a good university in the Shouf region. She believes that education is the best opportunity she can provide to her daughters to have a better life and succeed. Each season she saves the kishek revenues for her daughters' tuition fees. Decision making at her household is mutually done by her husband and herself; however, she processes everything by herself and sometimes with the help of her daughters. Siham is a success story that shows the importance of kishek production revenues to the rural families.

This study aims to analyze the value chain of Kishek in order to identify the links between the smallholders and the different stakeholders in the chain, focusing on the role women play in processing and marketing. In addition, the study will analyze the livelihood strategy of smallholders and processors to identify the challenges facing them, the available opportunities and to recommend a policy frame that would help and support the marginalized women and smallholders. The present study is guided through the following research questions:

1. Who and how are the kishek value chain stakeholders linked?
2. What is the role of women in the chain?
3. How are smallholders being able to reproduce themselves while being marginalized economically, politically and socially?

In order to answer the research questions, chapter two will start by discussing the literature related to the value chain and smallholders' integration in it. It examines the local food system and its livelihood diversification. It also defines mouneh and the reasons

behind its production process; and finally, explains what is kishek and women's involvement in process.

Chapter three discusses the methodology used to answer the research questions and the problems faced during data collection and field work.

Chapter four presents the data gathered during field work and its analysis. It focuses on the value chain analysis of kishek and its SWOT analysis to unveil the opportunities and challenges smallholders are facing, the women's role in the chain and the linkages between the different stakeholders. In addition, it displays a livelihood analysis that helps understand the livelihood of the smallholders and their needs and demands.

Chapter five concludes by providing recommendations that can help smallholders increase their efficiency in kishek production and improve their revenues.

CHAPTER II

LITERATURE REVIEW

A. Value Chains and Vertical Integration:

The term “value chain” was first introduced by Michael Porter in his book “Competitive Advantage - Creating and Sustaining Superior Performance”. He used the term as a basic tool to examine all the activities a firm performs and how those activities’ interactions are necessary to analyze the sources of competitive advantage (cost leadership, differentiation and focus). The chain is made up of primary activities that create a direct value (inbound logistics, operations, outbound logistics, marketing and sales, and service) and support activities that support the creation of the primary activities (procurement, technology development, human resource management, and firm infrastructure). Figure one illustrates Porters’ generic value chain. There are two ways to reach competitive advantage: optimization of the firm linkages that would reflect their strategy to achieve competitive advantage and coordination through reducing costs and improving differentiation (Porter, 1985; Sultan, 2013). In other words, it is a systemic approach to achieve competitive advantage, consisting of a sequence of activities that create and build value (Antoniou et al. 2012) to bring a good or service from the production phase to the consumption phase or disposal after use, noting that the value of the good or service increases as it passes from one phase to another. The value chain consists of actors that have different roles in the

chain but interlinked through the chain activities involved in bringing the product from its production stage “raw” to the final stage “consumption or disposal”. The linkages between the different activities are complex. The linkages are not only vertical; there tend to be more interconnections between the activities of the product. Those linkages deliver a mechanism for resource sharing among the different actors along the value chain, and are very important for increasing the competitive advantage. In addition, sometimes intermediary producers from a certain value chain may feed into a number of different value chains (Kaplinsky & Morris, 2001). Vertical integration was defined by Mpoyi in 2003 as to what extent an organization controls the production of its inputs or suppliers and the distribution of its outputs or finished products. According to Davis and Duhaime, vertical integration is two kinds: between or within the stages of the value chain. The between vertical integration happens amid the different stages such as production and processing, and the within vertical integration occurs inside one stage such as production (Davis & Duhaime, 1992; Zhang, 2013). Vertical integration can benefit the organization by reducing the transactional costs thus reducing costs (Porter, 1985; Jones and Hill, 1988; Mahoney, 1992) and increasing inputs efficiency hence, improving performance (Porter, 1985; Jones & Hill, 1988).

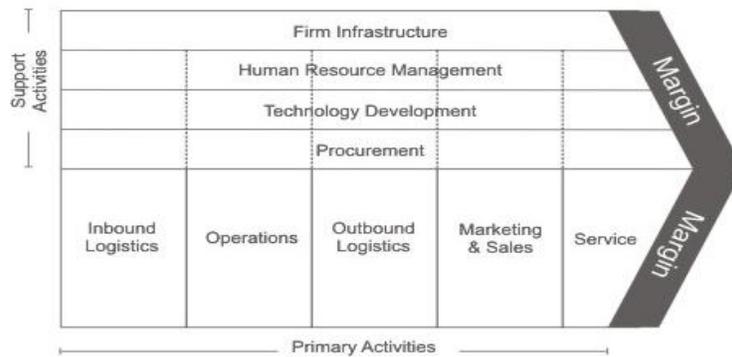


Figure 1: Porter's Generic Value Chain (Porter, 1985)

Value chains add incremental value to the product in the nodes of a chain either by value addition or value creation. This value is then realized from higher prices and/or the development of new (niche) or expanded markets (Neven, 2014). The term value addition is used when value is added to a product by processing it from a raw product into a finished product, and value creation term is used when the product is characterized by special feature such as geographical location or environmental friendly. For example, within the agro-food industry, the term value addition is used when apples are sun-dried to be eaten as chips or processed into jam. This gives it more value in the market place. Similarly, the term value creation characterizes the apples that are differentiated in the market place because they are linked to a geographical location, organically certified or have adapted the good agricultural practices guidelines.

The value chain analysis (VCA), based on the generic value chain model of Porter, frames how firms attain competitive advantage by adding value in their organizations through primary activities such as producing, marketing and transporting good and services (Porter, 1985). It is a diagnostic tool that describes the current situation of the chain, and results in recommendations for the improvement of the chain (Fearne & Martinez, 2012; Howieson et al. 2016) and an experiential tool in development studies, where the main objective of the VCA is to improve the supply-chain performance and increase the value net revenue (Taylor, 2005; Neven, 2014). However, few studies have established VCA from being a diagnostic tool for firms to have a successful implementation at a practical level (Bonney et al., 2007; Howieson et al. 2016). The VCA concept was developed as a research methodology by Peter Hines and Nick Rich (Hines & Rich, 1997) and was then further developed by different scholars (Jones and Womack, 1994; Rother and Shook, 2003; Petersen et al., 2015). It maps the creation of a product wanted by the customer by tracking it from raw material, production, processing, distribution and consumption. It helps in increasing the coordination between the different actors of the chain. (Prowse & Moyer-lee, 2015; Kaplinsky & Morris, 2001). Those trends have been appearing in the agricultural value chains. These chains are becoming more consumer-driven and vertically coordinated as the demand and supply patterns have been changing. Thus, agricultural value chains are becoming more integrated and globalized (Reardson et al. 2009; Prowse & Moyer-lee, 2015).

Over the past 50 years in developing countries, the agro-food value chain faced a transformation in the processing, wholesale and retail parts of the value through two stages. The first stage is known as the “pre-globalization” period that took place between the 1950s and 1980s. During this stage, a shift from small-scale traditional informal agro-food industry to large-scale formal sector was noticed and the emergence of large sale processors was documented. Governments invested in wholesale markets, big processing firms and retail chains. The second stage is known as the “globalization” period that started during the 1980s and is still ongoing. Liberalization of food processing and retail occurred. Trade liberalization was the center of debate because it was affecting the developing countries food systems and farmers. It didn’t affect the food production or consumption; however, it affected the quality of the food produced, its standards and varieties (Reardon & Timmer, 2007). As the governments continued its investments in wholesale markets, the private sector invested new projects in processing and retail. During this period, “supermarket revolution” arose and was encouraged. The transformation has been illustrated by consolidation, multi-nationalization, specialization, and organizational and institutional change through the rise of vertical coordination; furthermore, it was encouraged through socioeconomic factors, for example income rise and urbanization and policy changes such as the liberalization of markets and privatization of investments (Reardon et al., 2009; Reardon and Barrett, 2000). Smallholder farmers and retailers had to find new ways to work. They had to find new sources to market their products as the neighborhood markets closed. The emergence of supermarkets pressured agricultural value chains. Farmers started migrating from the rural areas to urban areas to find better income generating activities (Reardon & Timmer, 2007). Over the 1990s and 2000s, restrictions on the agro-food value

chain began and the procurement systems became modernized. Reardon & Berdegué noted that the procurement system modernization included three elements. First, a shift from using no or public quality and safety standards to private standards occurred. This shift was done to produce different products that can compete with the traditional sector and encourage farmers to improve their conventional production practices. However, this shift required big investments that can introduce new technologies and post-harvest handling techniques that smallholders couldn't afford (Reardon et al., 2000). Smallholders producing small quantities have no knowledge about the quality standards and don't have the capabilities to improve it. This made it harder for large processors or retailers to buy smallholders' products (Gereffi & Lee, 2012). Second, a shift from spot markets (cash markets) relations in traditional wholesale markets to vertical coordination mechanisms. This shift included contracts and market inter-links between the different actors in the chain. For instance, the wholesaler offers credit to a farmer; in return, the farmer sells his/her output to the wholesaler (Reardon et al., 2009). This guarantees a revenue for farmers but the revenue is lower than what is prevailed in the market and farmers lose their bargaining power (ESCWA, 2014).

In Lebanon, most of the holdings are small (85%) with only 15% considered large, where, according to the Ministry of Agriculture, any farmer having 2 ha or less is considered a small-scale farmer. Small agriculture holdings are mostly present in Mount-Lebanon and the South while the large holdings are in the Bekaa valley and coastal plain. In addition, most livestock farms are small-scale farms having 2 to 5 animals. Most of the

smallholders are between 35 and 65 years old. Around half of them depend on farming as their only income while the other half has off-farm activities generating an additional source of income (Ministry of Agriculture, 2012).

With respect to the agricultural services, only 11% of the agriculture holdings are benefiting from extension services provided by the ministry of agriculture. Also, only 4% are part of an agricultural cooperatives with only 1% having access to credit. Moreover, 75% of the farmers in Lebanon don't have National Social Security Fund (NSSF) and the 25% that do benefit from NSSF receive these benefits due to their work in the public and/or private sector. In addition, most of the farmers that are 65 years old and above don't have access to any kind of social security or health care except for the ones provided by the ministry of public health (Ministry of Agriculture, 2012).

Female farmers represent 9% of the total agriculture holdings, covering 4% of the total cultivated area mostly present in Akkar and North governorates. The average age is 52 years old (Ministry of Agriculture, 2012). However, due to the absence of gender-disaggregated data and the lack of statistics detailing women's participation in the informal and rural economies, it is hard to have accurate information about rural women in Lebanon. Rural women represent around 34% of the total family workforce in agriculture as unpaid labor. They are responsible for sowing, weeding, harvesting and processing vegetables, fruits and olives (Tailfer, 2012). After the war, male migration to the urban areas to find

better job opportunities increased and female participation in the agricultural sector increased. Female farmers' work is as efficient as male farmers' in the Lebanese rural areas. However, as women in the Middle East and North Africa region, they lack equal access to credit, information, extension and markets (Tailfer, 2012). Rural women work around 14 hours a day while men work up to 12 hours maximum in agricultural tasks and domestic chores (ESCWA, 2001). In addition, women have home responsibilities such as cooking, cleaning and taking care of children, so rural women end up working around 16 hours a day. Most of their work is either seasonal or part-time thus their contribution is not counted in the Lebanese economy. The informal work women perform such as rural cooperatives, domestic labor, household and micro enterprises, informal markets, cooperatives, local family-run businesses, or some other agricultural sectors is really important to the survival and function of the poor household families in rural areas. Moreover, almost all the money they save up goes to the household consumption so it doesn't enter the market cycle. In rural areas, men head the majority of households; however, 10.9% of the rural households are headed by women (CRTD-A, 2004). This is increasing as a result of male migration to the urban areas.

Smallholders are either on contract with big investors and companies or sell individually with very low prices because they produce small quantities to traders and/or wholesale market which makes them unable to achieve economies of scale. Therefore, Lebanese smallholders are coping with income pressure by looking for both cost reduction and value adding innovations (ESCWA, 2014). Those smallholders are the ones preserving

and keeping the traditional and cultural aspects of food production. In Lebanon, food culture is an essential part of the Lebanese identity, in which traditional cuisines represent distinctive traits of rural communities. They showcase the influence of local agriculture and local food culture. Traditional production forms an integral part of the Lebanese food culture and is widely practiced in rural areas, where communities are still involved in agricultural activities. They are the ones that still produce the different types of mounneh seasonally (traditional and seasonal products) and sell it to the urban areas. They are still trying to produce products such as Kishek that is made up of burghol and fermented milk. The milk usually comes from baladi goats and the burghol comes from wheat grown mostly in the Bekaa valley. Although, the government subsidizes wheat, those smallholders do not get any help from the government and they have no policies or regulations to protect them from the big investors and middlemen in the country. Moreover, they are still struggling to market and sell their products, because of their production size and time-consuming artisanal manufacturing process that increases the cost of the final product. Furthermore, they have no educational and health benefits to enable them to provide their children with better lives and improve the quality and quantity of their produce that would open new marketing opportunities which then increases their revenue and provides them with better social and economic lives. The absence of policies that allow them to be part of the large agribusiness sector limits their opportunities. Creating such policies can help them become part of those agribusinesses to benefit from their services. Even if smallholders have the know-how in planning, managing and marketing their products and have access to the raw materials easily, they still won't be able to afford the risks and costs associated with it (Wolfenson, 2013).

B. Local Food systems:

One entry point to integrate the smallholders in the agriculture value chain and understand their livelihood is the local food system. The idea of direct sales through local markets is not new; it existed since pre-industrial times where farmers used to sell the excess produce in order to gain an income (Ishardd, 2010). However, after the introduction of technologies and the establishment of supermarkets, people were able to get or ship whatever they need at any time. Lately, the interest in local markets is growing again. The demand for locally produced food has raised the importance of direct sales between the farmer and consumer and its popularity and demand is increasing everyday (Johnson et al. 2013). This increase in demand occurred due to four movements. First, the environmental movement where people are motivated to buy locally grown products by thinking of the geographical dimensions to decrease the transportation. Second, the food security movement that works on providing accessibility to safe, healthy and culturally appropriate produce. Third, the Slow Food movement that encourages people to grow their produce and prepare food traditionally. This movement started in Italy in response to mass-production of food. And finally, the local food movement increased people's interest in locally produced food that supports different families and provides information about the origin of the food they are consuming (Martinez, 2010).

