

AMERICAN UNIVERSITY OF BEIRUT

EXPLORING THE MANIFESTATION OF THE CORPORATE
FOOD REGIME IN LEBANON: CASE OF THE
HORTICULTURAL SUPPLY CHAIN

by
WALID IMADDINE MUKAHHAL

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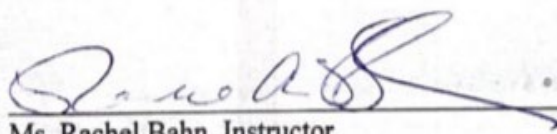
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I am with a great debt to the Food Security Program at the Faculty of Agricultural and Food Sciences at the American University of Beirut for providing me with ample opportunities for me to pursue my higher education. My responsibility is to utilize the knowledge gained from my education into actionable responses in the form of research, consultation, and application to advance humanity in the fields of food security and agribusiness.

This paper is dedicated to the Lebanese horticultural producers that seek positive change in the agricultural sector and to the people that have persevered in maintaining hope for a better tomorrow in Lebanon.

I wish to acknowledge the support and great love of my family for making this experience possible. I am lucky to have met great people and friends throughout my academic journey, and I am truly grateful to all.

AN ABSTRACT OF THE THESIS OF

Walid Imaddine Mukahhal for Master of Science
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Title: Exploring the Manifestation of the Corporate Food Regime in Lebanon: Case of the Horticultural Supply Chain

The paper examines the horticultural supply chain in Lebanon under the scope of food regime analysis amidst global geopolitical transformations and social movements. A historical view on Lebanon's food system concerned with political, economic, and social changes was investigated with a focus on agricultural production and trade. Understanding significant historical alterations allow us to realize food system transformation in Lebanon during the first colonial food regime and the second food regime post-world war with the rise of the Green Revolution. This would set the stage for the 3rd corporate-led food regime post-Cold War, where liberalization, globalization, and corporatization led to corporate food expansion through the rise of transnational corporations with the help of supranational institutions and global agribusinesses. A phenomenon known by supermarketization and restaurant corporatization would later dominate the food sector. The global food system had changed with several waves conveyed to developing nations, where Lebanon during and after the Civil War would find their food retail structure transformed with increased international penetration through foreign investments alongside politically sectarian resistance. The alterations had some implications on society, nutrition and public health, and the environment. Ultimately, a novel food regime understanding might be emerging, amidst, global recession and pandemic, social movements, and geopolitical uncertainties. The corporate food regime has manifested in Lebanon for over 30 years with success but with resilience of traditional retail formats and the role of the local FV wholesale market

The paper aims to evaluate opportunities for and barriers faced by Lebanese horticultural producers and suppliers when participating in the supply chain under the premises of the corporate food regime. In order to achieve this, procurement decisions, contractual agreements, standards, and credit terms required by supermarkets and corporate restaurants in Lebanon when procuring horticultural products were examined to understand market and negotiation power between the provider and the retailer. The objectives were realized through a qualitative research method that utilizes semi-structured interviews alongside critical

observational analysis and guidance of the literature. A series of supermarkets, corporate restaurants, horticultural producers, and suppliers were interviewed across Lebanon.

The study showed that specialty producers and processors supply corporate restaurants that require strict quality specifications and consistency, which can only be achieved through private food safety and quality certifications. Their relationship structure is binding, symbiotic, professional, and service oriented. Also, supermarkets have an opportunistic, non-binding relationship with their suppliers, where most of their products are sourced by the FV wholesale markets. Three categorizing dimensions were identified, where quality level (Privately Certified, IMP/Balade non-certified and conventional) was the principle indicator that determines negotiation and market power of horticultural providers when dealing with corporate procurers. The quality level is directly correlated to land size and ownership structure to the producer, where these are considered limiting factors faced by most producers. The principle limiting factor was considered to be the lack of a clear national agricultural policy and framework that has been absent for decades. The deteriorating economic situation including inflation and currency devaluation were also considered limiting factors for horticultural producers. There are opportunities found in the horticultural supply chain, where inefficiencies can be reduced at the level of the supplier, and producers can gain market power through investing in their quality level, away from conventional farming methods, especially in potato production to gain entry in the corporate restaurant supply chain. There are also opportunities in value-adding agro-processing sector, where a direct sale can be encouraged through farmer's market or directly to retailers or the food-service industry. Achieving this requires positive transformations in government, where trust from the common people is refortified and where intervention in the private sector is strengthened through further collaboration, funding, and observation of projects by a functional, non-corrupt government. Also, the private sector has a role to play to increase traceability and transparency along the supply chain, and with the help of the banking sector in investing in agricultural projects. Finally, these transformations should be able to improve the effectiveness and efficiency of the horticultural supply chain for producers, traders, retailers, processors, and consumers; transitioning into a more transparent, socially-just, sustainable, and secure food system.