Although local food systems popularity and demand increased, there is no universally accepted definition for "local/baladi" food. In addition, there is no agreement

about what are the primary factors that would develop the definition of “local/baladi” food. In most of the cases, local food refers to food produced in a certain area. It is defined according to geographical distance between farmer and consumer or the distance the food is traveling. In other cases, it is defined according to certain social or supply-chain characteristics in producing the food (Johnson et al. 2013). According to the University of Michigan, a local food system is a system in which people have financial and physical access to culturally appropriate, affordable, nutritious food that was grown and transported without degrading the natural environment in the same region. In short, it is an alternative network of food production, distribution and procurement for small-scale producers that focuses on sustainable, environment friendly, authentic and heterogeneous production aiming for ethical food production (Sundbo, 2013). It involves the smallholders in rural and urban areas working in the agricultural sector, heterogeneous products and short supply chains where the farmer and his family performs the different activities in the value chain from growing to marketing their produce and the consumers. The farmers are working on quality and authenticity and consumers are looking for good healthy products, local ingredients and cultural roots (Sundbo, 2013). The most common direct sales to the consumers in the region are farmers’ markets, community supported agriculture and other direct-to-consumer programs such as on-site farm stands (Martinez, 2010). Those new emerging markets or what Jan Douwe van der Ploeg et al. called “nested markets” in their article “Rural development through the construction of new, nested markets: comparative perspectives from China, Brazil, and the European Union”. These nested markets are providing one or more of the following products: (1) organic products, (2) high-quality products, (3) traditional seasonal products, (4) regional specialties, (5) direct selling and (6)

agro-tourism services. It provides specificity, connectedness between the actors of the value chain that creates a complex network, and rootedness which creates a socio-material network (Jan Douwe van der Ploeg et al. 2012). It is made of short circuits or value chains that interlinks production and consumption that are owned by farmers. The role of the farmers is not limited to production anymore, it is extended into processing and marketing that builds trust with consumers, meets their expectations and preserves the tradition and culture roots of a certain area by producing the same products that were produced by our ancestors (Sundbo, 2013; Jan Douwe van der Ploeg et al. 2012). This increases the share of the farmers from the total value added (Jan Douwe van der Ploeg et al. 2012) and gives more financial contribution to the local economy by creating jobs and improving accessibility to nutritious food. Moreover, it offers smallholders livelihood security through food security and better income that won't be offered by conventional food systems where smallholders produce the majority of the food consumed (Misereor, 2008). In addition, it has an environmental benefit through sustaining the production system of a certain area, preserving its biodiversity and reducing transportation costs because agriculture and food systems are the main contributors to greenhouse gas emissions. Furthermore, it plays an important role in rural development and improves the information flow to consumers of where, when and how their food was produced (Morries and Buller, 2003).

In Lebanon, we have three year-round farmers' markets and several markets that occur occasionally during holidays. Souk Al tayeb is an open-air weekly farmers' market every Saturday at Downtown Beirut and this year it extended to another location Gefinor –

Hamra opening every Wednesday. This farmers' market was founded in 2004 by Kamal Mouzawak (Souk eltayeb, 2017). Another farmers' market also located in one of Hamra alleyways in "Nehme Yafet Street Bread Republic" is "Souk El Ard". It is also an open-air weekly market every Tuesday hosted by the founder of Slow food movement in Lebanon Walid Attaya (Slow Food Beirut, 2017b). And finally, "Souk aal Souk" a monthly farmers' market presenting around 15 producers from all over Lebanon hosted by the Environmental and Sustainable Development Unit (ESDU) under the Faculty of Agricultural and Food Sciences (FAFS) at The American University of Beirut (AUB) (Food Heritage Foundation, 2017c). What those markets offer is a variety of fresh, organic and local products. One of the main products sold is "Mouneh".

In Lebanon in the past, people in the remote and rural areas used to preserve their summer crops to secure food for the harsh days in the winter season. It provides households essential nourishment for daily meals by transforming the perishable food into food with long shelf life for a calendar year. This process is called Mouneh and it is an unforgettable part of Lebanon's history. It is an Arabic word derived from the word "mana" that means storing (Massaad, 2010). It is a traditional annual processing of fruits, vegetables, herbs, flowers and animal by-products. Each mouneh type is processed at the season its grown, for example cherry jam is processed during May, June and July and tomato paste is processed during August and September. Mouneh is usually produced during the available season of the crop and kept in a special room in the house called "odet al-mouneh" to be consumed during the calendar year. The process of mouneh production is time consuming and

requires several days. It used to involve the whole community where women gather and process their goods. It includes: jams, molasses, syrups, vinegar, and jellies from fruits, where different techniques are used such as drying in the sun, dipping in syrup and developing high liquid concentration to form molasses etc. Vegetables are processed in different ways. It either involves soaking vegetables in water, salt and vinegar or reducing the water content to produce a paste. In addition, some products are dipped in olive oil and others like fruits are dried in the sun. Wild flowers and herbs are usually dried or changed into water through distilled water machines. Animal by-products and dairy by-products are also preserved through drying, dipping them in oil or storing them in clay jars. Olive oil is considered one of the most used products in the Lebanese diet therefore, it is usually preserved in glass jars away from the cool dry places (Mateljan, 2015) and finally grinding of wheat is one of the important old practices due to the essential role bread plays in the Lebanese diet. It is processed into burghol too. According to an article by the Ministry of Economy and trade, mouneh links the product to the production region, to the terroir of the product and landscape which surrounds the region. It is related to the concept of geographical indicator products demonstrating the area of origin. This helps customers know the area of origin by linking the product to its production area through looking at the nature and climate conditions of the region. Each region is specialized in a certain product for instance the first product of origin linked to the terroir was goat milk produced from herds grazing in rural highlands (Abu Ghyda & Fahs, 2007).

Today, and after the introduction of technology the world has changed and people's preferences have changed with time. The unsustainable use of natural resources especially water and the unhealthy food consumption lifestyle harms the planet and human health. The Barilla Center for Food and Nutrition proposed a new tool "Double Pyramid of food and the environment that shows what is good for human health is good for the environment (BCFN, 2011). People shifted from health products produced at homes into commercial products produced in large commodities. But of course some people in rural areas still process mouneh. Some households process mouneh from the extra produce they grow, others process it to secure food for political instabilities and others continue to process it as tradition and as sociological act preserving Lebanon's heritage. Households in rural areas process their own mouneh but not every single type of mouneh. They process some and buy the others from different women in their community. However, households living in the urban areas buy either commercial mouneh from supermarkets or traditional mouneh from seasonal migration, personal contacts and lately from farmers' market and occasional markets. Mouneh is considered not just a food product but a social root and a national identity. It is the story of the rural lands and its history. As mentioned before, in the Lebanese rural areas food culture is part of the Lebanese identity and women are the knowledge holders of the traditional cuisines. International organizations have provided funds and microcredit to support and develop food processing activities that provides job opportunities to a significant number of rural women around Lebanon (FAO, 2016a; Al Shouf Cedar Society, 2017). These developmental initiatives have had a direct impact on women's empowerment and positive change in rural social norms. Recently, after the awareness about the importance of healthy products and its impact on our health, people are

trying to shift from commercial food products towards homemade products which is basically mouneh. This is obvious through the spread of farmers' markets around Lebanon and rural food tourism activities such as the "food trail" initiative (Food Heritage Foundation, 2017a). This shift is helping the revival of the mouneh tradition and production. Women constitute 15.4% of the Lebanese workforce in food processing (ESCWA, 2001). Most of the women working in food processing are seasonal and temporary workers with low income that does not allow them to sustain their households. However, most of the mouneh is produced by women. With no accurate statistics documented because, as mentioned earlier, most of their work is informal and limited to the household level. A research done during a graduate course "RCODE 341" on women's contribution to household livelihood from mouneh production in the Shouf region concluded that female employment in mouneh production plays a vital role in contributing to the household livelihood. The expenditure on food increases as well as the expenditure on complementary goods such as clothing and entertainment increases. Also, an improvement in children's education was noted. Moreover, women in rural areas play an important role in agriculture. They are responsible for growing crops, preparing and processing food for the household that ensures a diverse diet. One of the main mouneh products processed by women is Kishkek.

C. Kishkek

Kishkek is a dairy by-product produced in the rural areas in different cuisines in the Middle-East (Iran, Iraq, Turkey and Lebanon) and India having several names such as Kichk, Keshek, kushuk, or Kishk (kurmann et al, 1992). It is usually made from drained

yogurt or milk mixed with cereals. It is eaten in different ways: plain, dissolved in water, salted or flavored as candy. In Iran, it is made from wheat or barley mixed with sour milk or yogurt. It can be liquid or dried (Ottolenghi, 2013). In Lebanon, Syria and Palestine it is eaten in the same way by mixing burghol (cracked wheat) with fermented milk or laban (yogurt) from goat or cows.

In Lebanon, kishek is a rural staple made of fine powder that is often served in several ways such as: a soup either cooked with awarma (fat of the lamb's tail mixed with meat), or served with fried onions and garlic, manoushe, with chicory salad or, in the current trend, mixing it with pasta. Its production differs from one region to another and the most known village producing kishek is Baalbak in the Bekaa valley (Abu Ghyda, 2007). Each region uses a different variety of wheat and kind of milk, and implements different processing techniques. Some regions use white wheat while others use brown wheat. Some processors use goat milk to give it a sour taste and flavor, while others use cow milk, and some mix both goat and milk together. Some of the processors use milk for kishek fermentation, while other use laban (yogurt) or labneh.

Keshek production is a long process. The process starts by choosing the burghol variety and milk type. Burghol is produced from durum wheat. Wheat is considered one of the important yearly preserves for the Lebanese. It is considered the major staple cereal in the Lebanese daily meals, (Hwalla et al., 2013) and is used in the famous Lebanese recipes

such as tabouli. According to the USDA, Lebanon imports 1,125,000 tons while producing 140,000 tons in 2016 (Wheat Atlas, 2016). The grinded white wheat is used to give a light color that is desired by urban customers and the grinded brown wheat is also used; however, it is known for its low yields. Most of the burghol production in Lebanon is in the Bekaa Valley (Food Heritage Foundation, 2016b). Milk is collected from local breeds of goat and imported cows. The goat's milk is creamier and contains more fat than the cow's milk, and it also gives a sour taste. Some decide to mix goat and cow's milk together because they don't have enough or they want to have a slight sour taste. In some rare cases, they use the sheep milk; however, it is too creamy and fatty (Tamime et al., 1999). Kishek is produced at the household level by women mainly. But, recently commercial kishek is being produced in small factories.

Kishek Ingredients (Massaad, 2010):

1. 1 kg Burghol
2. 8 kg Yogurt
3. Salt

Kishek Process (Massaad, 2010):

1. Wash the Burghol and leave it to dry in the sun for few days.
2. Add 2 kg of yogurt over the burghol. Keep it overnight covered with a fine cloth.
3. Pour the remaining yogurt into a large bowl lined with a double layer of sterilized cheesecloth, leaving plenty of material overlap the sides. Add a pinch of salt and mix

thoroughly. Tie the ends of the cloth together and secure with a string. Hang it over the bowl or drain in the sink overnight, allowing the whey to drip out until the contents are firm.

4. Next day, divide the content or “labneh” (strained yogurt) into 3 parts. Add one part to the burghol mixture. Add a pinch of salt. Leave the rest of the labneh to drain.
5. Next day, divide the labneh into 2 parts. Add one part to the burghol mixture. Add pinch of salt. Leave the rest of the labneh to drain.
6. Next day, add the remaining labneh to the mixture, thoroughly mixing the ingredients together with your hands twice a day. Add a pinch of salt. Leave to ferment 5 to 7 days, depending on weather conditions. Make sure to mix the ingredients thoroughly on a daily basis.
7. Spread lumps of the fermented mixture on a clean tray covered with a sterilized clean cloth outside in the sun to dry for 3 to 5 days. Rub the lumps of kishek between the palms of your hand until they separate and form a coarse powder.
8. Sift the dry coarse powder through a coarse sifter. Take the coarse powder to your local mill to have it ground into a fine powder or use a fine sifter to grind it yourself.
9. Put the fine ground powder to dry in the sun for 1 to 2 days to ensure complete dryness, as humidity may spoil the kishek.
10. Store in airtight bags in a cool dry place away from light.

There are two different kishek products that are made in rural areas: either plain kishek balls or stuffed kishek balls, both dipped in oil. The stuffed kishek balls usually contain red pepper and walnuts. They have the same ingredients and process; however, rather than putting them in the sun to dry, the kishek balls are made in circular shape, and are then sun-dried. Those are usually served as appetizers (Massaad, 2010).

D. Chemical Composition of Kishek:

Kishk is a very nutritive food containing carbohydrates, protein, fat and minerals. According to a study done by Tamime in 1999 on Lebanese Kishek, the kishek samples showed that kishek composition is made up of solids, organic acids and fatty acids. On average, it contains around 92 g.100 g⁻¹ total solids, divided into protein, (16 g.100 g⁻¹) due to the ratio of fermented milk to burghol 4:1, fat (9 g.100 g⁻¹), carbohydrates, ash and salt (varies due to the different amounts added during preparations). Carbohydrates, which consist of the highest amount (69 g.100 g⁻¹) are composed of starch, dietary fibers, galactose, and lactose. Different organic acids indicate the fermentation of yogurt (lactic acids) and diverse concentrations of various acids help in the formation of Kishek. Finally, fatty acids vary in kishek because they are influenced by the milk's fats. The goat's milk contains more fat than that of the cow's. Fatty acids in kishek include saturated, mono-saturated and poly-saturated fatty acids from C10 to C21 (Abd El Ghani, 2014). In addition, kishek contains several nutrients: Po, K, Ca, Mg, Na, Fe, Mn, Zn and Cu.

CHAPTER III

METHODOLOGY

This chapter aims at outlining the methods used in the study. Firstly, it details the conceptual framework used in the research of the Kishek value chain. Secondly, it presents the general characteristics of the study area and data collection.

A. Conceptual Framework:

The following section outlines the research design and the study's fundamental concepts. More precisely, these include the study's understanding of the Value Chain Analysis (VCA) and the Sustainable Livelihoods Analysis (SLA).

1. *Research Design:*

In order to understand the smallholders' interaction in the value chain, the kishek value chain was analyzed and assessed to identify the linkages and challenges facing smallholders participating in the chain. In addition, to understand why smallholder are being marginalized and what are the challenges facing them while producing traditional food products, the livelihoods of the smallholders were analyzed. Based on theoretical concepts and empirical studies of Kishek, a framework is presented in figure 3. The two main concepts will be explained.

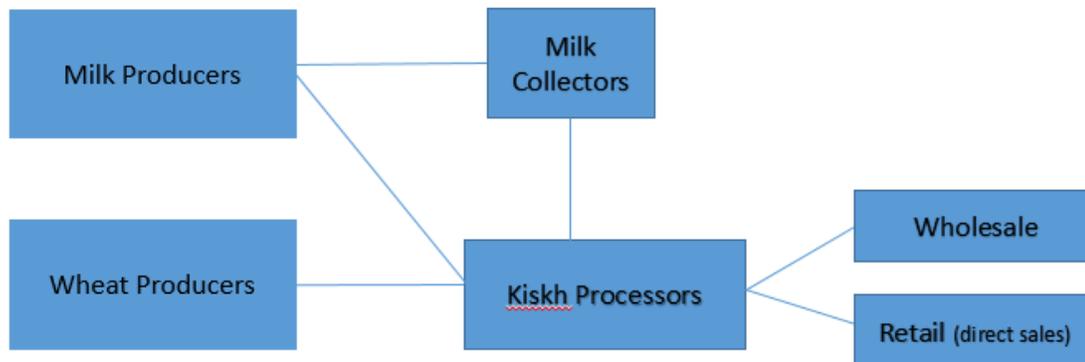


Figure 3: Kishek Framework

Source: Own illustration

2. Value Chain Analysis (VCA):

The VCA will act as an analytical lens to understand the complexity of the relationships and linkages between the value chain actors and their respective challenges as well as their opportunities. Therefore, it will focus on all the activities occurring related to production, processing and its marketing channels. The research applied the VCA in order to map the kishek value chain. Thus, the main stakeholders of the kishek value chain were identified and analyzed. It involved all actors involved through the entire chain from milk producers, milk collectors or middle men, kishkek processors and marketing channels (Hillen & Meijer, 2006).

The VCA included the following research steps (UNIDO, 2009):

1. Mapping the value chain to understand the characteristics of the chain actors and the relationships among them, including the study of all actors in the chain, of the flow of goods through the chain, of employment features, and of the destination and volumes of sales.
2. Identifying the distribution of actors' benefits in the chain. That is a partial economic analysis.
3. Identification of strengths and weaknesses of the Kishek value chain.

The VCA focused on the Kishek value chain itself and neglected the complex livelihood of the farm households. Hence, a sustainable livelihood analysis was applied to help in understanding the living conditions of the people involved in the chain (Kürschner et al. 2016).

3. *Sustainable Livelihood Analysis (SLA):*

The SLA presents the main factors that affects the smallholders' livelihoods and the relationships between them. It helps in the identification of entry points for support of the livelihoods (Scoones, 2009). In addition, it helps in identifying the producers and processors access to resources and livelihood assets that would help in determining the interventions needed to improve their livelihood strategies and incomes. The key elements of the sustainable livelihood analysis are explained through its framework. (Figure 4)

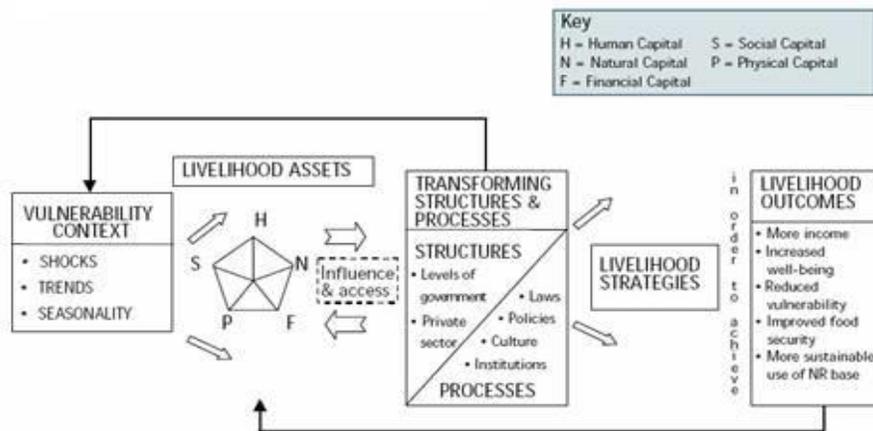


Figure 4: Sustainable Livelihood Approach Framework (Scoones, 2009)

The SLA have included the following steps:

1. Identification of livelihood assets regarding income generation;
2. Assessment of the importance of Kishek marketing within smallholders' livelihood;
3. Identification of the needs of local farm households regarding their potentials and challenges in the kishek value chain.

The empirical research methodology has been formed by applying the primary theoretical concepts, the Value Chain Analysis and the Sustainable Livelihood Analysis to the research framework outlined above.

B. Study area and data collection:

The study results are fundamentally based on empirical research. A qualitative research approach enabled an explorative and in-depth investigation of the research topic to understand the challenges facing smallholders that are still producing local traditional products.

1. Study Area:

Shouf district is located in the Mount-Lebanon governorate of an area of 495 square kilometers that is equivalent to 4.7% of the total area of Lebanon. It's surrounded from the north by the Damour river. It extends from the Mediterranean coast to the west to the heights of Barouk mountains (2 000 meters above sea level). The Shouf region is bounded from the north by Aley district, from the east by the West Bekaa district and from the south by Saida and Jezzine districts. Its administrative center is Beit Ed Dine, the capital of the emirs of Mount Lebanon, and the historic core of the Republic of Lebanon politically and geographically. The population is around 166 140 inhabitants, equivalent to 3.9% of the total population of Lebanon, spread over 75 municipalities (Localiban, 2016) .

The Shouf region encloses the largest Nature Reserve in Lebanon “Al-Shouf Biosphere Reserve” that includes three cedar forests Barouk, Massir Al-Shouf and Ain Zhalta. It is considered a suitable location for the conservation of large mammals and ultimately an adapted location for the reintroduction of previously extinct species that cover nearly 2% of Lebanese territory (Ministry of Environment , 2016).

The upper Shouf is considered a rural region in Lebanon. It allows the production of different crops due to its microclimate diversity. The major cultivated crops are: Olives, covering 50% of the cultivated area of the region, fruit trees such as apples, grapes, peaches, and cherries, covering 38% of the cultivated area, and vegetables (Hani, 2015).

A lot of the women in the Shouf region produce Mouneh at household level and sell it through personal contacts in their villages or neighboring villages. They usually grow the raw material in their backyards or in small lands in their home towns. Non-governmental organizations built the capacity of women through training on post-harvesting techniques, good hygiene, food safety, packaging and labeling of products. This improved the quality of their produce, thus opening new marketing opportunities. Moreover, they established different cooperative/community kitchens to facilitate women's work that would help them earn money to improve their household incomes. Three fully equipped kitchens were established in the upper Shouf in Baakleen, Mresti and Jbea for women to prepare all the seasonal jams, "makdous" and cater funerals and wedding; however, women are rarely using those kitchens, and for no valid reason for this. In addition, a good successful place to market their produce is "Al-Shouf Cedar Society". They provide women with workshops on how to improve their products in three different villages: Mresti, Jbaa and Baadaran. This will offer the women better seasonal or monthly incomes that would support their households (Al-Shouf Cedar Society, 2017).



Figure 5: Shouf District on the Lebanese Map
(Localiban, 2016)

2. Data Collection:

As the main aim of my thesis is to deeply explore key links between the value chain actors, mainly focusing on women's role and smallholders' challenges, opportunities and frame policy recommendation, I chose to use qualitative research methodology that would enable me to produce knowledge of social reality (Blaikie, 2009; King et. al., 1994). The value chain analysis and sustainable livelihood analysis describe all the production activities that form the value chain of Kishek (cultural practices, processing, milk production and collection, marketing). Furthermore, it analyzes the constraints and opportunities at every level of the production chain. It identifies the different existing systems and sub-systems in the sector, and show the type of relation among the relevant actors in the chain. Additionally, the livelihood analysis focuses on the smallholders' challenges and opportunities to understand how they are marginalized and how they are able to reproduce themselves. Moreover, the structural change in kishek production is drawn on the household activities typology (Daskalopoulou and Petrou, 2002). 2 milk producers and 2 kishek processors were asked about their household activities typology to

develop their trajectories over the past two generations. Using qualitative research methodology allows me to investigate the socially constructed world between the actors and the contradictions and challenges occurring. In order to explore gender relations in the household, I researched important issues including the division of work, decision making roles and mechanisms, and relations in the household and with the community. This helped me to directly and indirectly understand the impact of kishek production on their livelihoods. On the other hand, quantitative research will be used to describe the demographic and socio-economic situation of respondents and the role of women in kishek processing. It will be collected from the demographics and economical section of the semi-structured interviews. In addition, it will calculate the marketing costs and price spread. Marketing cost refers to the cost earned by the kishek processor from milk production to kishek product. This cost was worked out by summing the different components that are milk cost, milling cost, packaging cost and, in some cases, transportation and stand costs. Price spread was calculated by computing the differences between the prices received by the processor and prices paid by the consumer (Kodigehalli, 2011).

$$\text{Price spread} = P_{\text{received by the processor}} - P_{\text{paid by the consumer}}$$

Before collecting the primary data, secondary data about the Kishek was researched and collected in order to have a good background about kishek in Lebanon and Shouf region in specific. The information collected and found was about the chemical composition and nutritional benefits of kishek, mostly done at the American University of Beirut, and the traditional recipe was published in “Mouneh” Book by Barbar Massad;

however, the value chain itself was never studied or researched. The aim of the pre-fieldwork and secondary data collection is to turn the issues into a set of questions to which answers can be given. It plays a significant role in the empirical phase of the research when the task at hand is to explain the research problem and to come up with some hypotheses (Crawford, 1997). This pre-fieldwork might transform the original study if the kishkek value chain had been researched before (Hammersley and Atkinson, 2007).

The analysis of the kishkek chain was conducted through a participatory research approach. Participatory research methods are geared towards planning and conducting the research process with those people whose lives and meaningful actions are under study (Bergold & Thomas, 2012). Using this approach is beneficial because it is collaborative at every level of the chain, and it involves all the people concerned, who are small-scale actors operating at each level, those being the dairy farmers, collectors, kishkek producers and shops. It will consider the acts of communications and production between the different actors of the value chain to understand the links between them socially and economically (Kemmis and McTaggart, 2007). Smallholder views were elicited to shape plans and contribute to developmental strategies.

In order to collect information from the different actors of the value chain, semi-structured interviews and field visits were conducted with milk producers, kishkek processors, mills and milk collectors. Semi-structured interviews were designed to elicit information from each actor on the number of livestock, the type of livestock raised, the transportation mechanism to the kishkek processor, the number of farmers processing

“Kishek” at the household level, the processing method, the common problem and issues faced by farmers and processors, and marketing methods, etc. Using a set of pre-scheduled questions drew the subjects’ thoughts and opinions about, and attitudes toward the value chain of Kishek (Berg, 2004). This provided specific information at the farmers’ level and processors’ level. The flexibility of the semi-structured interviews when compared to the structured ones permits for the detection or elaboration of information that is important to participants, but may not have previously been thought of as pertinent by the researcher. For example, my survey included questions about using milk or yogurt in their mixture; however, during the interviews, some processors used “Labneh” instead. The purpose behind using interviews is to explore the views, experiences, beliefs and/or motivations of smallholders. Interviews are assumed to offer a ‘deeper’ understanding of social phenomena than that attained from quantitative methods (Gill et al. 2008). Farmers were visited in their farms to discuss in details and case-by case the basis of raising the livestock and producing kishek, problems faced and their marketing options, and to observe the way they handle their farms, production and how do they interact with each other. Participatory observation offered to study the farmers and processors as an insider, while remaining an outsider. As Marshall and Rossman indicated that through observation the researcher learns about behavior and the meanings attached to those behaviors. The data obtained during observation served as a check against participants’ subjective reporting of what they believe and do. In addition, it was useful to gain information about the physical, social, cultural, and economic contexts in which study participants live; the relationships among and between people, contexts, ideas, norms, and events; and people’s behaviors and activities – what they do, how frequently, and with whom (Taylor and Bogdan, 2015). Observation was

done during the interviews; therefore, a lot of the private interactions that occurred in the family were beyond what can be reached. For example, observation was so beneficial when interviewing women processing kishek at the household level because it allowed me to see the communication with her husband.

The semi-structured interview developed was divided into two main sections. One related to the milk producers and collectors and the other section related to kishek processing and its marketing, in addition to the demographics and economical sections, and challenges section. This will allow the interviewee the chance to probe far beyond the answers to the prepared and standardized questions, which provide information that might be very useful to the study (Berg, 2004). The method used to recruit farmers was the convenience sampling framework by visiting their farms and attempting to obtain their consent and approval to participate in the study. Convenience sampling involved the surveying of respondents who are close at hand. The study included random stopping at the households in the Shouf region (villages are: Baakline and surroundings, Deir el Qamar and surrounding, Maaser el Shouf, Moukhtara, Mresteh, Batloun). Moreover, the kishek producer at “Souk aal Souk” farmer’s market was interviewed and provided the contact of her milk producer who was interviewed too. The surveyed producers were 30 in total between milk producers, mill owners, collectors and kishek processors.

The semi-structured interview required a minimum of 30 minutes that was conducted on-site, in the farmer’s house, and provided him/her with a private setting. The interview didn’t start until the interviewee was comfortable talking. It was so important to

tell the interviewee when the interview started and to ask their permission to jot down notes; it is considered one of the interviewee simplest rights. The time depended basically on the interviewees willingness to provide me with details about their work, their constraints and own interest in the interview, and the degree of rapport they felt towards me. Mills didn't want to provide me with information and their answers were short: yes, or no or couple of words. I believe the reason behind this might be not introducing myself and my research properly. They thought I was part of the Ministry of Public Health inspections that was lately taking place in the region. Building trust between the researchers and actors of the value chain is so important. This was done through building rapport with the stakeholders during interviews. It got their unconscious mind to accept and begin to process my suggestions. They felt comfortable and relaxed and open to suggestions. I was empathetic to the interviewees' fears and concerns, the sensitivities of the situation, and the uncomfortable position the interviewees find themselves in. I provided specific reassurances of the legitimacy of the research and the guarantee of confidentiality to the farmers, collectors and processors (Dundun and Ryan, 2009) and it was also important to share stories that were similar to theirs. For example, when a woman was telling me how long it takes her to process the kishek and the different steps, I mentioned that I used to help my mom and aunties during September in grinding the kishek on the roof. I always tried to find a common ground between us to make them comfortable to talk. It made them feel closer and more comfortable in talking (Berg, 2004). Building rapport started simply by chatting with the farmers, processors or collectors with a common interest or any object present in the location of the interview. For instance, at one house I started the conversation by asking the woman about the pictures hanging on her living room wall.

In all interviews I started by asking background information about the interviewee such as age, education, and family. I didn't pose the questions as I wrote it, but in a descriptive manner. I used this technique mostly with women to tell me about their household responsibilities, work they perform inside and outside the house, and the work division with their husbands. Moreover, I asked about the income generations and who decides the prices and markets the product.

3. *Limitations:*

One of the problems I faced was not expected or anticipated. During my data collection, the Ministry of Public Health was doing quality control inspections in the Shouf region, closing the shops that don't meet the ministry's specifications and requirements, and giving the other shops a chance to change, in order to fit what is required. Therefore, every time I entered a mill in the region, I wasn't greeted well and barely talked to, until I explained well that I am an AUB student working on a research related to kishek and showed them the consent form. I have never encountered this problem before when collecting data for a course project during my undergraduate and graduate years at AUB.

Another limitation was the time factor. During my field visits, each interview used to take me longer than planned because it was not easy to build rapport with the people. I used to spend some time with women processing kishek or in the mills observing their services. By the time I found someone from the region that would help me in the community up there, I was almost done with my data collection.

4. *Ethics:*

Finally, an important part of the study is ethics. Ethics promotes the aim of the study because it's about sharing knowledge and truth to the public. Second, it promotes values that are important to the work collaboration between the different actors in the value chain and with the researcher; building trust, accountability, and respect. Finally, it holds the researcher accountable to the public. An important point about participatory approach is that participants and non-participants are being observed; the researcher should know what to write about and not interrupt their privacy. Therefore, my concern was to make sure that the people understood and learnt the purpose behind my research, as it is the right of respondent to have complete understanding of the purpose and methods used in the study and to protect them from harm and privacy (Berg and Lune, 2004). Therefore, the privacy of the villagers was respected. The work as Shaw said shouldn't be based on "try not to hurt anyone and when you hurt someone try your best to amend"; we should think of ethics before publishing or sharing anything about the respondents lives or situations (Shaw, 2008).

CHAPTER IV

RESULTS AND DISCUSSION

A. Demographic and Socio-economic Information

1. Characteristics of the respondents

Quantitative data on demographic and social characteristics was collected and analyzed based on a semi-structured interviews with respondents. Respondents were asked about their age, gender, marital status, working status, household size and number of individuals, educational background, and family annual income.

2. Demographic and Socio-economic Characteristics

The age range distribution of the respondents showed that, 3% of the respondents are in the 35 - 44 age groups, 47% in the 45 – 55 age groups, 30% in the 56 - 59 age groups and 20% are above 60 age group (Table 1). The average age of the respondents was within the range of 45 - 54 years (Table 1). This shows that majority of the respondents were at their productive and reproductive age group, which implies that they work hard in different agricultural and non-agricultural activities to generate an income that sustain their households. With regards to marital status, only two women weren't married and the rest were all married. 60% of the interviewed respondent were females and 40% were males.

This high number of females allowed me to collect more information regarding women’s participating and work within the household. The household family size of respondents was mostly small-size (1 – 4 members) and only 20% of the households had more than 4 members.

Table 1: Distribution of household respondents by age, gender and household size.

Age group	Frequency	Percentage
35 – 44	1	3
45 – 54	14	47
55 – 59	9	30
60 +	6	20
Gender		
Female	18	60
Male	12	40
Family size		
1 - 4 members	24	80
more than 4	6	20

The working status showed that 37% of the respondent had agriculture as a primary source of revenue, 23% had agriculture as the only source of revenue and 40% had agriculture as a secondary source of revenue. These are the kishek processors and milk collectors. Some of the farmers, where both the milk producers and kishek processor that explains the high number of farmers. With respect to the number of individuals working in the household, 50% of the households indicated that 2 individuals are working and these

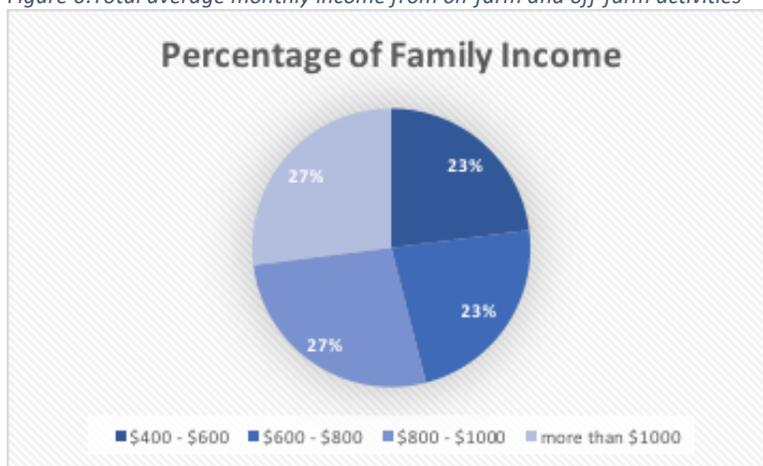
are husband and wife, 27% of the households had one person working, and 24% had 3 or more individuals working in the household. As for the educational level, 67% of the respondents had primary education and 33% had secondary education. Most of the families were educating their children in the public schools of the region. One of the women was able to teach her two daughters at one of the good universities in the Shouf region, by growing her agricultural lands, processing all kinds of mouneh and selling it in the urban markets such as “Souk Al tayeb” and “Souk aal Souk” (Table 2).

Table 2: Distribution of household respondents by working status, number of individuals working in the household and educational background.

Working Status	Frequency	Percentage
Agriculture as only source of revenue	7	23
Agriculture as primary source of revenue	11	37
Agriculture as secondary source of revenue	12	40
Number of individuals working in the household		
1	8	27
2	15	50
3 or more	7	24
Education		
Primary	20	67
Secondary	10	33

The collected data, on the average monthly incomes of household earned from on-farm and off-farm activities, revealed that 23% of the respondents earned less than \$600, likewise 23% earned between \$600 and \$800, and 54% earned more than \$800 (Figure 6). Those high numbers were documented because respondents provided their total monthly income rather than providing the income generated from the agricultural and kishek production. Moreover, since I come from the same region, some people didn't want to open up completely and provide me with the right income. From our conversation, during the interview, I was able to know that the revenue generated by milk producers was mainly used for household food consumption, monthly payments such as rent, electricity and water, and education. It was basically for family support rather than expanding their businesses. Similarly, the revenue generated by kishek processors was mainly used as an extra income to the family, spent on food consumption, education and fuel for winter because they live in rural areas where they get weeks of continuous snow.

Figure 6: Total average monthly income from on-farm and off-farm activities



B. Value Chain Analysis:

1. Mapping the Kishek Value Chain:

The purpose of mapping the kishek value chain is to outline the different stakeholders from raw materials to consumer. This process includes various actors – wheat producers, milk producers, collectors or small village shops, kishek processor, mills, retailers (bakery “forn”, famers markets, personal contacts), and finally, the rural and urban consumers. The general overview of the Shouf district kishek value chain is presented in figure 7.

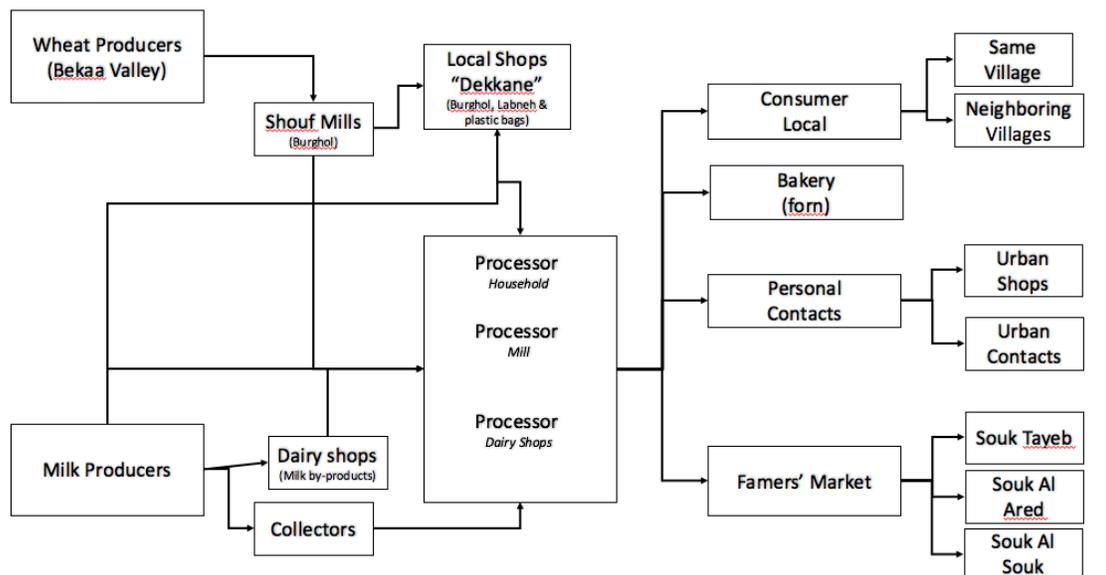


Figure 7: Mapping of Value Chain of Kishek in Shouf District

Source: Own illustration

a. Wheat Producers:

Wheat is not grown in the Shouf region. The study “Value chain analysis of wheat landraces and wheat-based traditional foods in relation to agrobiodiversity” mentioned that they stopped cultivating wheat due to the presence of narrow terraces, small holdings and the absence of machinery in the region, which can operate in the small terraces (Chalak et al., 2014). Around 58% of the wheat produced in Lebanon is grown in the Bekaa Valley (Ministry of Agriculture, 2012). Since the wheat producers were out of my study area, they were not interviewed. However, a lot of the kishkek processor buy their burghol from a big known mill in the Bekaa valley called “Najjar”.

b. Milk Producers:

The Majority of the milk producers in the region are smallholders except for few such as “Al Kadi Dairy Products”, who has their own farm, sell to households and produce their own dairy products that is distributed in supermarkets in Shouf and Aley districts. Some of the smallholders are on contracts with dairy product processors such as “Batloun Dairy Products” in Batloun village in Shouf. The average number of livestock ranged between 5 to 10, while one of the interviewed milk producers was considered big with 90 livestock heads. The milk producers are divided between cows and sheep and/or goat owners. Out of the 11 milk producers, 8 are raising cows and the rest are raising sheep and/or goat, and 10 of them produce dairy by-products from their livestock farms. They produce laban, labneh, kishkek and labneh serdele, while some produce cheese. They are all

small to medium scale producers. Their number of customers range between 5 to 50 per week. Men raise the livestock, while women mostly produce the dairy by-products especially kishkek. Sheep and/or goat milk is more expensive than the cows' milk. All the producers sell their milk in the same price. Usually, the cows' milk is sold between 1,600 LBP and 1,700 LBP per kilogram, while the sheep and/or goat's milk is sold for 2,000 LBP per kilogram for retail and individuals, and for wholesale cow's milk costs between 1,000 LBP and 1,100 LBP per kilogram. Sheep and/or goat's milk is not sold for wholesale because all farms are small-scale. During the interviews, smallholders mentioned that they are unable to expand and improve their work because the local individual demand will not increase, and factories buy the milk around 900 LBP per kilogram. In addition, if they didn't like the quality of the milk or the transportation mechanisms, they won't buy it. Therefore, smallholders prefer to stay on a very small scale producing small quantities and selling their neighbors, rather than being controlled by the dairy-product factory owners. This is the case of most smallholder milk producers in Lebanon. The Food and Agriculture Organization (FAO) in Lebanon did a great project last year that helped several smallholders milk producers in the north region. Milk producers were trained of the proper techniques of milking to improve their milk quality, constructed milk collection and cooling centers for farmers to preserve milk freshness, and set up a network of farmers together to achieve economies of scale and increase their bargaining power (FAO, 2016b).

c. Shouf Mills:

Most of the mills in the Shouf region are small. They are present in big villages, and sometimes you can find several mills in one village such as in Bakaata and Baakleen.

The mills in the Shouf region play several roles: the burghol supplier, the kishkek grinder and the kishkek processor. Mills get the wheat from the Bekaa valley and grind it into burghol, then its ready to be sold. Three different kinds, where mentioned in the interviews: baladi, white and brown. Most of the people use the smooth white burghol because it gives kishkek the light color. The price of one kilogram of smooth white burghol costs between 1,500 LBP and 2,000 LBP. The brown burghol costs 1,250 LBP per kilogram. And the Baladi, which is also white but considered to be of better quality ranges between 2,000 LBP and 2,500 LBP per kilogram. In addition, during the kishkek production, processor grind the kishkek before sun drying it. This fastens the process and decreases the workload. The cost of kishkek grinding is 1,000 LBP per kilogram. Also, they either produce commercial kishkek that is sold to bakeries or gather kishkek from smallholders that is sold to households, such as the case of a mill in Kfarheem and another in Baakleen. The cost of one kilogram of kishkek for bakeries ranges between 15,000 LBP and 18,000 LBP per kilogram, while the ones for households' ranges between 20,000 LBP and 25,000 LBP per kilogram. I wasn't able to get information about the difference between the two kinds. All the kishkek produced is from cow's milk. When I was moving from one village to another, I saw an ad that said: "Najjar is coming to Shouf, located in Batloun". I went there to the location and I was able to meet with the owner of the mill from the Bekaa region. He told me that he decided to open a branch in Shouf after the high demand for their products from both wholesalers and individuals from the Shouf region. This branch in Batloun will make it easier for their customers because Bekaa is far from Shouf region. Out of the 24 kishkek processors interviewed, 14 buy their burghol from "Najjar". This will be a big mill compared to the

other mills present in the region, and it will definitely compete with the small mills present in the region in selling burghol and commercial kishek.

d. Local shops “dekkane”:

Some local shops obtain burghol from mills to display in their shops. This mostly occurs in small villages in upper Shouf that are far away from the big villages. Most of the women in those villages don't have any means of transportation to go to Baakleen or Baakata, so this facilitates their access to burghol for food preparation and kishek processing especially that most of the women in rural Shouf produce kishek for their home consumption. On the other hand, some milk producers, produce Laban and Labneh, and distribute it to the shops in their village. This case was mostly seen in the villages of Ghareefeh and Barouk. Moreover, women buy the airtight bags for kishek packaging from those shops. They are cheap, and available in most of the local shops “dekkane” because it is used by households for different purposes. Usually 1 kg of plastic bags costs between 3000 LBP and 5000 LBP.

e. Dairy Shops:

Some livestock farms that produce dairy by-products have small shops in their villages, where they display their products. These products are made from sheep and/or goat, or cow milk and include laban, labneh, labneh serdele (mainly goat, with or without olive oil), kishk, halloum cheese (from sheep), Akkawi-Checki cheese (from sheep), and cheeses like “double crème” and “Bulgari”. For instance, the “Batloun Dairy Products” has a shop on the main street of Batloun, where they sell all their dairy by-products. Another

farmer in Deir El Kamar, has a small shop located next to his house, where he processes the dairy by-products and sells it. In addition, he provides the Notre-Dame University in Deir El Kamar with all the dairy by-products needed for their cafeteria especially Labneh and Kishek for morning pies, and takes some to a small shop in Beirut twice a week.

f. Collectors:

Milk collectors or “hallabs” play a leading role in the dairy value chain as they connect between milk producers and kishek processors. In most of my cases, the hallabs are also the producers, and ensure the collection, transportation and sale of a network of producers (MeryCorps, 2014). All the smallholders raising livestock distribute the fresh milk daily to their customers personally. Usually, milk is distributed to the households in the early morning around 6 am. Moreover, “Batloun Dairy Products” plays the role of a collector, where it collects milk from different smallholders in the region, and produces its by-products. It is an oral contract between the farmers and collector in the region. Collectors pick up the milk either in the early morning or in the evening after the livestock is back to their shelter for milking. Payments to the farmers are done every two weeks. Hallabs buy the cow milk from smallholders between 900 LBP and 1,100 LBP per kilogram, where the quality of the milk plays an important role in the price.

g. Kishek Processors:

Hundreds of smallholders kishek processors are spread in the Shouf region. Out of the 25 kishek processors interviewed, 18 are women and 6 are men (Figure 8). Those 6 men

are either the owners of the small dairy workshops or mills, where they have seasonal workers processing the kishek.

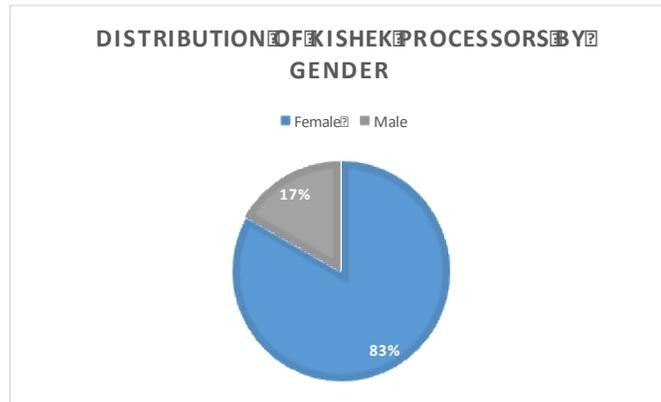


Figure 8: Distribution of Kishek Processors by Gender

Generally speaking, there are three kinds of kishek processors in the Shouf:

Households: All the women interviewed process their kishek at the household level. Household processors produce for their own consumption and sell the extra production directly to consumers locally or through farmers' markets. This was the case of women producing between 15 – 50 kg per season. However, other women were processing between 60 – 200 kg per season. This is done for generating an extra revenue for the household (Figure 9).

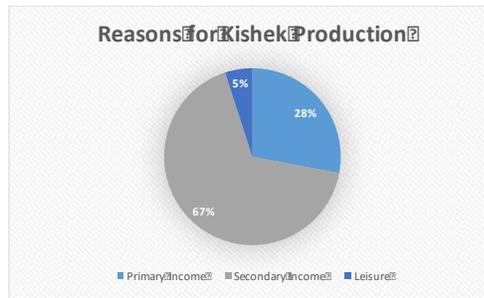


Figure 9: Reasons for Kishkek Production

64% of the women process their kishkek in September, 20% of them between July and August and the rest process their kishkek weekly because they provide local bakeries “forn” with kishkek. Women usually process the kishkek by themselves with minimal help from the husband or children (Figure 10). One kilogram of kishkek costs between 20,000 and 30,000 LBP depending on the type of milk and burghol processed. The kishkek is packed in an airtight bag.

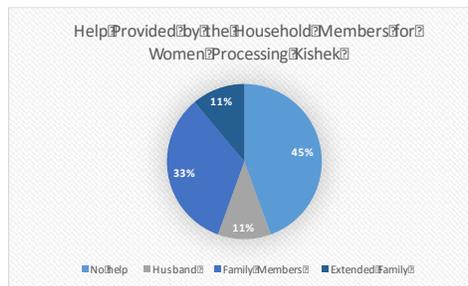


Figure 10: Help Provided by the Household Members for Women Processing Kishkek

Dairy Shops: Those small dairy shops are not for kishkek only. They are spread in several villages of the region such as Deir El Kamar, Batloun, and Barouk as previously

discussed in the dairy shops section page 48. They process commercial kishkek, and sell it to the households in the region. Those shops process between 100 – 200 kilograms per season. The quantity produced depends on the demand. Seasonal workers usually process the kishkek with the supervision of the owner or his wife. All dairy shops process the commercial kishkek from cow's milk, and its price ranges between 20,000 and 25,000 LBP per kilogram. The kishkek is packed in an airtight bag and displayed on the shops shelves seasonally between July and October. Sometimes kishkek is sold in glass jars.

Mills: As mentioned before, mills play different roles in the value chain. During the kishkek season, the seasonal workers, with the supervision of the owner, process commercial kishkek mainly for bakeries. Processing is sometimes done by the wife and family of the owner if it is a family business. I wasn't able to get the exact way mills process kishkek, but it's usually cheaper than kishkek processed by women at the household level.

k. Sales:

Local customers: As mentioned before, women processing kishkek on the household level, sell their products to households in the same village or neighboring villages. Households buy the kishkek based on trust and personal experience with the processor and others buy kishkek from smallholder vulnerable women to support them. Usually a household in the Shouf region won't buy less than 3 kilograms of kishkek per season. So a women processing 20 – 40 kilograms per season would have between 5 to 10 customers.

Bakeries: Usually bakeries buy either commercial kishek from mills and dairy shops, or the wife or mother of the owner produces the kishek at the household level weekly for the bakery. They need kishek on weekly bases to make kishek pies. A kishek pie is sold for 1,000 LBP, and each kilogram can produce up to 20 pies.

Personal contacts: Some women sell their kishek through their personal contacts to different regions in Lebanon especially to urban customers or shops. Urban households buy their kishek during their summer stay in the Shouf region or through their friends living up there. When woman processor builds trust with urban households, they become her annual customers. In addition, the “word of mouth” helps women sell more to the urban areas. For instance, one urban household helped a rural woman processor sell all her seasonal produce to her neighbors in the building. Now this woman produces seasonal kishek depending on the demand of the tenants. Moreover, some dairy shops put some of its products in mouneh urban shops to facilitate the access of rural traditional food to urban households.

Famer's market: Three different farmers' markets were established in Beirut to help rural farmers and women processors sell their products. Therefore, women having access to transportation to Beirut and their husbands allow them to go; participate in those markets to sell their products and get better exposure.

2. Potentials and Limitations of the Kishek Value Chain:

	Positive Factors	Negative Factors
Internal Factors	<p>STRENGTHS</p> <ol style="list-style-type: none"> 1. Well-established marketing linkages 2. Interactive value chain actors 	<p>WEAKNESSES</p> <ol style="list-style-type: none"> 1. The value chain has inflexible linkages 2. Capital constraints 3. Sell individually small amounts 4. Limited access to urban areas

	Positive Factors	Negative Factors
External Factors	<p>OPPORTUNITIES</p> <ol style="list-style-type: none"> 1. Rural traditional product 2. Innovation in production 3. NGOs support programs 	<p>THREATS</p> <ol style="list-style-type: none"> 1. Small Kishek factories are being established. 2. Competition

Table 3: Kishek Value Chain SWOT Analysis for smallholders

Source: own illustration

a. Strengths

As the analysis of the kishek value chain showed (see figure 7), all actors ranging from farmers to consumers rely, to different degrees, on commercial relationships that are often based on trust and personal ties. Thus, a market gap does not exist since processors produce small amounts, (20 – 40 kilograms) depending on the demand and their consumers. Some of the relationships between milk producers and collectors offer a good reliability that form virtual contracts between them.

The analysis also showed that small scale actors are integrated vertically in the value chain, meaning that they spread their activities to cover some sections of the value chain. Some of them even cover the whole value chain from milk production to sales. This

potentially decreases marketing costs and increases the overall productivity, because sales channels are shortened and the number of actors involved in the chain is reduced. In turkey, Türkmen Saçak (Cheese Turkmen fringe) is also processed at the household level, where the whole production value chain is covered by the small-scale processor (Slow Food Movement, 2016a). Short supply chain is not a new phenomenon in small-scale production. It existed before, but after globalization and introduction of the supermarkets, local food in Lebanon became an opportunity for women to sell their product directly to consumers as the case of smallholders and processors in Piedmont, Italy (Ciulla, 2012).

To sum up, the analysis revealed that all actors involved in the kishek value chain are aware of consumer preferences as they are also kishek consumers.

b. Weaknesses

The well-established linkages also describe a weakness in Kishek value chain. While the relationships are well- established, they can also establish inflexible linkages. Therefore, some actors respond doubtfully to new chances they get, especially the dairy smallholder that are on contracts. From an entrepreneurial perspective, this is a weakness as new, more profitable chances might be disregarded. Those inflexible relationships can also be seen as a result of doubt towards new partners. Farmers and processors are careful of interacting with new partners without having personal and long-established relationships with them.

In addition, capital constraints stand in the way of actors that want to invest in new opportunities or expand their current work. Thus, the further development of economies of scale is vulnerable and additional value-generating activities are out of reach.

Moreover, most kishkek processors are smallholders linked directly to market on an individual base. They are all producing the same product in the same way with no added value. This is decreasing their power when selling their product to individuals or bakeries “forn”, and helping customer be in control when purchasing kishkek.

Furthermore, some women producing kishkek don’t have access to go to the urban areas to participate in the farmers’ market. Some of them don’t have cars or their husbands are busy and others cannot afford paying for transportation either through private or public transportation, and the stand fees in the markets is usually \$20 per table.

c. Opportunities

As mentioned before in chapter 2. Kishkek is a rural traditional mouneh that is still produced on small-scale and people buy it on trust bases. Women should take advantage of this and create labels and link it to its geographical origin. Thus, its prices might increase. In addition, as Feenstra and Hardesty mentioned, consumers are now more interested in products that have a “story” linking farm to fork. The story can be related to being locally produced or processed by small-scale producers or farms. Salumi, Italian cold cuts predominantly made from pork, was given as an example for small-scale production in

Italy. Similarly, Kishek can also be an example of small-scale production done by women in rural Lebanon (Feenstra and Hardest, 2016).

Interviews with kishek processors revealed that women would want to expand their work but they don't know how and from where to start. In addition, they would love to add-value to their product and create a niche market such as organic kishek; however, they are scared that people will not buy it for several reasons. First, it will be more expensive. Second, people do not trust organic food in the region. Finally, most of the women in the region know how to produce kishek, so they might stop purchasing it if it becomes more expensive.

All in all, rural production improvement and enhancement is within the focus of many international, national and local non-governmental organizations support programs that offer opportunities for smallholders to add additional value to their products or to improve their decision-making influence with regard to selling price.

d. Threats

As mentioned before, all kishek processors are producing kishek in the same way with no personal touches. This increases the competition between them and causes the price of kishek to be average, where it had the possibility of being sold in higher price.

Moreover, a small kishek factory might open soon in Lebanon and sell kishek in cheaper prices. So people not looking for good quality and traditional recipe of kishek will start

buying this product rather than going up to the mountains to buy kishek, or wait the weekly markets that are located in specific places in Beirut.

These strengths and opportunities, but also weaknesses and threats that affect the kishek value chain impose suggestions for better market opportunities for farm households. Hence, the following section will focus on the livelihood strategies and needs of kishek processors households to be able to recommend policy interventions.

C. Sustainable Livelihood Analysis:

The Sustainable Livelihoods Analysis (SLA) explores the capital ability of smallholder farmers. The value chain analysis uncovered their specific needs and constraints in kishek processing and marketing. This analysis attends to find appropriate entry points to support the livelihoods of the smallholder. This section analyzes the livelihood impact for the smallholders producing kishek. The livelihood assets are grouped as human, social, financial, natural and physical capitals (Assests, 1999).

1.Human Capital:

According to Scoones (2009), Human capital refers to “the skills, knowledge, ability to work and good health and physical capability important for the successful pursuit of different livelihood strategies”. In the interviews, I focused on the skills (years of experience), access to information and knowledge, participation in training sessions in the region and medical insurance.

With respect to the years of experience, 67% of the kishek processors have more than 8 years of experience in processing kishek, 29% have 4 to 8 years of experience and 4% started recently having between 1 to 2 years of experience (Figure 11).

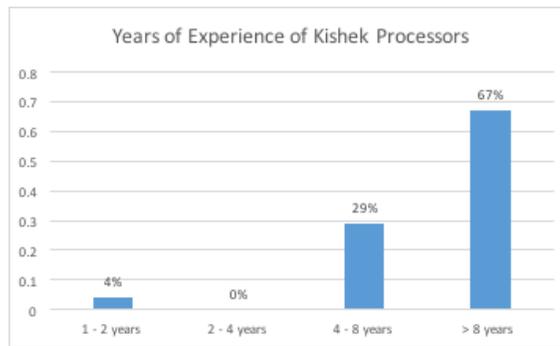


Figure 11: Years of Experience of Kishek Processors

Only 33% of the kishek processors receive extension services in the region (trainings, workshops and awareness lectures) that can be on monthly or annually basis. Out of these, 66.5% receive the services from the Ministry of Agriculture extension office in Deir El Kamar, while the rest receive services from non-governmental organizations such as “Al-Shouf Cedar Society (ACS)”. When farmers and processors are invited to workshops or trainings sessions, they all participate but usually not all smallholders are invited. I noticed from the attendance sheets that ACS and ESDU provided me with that the same people are always participating in the trainings and workshops (Figure 12).

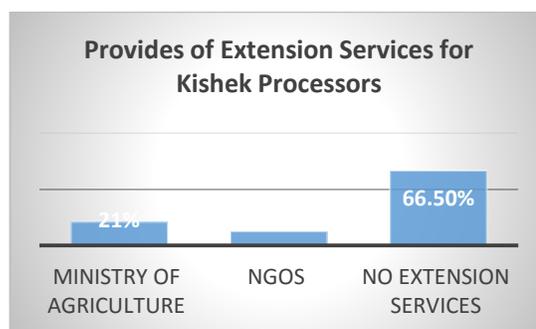


Figure 12: Provides of Extension Services for Kishek Processors

When it comes to medical insurance, only 37.5% have medical insurance. 67% of them are provided insurance through their children, while the rest are provided insurance through their off-farm job.

2. Social Capital:

The social capital describes “the social resources (networks, social claims, social relations, affiliations, associations) upon which people draw when pursuing different livelihood strategies requiring coordinated actions” (Scoones, 2009).

The interviews with the kishkek processors revealed that social networks are of great importance in the process. Networks between kishkek processors and the other actors of the value chain are important as they might be neighbors or friends, where they might exchange information and knowledge between each other. In addition, most of the processors mentioned that they have long-term relationships with the other actors of the value chain that is built on trust and friendship. They buy their milk from their village or neighboring village and sell their kishkek within the same circle.

3. Financial Capital:

The financial capital denotes “the capital base (cash, credit/debt, savings, and other economic assets, including basic infrastructure and production equipment and technologies) which are essential for the pursuit of any livelihood strategy” (Scoones, 2009). The majority of the households interviewed have access to multiple sources of cash income

from on-farm and off-farm activities. On-farm income is mostly based on vegetables and fruit production or livestock husbandry. 50% cultivate vegetables and fruit, produce mouneh and sell it; 25% of the kishkek processors are also milk producers and dairy by-product processors.

Off-farm income is generated by working with the army, government or building rentals. 6% of the households receive pensions and 20% of the households receive remittances from family members working in other cities and abroad.

Only 13% of the households have access to loans and rely on loans for expanding and improving their dairy farms. They have access to micro-credit loans such as “kafalat”¹. One family had to take a bank loan because they were unable to reach the micro-credit loans. The ACS is providing women and smallholders in the region with small loans to improve their farm or production; however, not all smallholders are aware of it (Figure 13). In Piedmont in Italy, the government created several laws that supports the development of organic agriculture, and establishment of market areas in the region for direct sales. In addition, the European Union funds projects that improves the quality of rural life and the agricultural sector (Ciulla, 2012).

¹ **Kafalat is a Lebanese financial company with a public concern that assists small and medium sized enterprises (SMEs) to access commercial bank funding.**

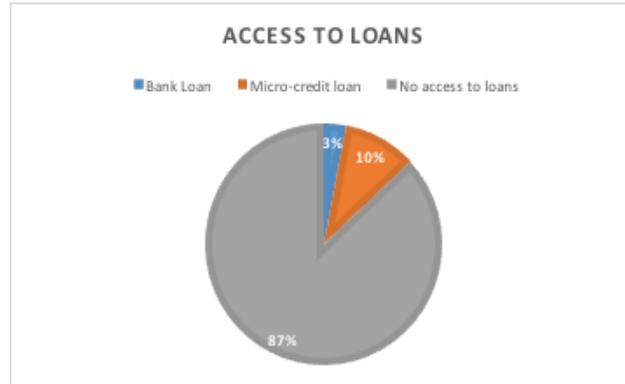


Figure 13: Access to Loans

According to the information collected from women processors during the interviews, one kilogram of kishkek processed at the household level costs on average 21,500 LBP. This includes burghol, laban, labneh, mill services and packaging (Table 4). Kishkek is sold on average for about 27,500 LBP, but most of the processors sell it for 30,000 LBP. Therefore, if we use $\text{Price spread} = P_{\text{received by the processor}} - P_{\text{paid by the consumer}} = 27,500 - 21,500 = 6,000 \text{ LBP}$ or $30,000 \text{ LBP} - 21,500 \text{ LBP} = 8,500 \text{ LBP}$. We can notice that the kishkek processors will gain between 6,000 LBP and 8,500 LBP per kilogram of kishkek. The average kishkek processors produce around 61 kilograms per season, thus generating between 366,000 LBP and 518,500 LBP revenue per season (Table 4). Although the profit gained is small, yet kishkek is considered one of the main revenues received by women from mouneh production because it is processed and sold in September, unlike the other types of mouneh that people would buy anytime of the year. It is around $\frac{1}{4}$ of their mouneh income. September is the beginning of the new school year and the fall season, so kishkek revenues cover an important expense for the household such as school transportation for their

children or their first barrel of diesel. Also, they mentioned that kishek is not found in supermarkets so families are ready to pay around 30,000 LBP per kilogram; however, when it comes to other kinds of mouneh that are found in supermarkets, people not looking for a good quality and clean product would buy the cheap product displayed in supermarkets.

Ingredients	Quantity	Average Cost (LBP)
Laban	1 kg	2,250
Labneh	2 kg	16,000
Burghol	1 kg	1,800
Services		
Mill	1 kg	1,200
Packaging	1 bag	250
Total		21,500

Table 4: Cost of 1 kilogram of Kishek

4. Natural Capital:

Access to water and land is important for smallholders. Most of the smallholders own the land, where they raise their livestock or grow their crops. All the kishek processors interviewed, who produce their dairy by-product in shops are the shop owners, except for one woman who rents a shop in her village to sell her products. Kishek is processed at the household level, dairy shops or mills so no problems with access to land detected.

The households interviewed mentioned that access to water is a limiting asset. They receive governmental water once or twice a week. The water is not clean. It can be

used for agriculture and household chores but it is not drinkable. Therefore, they buy bottled water for cooking food and drinking.

5. *Physical Capital:*

Kishek processors have easy access to milk producers because they are either their neighbors or from neighboring village, where every early morning the milk producers or collector distribute the fresh milk to their customers.

With respect to milling the kishek, mills are found in most of the villages in the Shouf region; therefore, they usually go to the mill when they go for grocery shopping, if not the husband takes it there. It doesn't require a lot of time and costs 1,200 LBP for each kilogram.

Smallholders especially the women, don't have access to any means of transportation to be able to sell their produce in local events and urban areas. Only 10% of the women interviewed have transportation means to participate in local and urban farmers' market, while the others either don't have means of transportation or no affordable proper public transportation available. If they want to take a taxi from Shouf to Beirut, it will cost them around 50,000 LBP minimum and the stand rental is for 30,000 LBP with no guarantee that they will sell their products. One of the women tried participating two times in Beirut farmer's markets but ended up paying 100,000 LBP and selling for 30,000 LBP; therefore, she won't repeat this experience again.

6. *Livelihood Strategies:*

The following livelihood strategies are related to the majority of the interviewed households. They explain how households in the Shouf region secure their living.

a. Diversification of income sources: All households diversify their income sources to lower their vulnerability to external shocks and to attain a sustainable income flow. The majority generates an income from both on-farm and off-farm activities (67% of the interviewed). Usually the on-farm activities act an additional income for the family. The diversification of income sources helps households sustain and improve their production. It is important to note that households depending on agriculture as their primary and only source of income receive uneven flows of income. Seasonality means that households consumption needs are uneven with the income flow they receive. Income instability is a real problem facing household in rural areas not only in Lebanon; therefore, income diversification is so important for the household income stability and consumption (Ellis, 1998).

b. Kishek sufficiency: All of smallholders retain portions of their produce for their own consumption annually. Some keep around 7 kilograms and others 15kilograms depending on the size of the family and their annual consumption of kishek.

c. Coping with shocks and insecurities: Kishek processing is a low risk production and it is usually produced with other types of mouneh. Therefore, they don't have to worry about developing strategies to cope with weather extremes or water availability.

d. Strategies for reducing production costs and financial capital needs: If

production costs are reduced, smallholders’ competitiveness in the kishek value chain will increase. Women can buy milk rather than buying laban and labneh and transfer it to laban and labneh at home. It doesn’t require a lot of work and it would reduce the cost of production by 5,450 LBP per 1 kilogram of kishek (Table 5).

Ingredients	Quantity	Average Cost (LBP)	Average Cost using milk (LBP)
Laban	1 kg	2,250	0
Labneh	2 kg	16,000	0
Milk	8 kg	0	12,800
Burghol	1 kg	1,800	1,800
Services			
Mill	1 kg	1,200	1,200
Packaging	1 bag	250	250
Total		21,500	16,050

Table 5: Cost Difference between Buying Milk or Labneh and Laban for 1 kg of Kishek

e. Collective action: Kishek processors have limited production capacities, high costs to access inputs and market outputs, and little bargaining power with milk producers when dealing with the dairy by-product factories and middlemen. Collective action is a possible strategy to tackle inefficiencies and barriers facing smallholders from expanding and improving their production. By consolidating, the smallholders will have a better position to decrease their costs, to gain market information and to hit more profitable markets. This can allow the household artisanal kishek to compete with the commercial

kishek that is being more spread in the market. Those collective actions can be informal or formal groups of smallholders. From all the interviewed smallholders, non is part of a cooperative. Some women mentioned that they used to work with other women in community kitchens, but those kitchens were active for projects that were implemented by the ACS and other local non-governmental organizations. In Vietnam, as men migrated to urban areas, women became responsible for coconut husk processing. When a community based organization was created with the help of the government, women were able to double their production and gain more revenues (Kruijssen et al., 2006).

Most of the interviewed smallholders believe collective action to be a chance to increase their profit share and decrease additional costs. However, smallholders are alert to the challenges and constraints of formal organization such as mismanagement, conflicts and poor organization, which happened several times before as they mentioned. Informal organization; on the other hand, are faced by issues of trust, and reliability between the members.

D. Kishkek Production Practices Transformation Over Time:

Two milk producers and two kishkek processor were asked about their milk and kishkek production trajectory over the past two generations

1. Milk Producer No 1

Milk producer no.1 is an 80 years old man. He is married and has three children. All his children are married and working in the public sector. He owns 35 goats, and sells fresh milk in his village and neighboring villages. In addition, he has a land in his village, where he grows different kinds of vegetables and an apple orchard. 80% of his household income is generated from livestock production and 20% from crop production. His wife uses the extra milk to process labneh, laban, labneh serdele and kishkek for their household consumption. In the 1960s, his father owned 10 goats while his mother used to process kishkek for the household consumption. Brown wheat was grown in their lands and processed into burghol at the household level. Kishkek was processed from the brown burghol and extra goat milk available. Kishkek was eaten during winter to provide energy and warmth in very cold weather. At the age of 10, Milk producer no.1 started helping his father and at the age of 20, they added the number of goats to 20.

2. Milk Producer No.2

Milk producer no.2 is 50 years old man. He is married and has 3 children. He is an employee in the public sector and owner of a cow's farm. His wife works as a teacher in a private school in their village. Their household income depends 75% on the off-farm activities and 25% on the on-farm activities. In the 1960s, his father had 2 cows, where he

sold fresh milk to couple of households in his village. In the 1980s, milk producer no.2 added 5 cows. In 2000, he invested in developing a cow's farm with 20 cows. His mother produces kishkek for the household consumption from the extra cow's milk produced and white burghol bought from mills.

3. Kishkek processor No.1

Kishkek processor no.1 is 50 years old woman. She processes all kinds of mouneh for a living. She is married to man working in the Lebanese Army. Her household income depends 60% on the monthly salary from the public sector and 40% on the mouneh processing sales. During the 1960s, her father-in-law had two orchards of apples and grew all kinds of vegetables that provided them with a living besides the public sector job. In the 1990s, as her children started school, the income became low and didn't provide them with their basic needs. Therefore, she started processing all types of mouneh grown in their land and selling it to her employed neighbors. And in 1998, she started processing Kishkek because it provides an extra income for the household in September. She mentioned that September is a critical month because schools starts as well as the winter season preparations. She uses the money for her children's school transportation. 3 years ago, she started participating in the occasional markets in the shouf region that exposed her to new customers and higher revenues.

4. Kishkek Processors No.2

Kishkek Processor no.2 is a 40 years old women. She is married to a farmer. They have two children in school. In the 1970s, her father-in-law owned 10 goats and 5 sheep,

and her mother-in-law processed labneh and kishkek for the household consumption with the help of her daughters. In the 1980s, her husband started working in construction; the income flow was uneven and low; therefore, he went back to raising goats with his father, adding 10 goats and 10 sheep. When their children started their elementary school the income generated from fresh milk wasn't enough, hence she started producing all kinds of mouneh and selling it. She produces kishkek with goat's milk and white burghol and sells it to household in the Shouf region.

Kishkek goes under the agro-pastoral system in Lebanon. Hamadeh et al. (2006) mentioned that this system is undergoing drastic changes. Lands are being less available for grazing and gradually being used for crop production. Moreover, the traditional systems are developing into more sedentary systems in order to adapt with the new environment constraints (Hamadeh et al. 2006).

In the past, each household in the rural areas had a minimum of one goat and/or sheep in their houses. It was used for their daily milk consumption, where women used to preserve milk by-products for the winter season. In addition, households used to grow wheat in their lands and process it to burghol using a special tool. Kishkek was processed at the household level for their own consumption from brown burghol and goat's milk. It was processed by women but involved the whole family. Children used to wait September to rub the kishkek between the palms of their hands on the roof of the house. Women used to teach their daughters how to process kishkek as they grow up. It was consumed only during winter times to provide warmth and energy to the human body. It was served as a soup with awarma. It was considered one of the best meals served in winter. It was not sold, each household used to produce its own calendar year consumption. Hence, Kishkek was done

from the extra goat milk produced at home and sometimes mixed with sheep milk, and brown burghol.

This whole process has changed now, few women process kishkek at the household level for their own consumption. Kishkek is done by several women in each village and sold to the other households. The interviewee said that this change happened after women entered the labor force, where they don't have enough time to process mouneh in general anymore. In addition, after the industrialization occurred, people stopped processing wheat into burghol at the household level. It is either bought from the mills or ready packages from the supermarket. Moreover, kishkek is now being grinded in the mills, thus the time required for rubbing kishkek by hands was reduced by half if not more. People started using white burghol instead of brown burghol, and using cow's milk instead of goat and sheep milk according to the market demand. The old traditional recipe is now only done by old women processing kishkek for their household consumption because it is not demanded by the new generations due to its sour taste. Although the kishkek being sold today is not exactly what our grandparents used to process and eat, yet each family in the rural areas still buys kishkek every September to consume it in a calendar year.

Furthermore, when we asked women about the reasons behind kishkek production as an income generating activity and not only for food security purposes, they mentioned that they started producing all kinds of mouneh for several reasons: (1) there is a demand for it from employed women, (2) need for an additional income in the family, (3) process the extra fruits and vegetables, and milk that are not sold, and (4) the only work she can excel in. Kishkek is considered one of the main revenues received by women from mouneh production because it is processed and sold in September unlike the other types of mouneh

that people would buy anytime of the year. September is the beginning of the new school year and the fall season so it covers an important expense for the household such as school transportation or their first barrel of diesel. Also, they mentioned that kishkek is not found in supermarkets so families are ready to pay around 30,000 LBP per a kilogram; however, when it comes to other kinds of mouneh that are found in supermarkets, people tend to go buy the cheaper products. Similarly, in Abruzzo region Italy, the cheese “Pecorino di Farindola” is processed by women at the household level during the winter season (December to March). It is processed from ewe’s milk and pig rennet, and its production requires a lot of patience (Schirone et al., 2010). The livestock is raised by men and the cheese is processed from the extra fresh ewe’s milk by women. In the past, the cheese was processed for the household consumption only, starting the 1990s, the interest in pecorino cheese increased as a traditional small-scale farm production, and women started selling it. It is still preserving the traditional way of its production. Only the electric stoves have replaced the fire, but the whole process of its processing remained unchanged. In order to preserve this unique cheese and its production process, the Slow Food has helped women establish a consortium, where it includes 20 small-family farms today providing Pecorino di Farindola cheese for Italian and international buyers (Lebedeva, 2015).

Kishkek production trends has changed over the years. The old brown baladi wheat landraces used in kishkek production has disappeared. A Mexican variety have replaced the old baladi landraces grown (Chalak et al., 2014). In addition, kishkek was processed for the household consumption by the whole family. It was considered a nutritious and healthy meal that keeps the human body warm in the winter season. As food industrialization arose and agricultural activities income became low, men and the new generations in the

households migrated to the urban areas and women had to find new income generating activities. Kishek processing became limited to the mother in the household as her daughters are busy with their education. At the same time, as women entered the labor force, they stopped processing kishek. Therefore, rural unemployed women started processing kishek as an income generating activity and selling it to employed women in rural and urban areas. Thus, kishek moved from being an instrument providing food security for the household into an instrument providing livelihood income diversification.

CHAPTER V

CONCLUSION AND RECOMMENDATIONS

This study was carried out in Shouf district, a rural region in Lebanon. The objectives of the study were to understand the interactions and linkages between smallholders in the kishkek value chain as one of the main traditional products still produced in rural areas. Moreover, it was carried out to describe the challenges faced by smallholders that increases their risk of marginalization in their community, focusing on the role women play in this value chain.

The study revealed that the kishkek value chain is interactive and its linkages are well-established but inflexible. Actors are linked through personal and long-term relationships, where they don't open up to new opportunities such as creating new niche markets, which decreases their chances of improvement and expansion. In addition, capital constraints play an important role in limiting actors ability to invest and develop their products. When it comes to the smallholders themselves, most of the kishkek is processed at the household level by women, where it is sold on individual bases in small quantities seasonally. This weakens their power of negotiation if they want to sell it to dairy shops or mills. Kishkek plays an important role in the annual income of the family, where it covers educational expenses or part of the fuel expenses. Moreover, women have limited access to

urban areas due to the lack of public transportation and their husbands don't have the time to take them. On the other hand, NGOs are supporting women and value chain projects in rural areas through trainings to improve their market access. The livelihood analysis showed that most of the farmers are being controlled by the collectors or dairy by-product producers. Furthermore, they have no medical or health insurance if they don't have an off-farm job and no existing active cooperatives or informal groups that would help smallholders achieve economies of scale.

The study recommends tackling female kishkek processors individually to improve their livelihoods in rural areas as they are the main processors, and the smallholders in general in order to achieve better kishkek production and market linkages.

The current kishkek value chain offers limited marketing opportunities for smallholder processors especially women, such as personal contacts and local customers. By improving the availability and access of women to market information, such as how to participate in farmers' markets, female processors will get motivated, work collectively to enter the market and build resilience. This can be done through providing training sessions for the kishkek processors on better techniques, hygiene practices, proper packaging and entrepreneurship skills. In addition, provide them with the rules and regulations of how to apply for micro-credit loans that improve their households' livelihoods or expand their production.

Another important point, is creating a kishkek cooperative or activate the three present community kitchens in the region to help women improve their produce, properly package and label, and merge into a large production base. This will help them decrease their production costs by buying large quantities of milk and burghol from the main suppliers directly rather than the collectors and mills. In addition, it will strengthen their power of negotiation when buying their raw material and selling their kishkek produce. They will be taken more seriously in their community after registering officially in the Ministry of Agriculture. This will help women sell their products. Moreover, they will be able to start putting labels on their kishkek to add value or produce new products such as organic kishkek. On an individual basis, cooperatives will help women build their leadership skills, increase their self-confidence and participate in the household decision-making. Also, as they consolidate as a team, they will feel stronger and capable of participating in the different activities or markets happening in the region seasonally without the need of men's help in transportation. Additionally, cooperatives can act as a channel to provide information and enable smallholders to supply more market channels nationally and internationally (Tannouri & Yahfoufi, 2016). Therefore, cooperatives will be affecting women's livelihood on the household and community levels. On the household level, it will improve their traditional production and income, and on the community level, it strengthens their market power. Women will be taken more into consideration and achieve economies of scale (FAO, 2016b). Furthermore, cooperative will ensure fair market for all smallholders, not only women, and increase their income that would help them later on invest in scaling up their production.

Finally, with respect to the milk producers, a big barrier for them in the value chain are the milk collectors or intermediaries that control the price of milk collected. It is more than important to create a collection and cooling center that will maintain the freshness of the milk, and then smallholders won't be obliged to sell their milk in low prices before it gets spoiled. In addition, those centers will increase the milk price per kilogram whether sold on the farm gate or dairy by-products producers gate. This initiative was done in North Lebanon sponsored by FAO and it was successful (FAO, 2016b).

APPENDIX I

QUESTIONNAIRE IN ENGLISH

Questionnaire for Kishek Value Chain Stakeholders

Research title: CHALLENGES AND OPPORTUNITIES IN THE VALUE CHAIN OF “KISHEK”: THE CASE OF RURAL WOMEN PRODUCERS IN THE SHOUF CAZA, LEBANON.

Location:

Date:

1. Are you the most responsible person in the household?
 - a. Person most responsible
 - b. Jointly responsible
 - c. Someone else is responsible
 - d. Don't know

Demographics:

2. Village:
3. Gender:
 - a. Female
 - b. Male
4. Age:
 - a. 18 – 24
 - b. 25 – 34
 - c. 35 – 44
 - d. 45 – 54
 - e. 55 – 59
 - f. 60 – 64
 - g. 64+

5. Working Status:
- Full time farmers
 - Part time
6. How many people working in the household?
- 1
 - 2
 - 3
 - 4

7. Number of household members:

Up to 5 years	1	2	3	4
6 – 15 years old	1	2	3	4
16 – 60 years old	1	2	3	4
60+ years old	1	2	3	4

8. Level of education:
- Primary
 - Secondary
 - Tertiary
9. How much is your monthly income?
- <\$1000
 - \$1001 - \$3000
 - \$3001 - \$5000
 - \$5001 - \$10000
 - >\$10000

Milk Production:

Cows:

10. What is the total number of the herd (including cows, calves and bulls)?
- 1 – 5
 - 6 – 10
 - 11 – 20
 - 21 – 30
11. How many milking cows do you have?
- 1 – 5
 - 6 – 10
 - 11 – 20

- d. 21 – 30

- 12. How much milk is produced per cow per day?
 - a. 20 – 30 L
 - b. 31 – 40 L
 - c. 41 – 50 L

- 13. How much is the total milk production per year?
 - a. 7,000 – 10,000 L
 - b. 11,000 – 15,000 L
 - c. 16,000 – 18,000 L

- 14. How long is the milking period? (days/year)
 - a. 200 - 250 days
 - b. 250 – 300 days

- 15. How much milk is produced in total per season?

Goat:

- 16. What is the total number of the herd (including goats, kids and bucks)?
 - a. 1 – 5
 - b. 6 – 10
 - c. 11 – 20
 - d. 21 – 30

- 17. How many lactating goats?
 - a. 1 – 5
 - b. 6 – 10
 - c. 11 – 20
 - d. 21 – 30

- 18. How long the lactating season is (number of months + list the months)?
 - a. 200 - 250 days
 - b. 250 – 300 days

- 19. How much milk is produced per day per goat? (Peak season)
 - a. 2.5 – 3.5 L
 - b. 3.5 – 4.5 L
 - c. 4.5 – 5.5 L

- 20. How much milk is produced on average along the milking period?
 - a. 200 – 250 L
 - b. 250 – 300 L
 - c. 300 – 400 L

21. How much milk is produced in total per season?

Sheep:

22. What is the total number of the herd (including ewes, lambs and sheep)?

- a. 1 – 5
- b. 6 – 10
- c. 11 – 20
- d. 21 – 30

23. How many lactating ewes?

- a. 1 – 5
- b. 6 – 10
- c. 11 – 20
- d. 21 – 30

24. How long the lactating season is (number of months + list the months)?

- a. 90 - 150 days
- b. 150 - 250 days

25. How much milk is produced per day per ewe? (Peak season)

26. How much milk is produced on average along the milking period?

- a. 200 – 250 L
- b. 250 – 300 L
- c. 300 – 400 L

27. How much milk is produced in total per season?

Marketing:

28. Do you sell your milk fresh or processed?

- a. Fresh
- b. Processed

29. Do you produce Kishik?

- a. Yes
- b. No

30. Who is involved in the processing?

- a. Spouse
- b. Wife
- c. Family members

31. If fresh,

a. Number of Clients (give names and location if possible):

b. Sold to:

- i. Collectors
- ii. Dairy units
- iii. Households
- iv. Others

c. Price/L sold (retail):

d. Price/L sold (wholesale):

e. Quantity of sold milk/season:

f. Quantity consumed at home/month:

32. If processed:

a. Type of products:

Type of product	Unit of sale (kg, L, etc.)	Price/unit	Quantity produced/year or season	Quantity sold/year	

b. Number of Clients: (Name and Location)

c. Sell to:

- i. Small shops
- ii. Households in same village
- iii. Households in neighboring villages
- iv. Farmers market
- v. Others

b. Quantity consumed at home/month:

Kishek

33. Who produces the kishek? (specify which family member(s) is(are) involved in the processing)
- Wife
 - Family
 - Extended Family
 - Seasonal workers
34. Where is it produced?
- Household
 - Community Kitchen
 - Cooperative
35. Where do you get the wheat from?
- Own land
 - Neighbours
 - Shops: where.....
 - Mills, where:.....
 - Other: where.....
36. What variety of wheat is used?
- Common name:.....
 - Other name:.....
37. How much do you pay for the wheat per kg?
38. Do you think if wheat was produced in Shouf it would have been cheaper?
- Yes
 - No
39. What is the quantity of kishek produced?
- 10 – 20 kg
 - 20 – 40 kg
 - 40 – 60 kg
 - < 60 kg
40. Who decides the quantity produced?
- Wife
 - Spouse
 - Family decision
41. During which months of the year do you process the kishek?
- July
 - August

- c. September
- d. Other
- 42. Do you use milk or laban to process kishek?
 - 1. Milk (if milk go to question 46)
 - 2. laban (if laban go to question 42 -45)
- 43. What type of laban do you use:
 - a. Goat
 - b. Cow
 - c. Sheep
 - d. Mixture (proportion of each type of milk):.....
 - e. Other
- 44. How do you source your laban:
 - 1- I purchase it from nearby farmers in the region
 - 2- I purchase it from nearby coop
 - 3- I make my own (go to question 47 and 50)
 - 4- Other specify who and where:.....
- 45. How many kgs of laban do you need?
- 46. How much does a kg of Laban cost you?
- 47. What type of milk do you use (this question might be a repetition of question 9 if they purchase the laban):
 - a. Goat
 - b. Cow
 - c. Sheep
 - d. Mixture (proportion of each type of milk):.....
 - e. Other
- 48. Where do you get the milk from:
 - i. I purchase it from nearby farmers in the region
 - ii. I purchase it from nearby coop
 - b. From my own farm
 - c. Other: specify who and where:.....
- 49. How many litres of milk do you need?
- 50. How much does a litre of milk cost you?
- 51. Who gets the milk or laban?

- a. Collector
 - b. Wife
 - c. Spouse
52. Processing practices (tick all applicable answers):
- a. Boil milk: yes... No...
 - b. Duration of boiling process in minutes:.....
53. Where/how does the drying of kishek occurs (tick all relevant answers):
- 1. Rooftop
 - 2. Garden
 - 3. On cotton sheets
 - 4. On aluminium trays
 - 5. Other:.....
54. Do you sieve your Kishek prior to milling (tick all relevant answers):
- 1. Yes...
 - 2. No....
55. Who sieves it?
- a. Wife
 - b. Spouse
 - c. Family members
 - d. Extended Family
56. Milling of kishek: where do you mill the kishek and how many times:.....
.....
57. Who takes it to the Mill?
- a. Wife
 - b. Spouse
 - c. Children
 - d. Seasonal workers
58. How much does it cost you to mill the Kishek?
59. Does anyone help you in drying kishek?
- a. No
 - b. Spouse
 - c. Family members
 - d. Extended Family
60. Preservation: what is the kind of container/package you keep the kishek in:
- a. Plastic bags
 - b. Cotton bags

- c. Other, specify:.....
- 61. How much do the containers cost?
- 62. How much time does the Kishek process takes?
 - a. 5 days
 - b. 6 days
 - c. 7 days
 - d. 8 days
 - e. 9 days
- 63. Who markets the kishek?
 - a. Wife
 - b. Spouse
- 64. Who decides on the price of kishek?
 - a. Wife
 - b. Spouse
- 65. For how much is 1 kg of Kishek sold?
- 66. How do people know about your kishek production?
- 67. How long have you been producing Kishek?
 - a. 1 – 2 years
 - b. 2 – 4 years
 - c. 4 – 8 years
 - d. < 8 years
- 68. Where do you sell the kishek?
 - a. Personal contacts in the same village
 - b. Personal contacts in the neighbouring villages
 - c. Personal contacts on the phone
 - d. Farmers market in urban areas
 - e. Special events in the region
 - f. Mini-markets
 - g. Others
- 69. Why do you process Kishek?
 - a. Primary income
 - b. Extra income for the family
 - c. Enjoyment and tradition

Challenges:

70. If you need any help where do you go?
- a. Extension Office of Ministry of Agriculture
 - b. Local NGOs
 - c. Municipality
 - d. More experienced farmers/processor
 - e. Other
71. Do you receive any extension services?
- a. Yes
 - b. No
72. If yes, what services to you receive?
- a. Vaccination
 - b. Feed
 - c. Training
 - d. Workshops
 - e. Awareness about any disease or problem in the field
73. If yes, from whom?
- a. Ministry of Agriculture
 - b. Local non-governmental organizations
 - c. International non-governmental organizations
74. Do you have any health insurance?
- a. Yes
 - b. No
75. If yes, what kind of insurance to you have?
- a. NSSF
 - b. COOP
 - c. Private insurance
 - d. With our children
76. Are you a member of an agriculture cooperative?
- a. Yes
 - b. No (skip to question 72)
77. If yes, what is the name of the cooperative?
78. What are the benefits from this cooperative?
79. Do you have access to credit?
- a. Yes
 - b. No

80. If yes, what kind of credit?
- a. Micro-Credit
 - b. Kafalat
 - c. Loan
 - d. Others
81. For what do you use it?
- a. Buy livestock
 - b. Vaccination
 - c. Improve milking techniques
 - d. Other

APPENDIX II

QUESTIONNAIRE IN ARABIC

استبيان

استبيان لمنتجات الحليب والكشك
عنوان البحث: دور أصحاب الحائزات الصغيرة في سلسلة القيمة للمونة في ريف لبنان: الفرص والتحديات.

اسم العداد:

العنوان (اسم الضيعة والحي):

التاريخ:

سؤال اختياري:

هل عمرك 18 سنة وما فوق؟

1. نعم
2. كلا (أشكر وإغلاق البيان)

-
1. هل أنت الشخص الأكثر مسؤولية في المنزل؟
 - a. الشخص الأكثر مسؤولية
 - b. المسؤولية المشتركة
 - c. شخص آخر مسؤول
 - d. لا أعرف

التركيبة السكانية:

2. الجنس:

- a. ذكر
- b. انثى

3. العمر:

- a. 18 – 24
- b. 25 – 34
- c. 35 – 44
- d. 45 – 54
- e. 55 – 59
- f. 60 – 64

g . 64+

4 . الوضع المهني:

- a . المزارعين بدوام كامل
- b . المزارعين بدوام جزئي
- c . ليس المزارعين

5 . كم عدد الأشخاص الذين يعملون في المنزل؟

- a . 1
- b . 2
- c . 3
- d . 4

6 . عدد أفراد الأسرة:

+٤	٣	٢	١	حتى 5 سنوات
+٤	٣	٢	١	سنة 6-15
+٤	٣	٢	١	سنة 16-60
+٤	٣	٢	١	سنة 60+

7 . مستوى التعليم:

- a . ابتدائي
- b . ثانوي
- c . جامعي

8 . كم دخلك الشهري؟

- a . \$400 - \$600
- b . \$600 - \$800
- c . \$800 - \$1000
- d . > \$1000

إنتاج الحليب:

بقر:

9 . ما هو العدد الإجمالي للقطيع (بما في ذلك الأبقار والعجول والثيران)؟

- a . 1 - 5
 - b . 6 - 10
 - c . 11 - 20
 - d . 21 - 30
- 10 . كم عدد الأبقار الحلوب لديك؟
- a . 1 - 5
 - b . 6 - 10
 - c . 11 - 20

d. 21 – 30

1 1 . ما هي كمية الحليب المنتجة للبقرة الواحدة في اليوم الواحد؟

a. 20 L – 30 L

b. 3L – 40 L

c. 4L – 50 L

1 2 . كم هو إجمالي إنتاج الحليب في السنة؟

a. 7,000 – 10,000 L

b. 11,000 – 15,000 L

c. 16,000 – 18,000 L

1 3 . ما هي فترة الحلب؟ (أيام / سنة)

a. 250-200 أيام

b. 300-250 أيام

1 4 . ما هو مجموع إنتاج الحليب في الموسم الواحد؟

ماعز:

1 5 . ما هو العدد الإجمالي للقطيع (بما في ذلك الماعز، والأطفال وباكز)؟

a. 1 – 5

b. 6 – 10

c. 11 – 20

d. 21 – 30

1 6 . كم عدد الماعز المرضعة؟

a. 1 – 5

b. 6 – 10

c. 11 – 20

d. 21 – 30

1 7 . ما هي فترة الحلب (عدد الأشهر + قائمة أشهر)؟

a. 250-200 أيام

b. 300-250 أيام

1 8 . ما هي كمية إنتاج الحليب اليومية لكل الماعز؟ (موسم الذروة)

a. 2.5 – 3.5 L

b. 3.5 – 4.5 L

c. 4.5 – 5.5 L

1 9 . ما هو متوسط إنتاج الحليب طول فترة الحلب؟

a. 200 – 250 L

b. 250 – 300 L

.c 300 – 400 L

.2 0 ما هو مجموع انتاج الحليب في الموسم الواحد؟

خروف:

.2 1 ما هو العدد الإجمالي للقطيع (بما في ذلك النعاج والخراف والغنم)؟

.a 1 – 5

.b 6 – 10

.c 11 – 20

.d 21 – 30

.2 2 كم عدد النعاج المرضعات؟

.a 1 – 5

.b 6 – 10

.c 11 – 20

.d 21 – 30

.2 3 ما هي فترة الحلب (عدد الأشهر + قائمة أشهر)؟

.a 90-150 يوما

.b 150-250 يوما

.2 4 ما هي كمية انتاج الحليب اليومية لكل الماعز؟ (موسم الذروة)

.a 2.5 – 3.5 L

.b 3.5 – 4.5 L

.c 4.5 – 5.5 L

.2 5 ما هو متوسط انتاج الحليب طول فترة الحلب؟

.a 200 – 250 L

.b 250 – 300 L

.c 300 – 400 L

.2 6 ما هو مجموع انتاج الحليب في الموسم الواحد؟

التسويق:

.2 7 هل تبيع الحليب طازجا أو مصنع؟

.a طازج

.b مصنع

.2 8 هل تنتج كشك؟

.a نعم

.b كلا

2 9 . من يشارك في تجهيز الكشك؟

- a. الزوج
- b. زوجة
- c. أفراد الأسرة

3 0 . إذا طازج، الى من تبيع الحليب؟
a. عدد الزبائن (إعطاء أسماء ومكان إذا ممكن):

b. تبيع الى:

- i. موزع الحليب
- ii. وحدات الألبان
- iii. الأسر
- iv. آخرون

c. سعر لير الحليب بمفرق:

d. سعر لير الحليب بالجملة:

e. الكمية المباعة من الحليب في الموسم:

f. الكمية المستهلكة في المنزل شهريا:

3 1 . إذا مصنعة:

a. نوع التصنيع:

نوع المنتج	وحدة البيع (كجم، لتر، الخ)	وحدة السعر	الكمية المنتجة / سنة أو الموسم	الكمية المباعة / سنة

b. عدد الزبائن (إعطاء أسماء ومكان إذا ممكن):

c. تبيع الى:

- i. المحلات التجارية الصغيرة

- .ii الأسر في القرية نفسها
- .iii الأسر في القرى المجاورة
- .iv سوق المزارعين
- .v آخرون

.d الكمية المستهلكة في المنزل شهريا:

الكشك:

3 2 . من ينتج كشك؟ (تحديد من من أفراد الأسرة الذي يشارك في تجهيز)

- .a زوجة
- .b أسرة
- .c الأسرة الممتدة
- .d العمال الموسميين

3 3 . أين تنتج الكشك؟

- .a المنزل
- .b مطبخ محلي
- .c تعاونية

3 4 . من اين تشتري البرغل؟

- .a الأراضي الخاصة
- .b الجيران
- .c محلات: حيث
- .d المطاحن، حيث:
- .e البعض: أين

3 5 . ما نوع البرغل الذي تستخدمه؟

3 6 . سعر كيلو البرغل؟

3 7 . هل تعتقد أن تم إنتاج القمح في الشوف يكون سعر البرغل أرخص؟

- .a نعم
- .b كلا

3 8 . ما هي كمية الكشك المنتجة في الموسم؟

- .a 10 – 20 kg
- .b 20 – 40 kg
- .c 40 – 60 kg

.d . 60 kg <

3 9 . من الذي يقرر الكمية المنتجة؟

.a زوجة

.b الزوج

.c قرار الأسرة

4 0 . خلال اي أشهر من السنة تصنع الكشك؟

.a تموز

.b آب

.c أيلول

.d آخر

4 1 . ماذا تستخدم الحليب او اللبن؟

.a الحليب (اذهب الى سؤال ٤٦)

.b اللبن (اذهب الى سؤال ٤٢ - ٤٦)

4 2 . ما هو نوع اللبن المستخدم؟

.a ماعز

.b بقرة

.c غنم

.d خليط (نسبة كل نوع من الحليب):

.e آخر

4 3 . من اين تشتري اللبن؟

.a أنا بشرائها من المزارع القريبة في المنطقة

.b أنا بشرائها من سوبر ماركت

.c انا اصنع اللبن

.d آخر (حدد المكان)

4 4 . ما هو كمية اللبن المستخدمة؟

4 5 . ما سعر كلبو اللبن؟

4 6 . ما نوع الحليب المستخدم؟

.a ماعز

.b بقرة

.c غنم

.d خليط (نسبة كل نوع من الحليب):

e. آخر

- 4 7 . من اين تشتري الحليب؟
a. أنا بشرائها من المزارع القريبة في المنطقة
b. أنا بشرائها من سوبر ماركت
c. من مزرعتي
d. آخر (حدد المكان)
4 8 . ما هو كمية الحليب المستخدمة؟
4 9 . ما سعر ليتر اللبن؟

- 5 0 . من الذي يذهب لشراء الحليب واللبن؟
a. الموزع
b. زوجة
c. الزوج
d. آخر

- 5 1 . الممارسات التصنيع (وضع علامة على كل الإجابات التي تنطبق):
a. غلي الحليب: نعم ... لا ...
b. مدة غليان في دقائق: ..

- 5 2 . أين / كيف تجفيف كشك (ضع علامة على كل الإجابات ذات الصلة):
a. سطح المبنى
b. حديقة
c. على ملاءات من القطن
d. على الصواني الألومنيوم
e. آخر:

- 5 3 . هل تنخل الكشك الخاص بك قبل الطحن (ضع علامة على كل الإجابات ذات الصلة):
a. نعم
b. كلا

- 5 4 . من ينخل الكشك؟
a. الزوجة
b. الزوج
c. افراد الاسرة
d. الأسرة الممتدة

5 5 . طحن كشك: أين طاحونة كشك و عدد

المرات:.....

5 6 . من يأخذ الكشك الى المطحنة؟

a. الزوجة

b. الزوج

c. افراد الاسرة

d. الاسرة الممتدة

5 7 . كم هي تكلفة طحن الكشك؟

5 8 . هل من أحد يساعد في تجفيف الكشك؟

a. كلا

b. الزوج/الزوجة

c. افراد الاسرة

d. الاسرة الممتدة

5 9 . ما هو نوع من المحتويات المستخدمة للحفاظ على الكشك:

a. اكياس بلاستيك

b. أكياس القطن

c. آخر، التحديد:

6 0 . ما سعر المحتويات؟

6 1 . كم من الوقت تستغرق العملية كشك؟

a. ٥ أيام

b. ٦ أيام

c. ٧ أيام

d. ٨ أيام

e. ٩ أيام

6 2 . من يسوق الكشك؟

a. الزوجة

b. الزوج

6 3 . من يقرر سعر كيلو الكشك؟

a. الزوجة

b. الزوج

- 6 4 . ما هو سعر كليو الكشك؟
- 6 5 . كيف يعرف الناس عن إنتاج كشك الخاص بك؟
- 6 6 . منذ متى وانت تنتج الكشك؟
- a. ١ - ٢ سنوات
- b. ٢ - ٤ سنوات
- c. ٤ - ٨ سنوات
- d. < ٨ سنوات
- 6 7 . اين تبيع الكشك؟
- a. الاتصالات الشخصية في نفس القرية
- b. الاتصالات الشخصية في القرى المجاورة
- c. الاتصالات الشخصية على الهاتف
- d. سوق المزارعين في المناطق الحضرية
- e. أحداث خاصة في المنطقة
- f. ميني ماركة
- g. آخرون
- 6 8 . لماذا تصنع الكشك؟
- a. الدخل الأولي
- b. دخل إضافي للأسرة
- c. التمتع والتقليد
- 6 9 . إذا كنت بحاجة إلى أي مساعدة أين تذهب؟
- a. مكتب الإرشاد في وزارة الزراعة
- b. المنظمات غير الحكومية المحلية
- c. البلدية
- d. المزارعون او مصنعون أكثر خبرة
- e. آخر
- 7 0 . لم تتلقى أي خدمات الإرشاد؟
- a. نعم
- b. كلا (اذهب الى سؤال ٧٣)
- 7 1 . إذا نعم، ما هي الخدمات التي تتلقاها؟
- a. تلقى
- b. اغلاف
- c. تدريب
- d. ورش عمل

e. نشر الوعي حول أي مرض أو مشكلة في الحليب أو الكشك

7 2 . إذا نعم، من من؟

- a. وزارة الزراعة
- b. المنظمات غير الحكومية المحلية
- c. المنظمات غير الحكومية العالمية

7 3 . هل لديك أي ضمان صحي؟

- a. نعم
- b. كلا (اذهب الى سؤال ٧٥)

7 4 . إذا نعم، ما هو نوع الضمان الصحي؟

- a. صندوق الضمان الاجتماعي
- b. تعاونية الموظفين
- c. شركة خاصة
- d. ضمان من افراد الاسرة

7 5 . هل انت عضو في أي تعاونية؟

- a. نعم
- b. كلا (اذهب الى سؤال ٧٨)

7 6 . ما اسم التعاونية؟

7 7 . ما هي الخدمات او الفوائد التي تقدمها التعاونية؟

7 8 . هل لديك الوصول إلى الائتمان او التسليف؟

- a. نعم
- b. كلا (اشكر وانهي الاستبيان)

7 9 . إذا نعم، ما نوع التسليف او الائتمان؟

- a. القروض متناهية الصغر
- b. كفالات
- c. قرض
- d. آخرون

8 0 . لماذا تستخدمه؟

- a. شراء ماشية
- b. تلقيح

- .c تسخين الحليب
- .d لإنتاج مشتقات الحليب
- .e آخر

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