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ABBREVIATIONS

BRC	British Retail Consortium
CEO	Chief Executive Officer
CFO	Chief Financial Officer
COO	Chief Operating Officer
CPO	Chief Procurement Officer
CSA	Community Supported Agriculture
EEC	European Economic Community
FAO	Food and Agriculture Organization of the United Nations
FFV	Fresh Fruits and Vegetables
FMCG	Fast-moving Consumer Goods
FSSC	The Foundation Food Safety System Certification
FV	Fruits and Vegetables
GAP	Good Agricultural Practices
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GMP	Good Manufacturing Practices
GMO	Genetically Modified Organism
GNAP	Gross National Agriculture Product
HACCP	Hazard Analysis Critical Control Points
HLTF	High Level Task Force on Global Food Security
IDAL	Investment Development Authority of Lebanon
IMC	ISTITUTO MEDITERRANEO DI CERTIFICAZIONE
IMF	International Monetary Fund

IMP	Integrated Pest Management
ISO	International Organization for Standardization
IQM	Integrated Quality Management
Kg	Kilogram
LBP	Lebanese Pound
MENA	Middle East and North Africa
M	Million
NGO	Non-governmental Organization
N-NCD	Nutrition-related non-communicable diseases
OECD	Organization for Economic Co-operation and Development
OETA	Occupied Enemy Territory Administration
PL-480	Food for Peace Act
Public Law 87–195	Foreign Assistance Act
RFID	Radio-Frequency Identification
SA	Social Accountability
SQF	Safe Quality Food
TNC	Transnational Corporation
US	United States
USA	United States of America
USAID	United States Agency for International Development
USD	United States Dollar
UN	United Nations
UNDP	United Nations Development Programme
WTO	World Trade Organization

CHAPTER I

INTRODUCTION

The emergence of the corporate food regime is characterized by the rearrangement of food supply chains that are led by corporate retail repositioning through supermarketization and corporate fast-food expansion (Bernstein, 2015). Researchers have identified transnational corporations as the primary tool of analysis to study the globalization of the food system (Heffernan & Constance, 1994, pp.29-30). TNCs were found to be the main driving force shaping the global food system, including the manifestation of supermarkets and fast-food chains (Monteiro et al., 2013). The emergence of globalized corporate food industries in place of local food producers has had negative consequences on society, environment, and public health nutrition (O’Kane, 2011). The corporate food regime is a global phenomenon: this study will take Lebanon and its horticultural supply chain as a case study. The research begins by identifying significant historical geopolitical developments in Lebanon concerning agricultural production, food trade, and government policy by exploring secondary literature. The study investigates the procurement decisions of supermarkets and corporate restaurants in Lebanon concerning horticultural products, as well as the socio-economic impact of the corporate food regime on the horticultural supply chain. The study then identifies opportunities for and barriers to engagement of Lebanese

horticultural producers within the corporate food supply chain. The purpose is to provide a framework to understand and improve the current food system, where this research concludes by proposing recommendations to actors involved in the horticultural supply chain that might include the government, NGOs, corporations, consumers, producers, suppliers, and researchers depending on primary findings using qualitative data with guiding supporting evidence from secondary literature and observational understanding. The research aims at exploring the manifestation of the corporate food regime in Lebanon based on historical and current developments, where the local food system would be analyzed under food regime change catalyzed by social movements and economic turbulence. The research began during the October Revolution, where significant changes in the food system showed to be having short to long term implications on food production and trade. Initially, the research aims to understand the power dynamics in negotiating deals between local horticultural producers and suppliers according to the standards, certifications, and contracts required between them and on the foundational basis their relationship is relying on.

The research objectives aimed by this research can be summarized as follows:

- **Objective 1: Explore the manifestation of the corporate food regime in Lebanon based on historical geopolitical developments concerning agricultural production, food trade, and policies thereof.**
 1. What are the historical geopolitical developments that led to the manifestation of the corporate food regime in Lebanon?
 2. What were the facilitating or limiting factors that led to this expansion?
 3. What were the implications of this expansion on the local food system?

4. What are the local and global transformations anticipated after analyzing recent and historical geopolitical developments concerning food supply under the scope of food regime analysis?
- **Objective 2: Identify the procurement decisions and contractual agreements of supermarkets and corporate restaurants in Lebanon when procuring horticultural products.**

This objective can be divided into two subparts divided each into two questions:

- I. **Understanding the Supermarket-Supplier relationship:**
 1. What are the procurement decisions taken when supermarkets procure horticultural products from their suppliers?
 2. What are the related standards, certifications, and contracts required by corporate supermarkets when procuring from their suppliers?
- II. **Understanding the Restaurant-Supplier relationship:**
 1. What are the procurement decisions taken when corporate restaurants procure horticultural products from their suppliers?
 2. What are the related standards, certifications, and contracts required by corporate restaurants when procuring from their suppliers?

- **Objective 3: Evaluate barriers faced by and opportunities for Lebanese horticultural providers when participating in the supply chain under the premises of the corporate food regime.**

This objective can be divided into two research questions:

1. What are the barriers faced by horticultural providers in Lebanon under the premises of the corporate food regime?
2. What are the opportunities for horticultural providers in Lebanon under the premises of the corporate food regime?

CHAPTER II

LITERATURE REVIEW

A. Food Security, Food Regime, and Food Systems:

By the end of the Second World War in 1943, where famine was predominant in Europe, and food insecurity was looming globally, 44 nations met in Hot Springs, Virginia, USA, to discuss ‘freedom from want’ in the global supply of food. “Freedom from want” with respect to the food supply, especially in agriculture, signifying “a secure, adequate and suitable supply of food for every man, woman, and child”; a pivotal event that would set the world stage for the second food regime and later the third or corporate-led food regime. According to the definition set by the World Food Summit in 1996 and later amended in 2009 : ‘Food security exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their food preferences and dietary needs for an active and healthy life’. This definition includes four fundamental pillars of food security: availability, accessibility, utilization, and stability. Most recently, the term ‘food and nutrition security’:

“Exists when all people at all times have physical, social and economic access to food, which is safe and consumed in sufficient quantity and quality to meet their dietary needs and food preferences, and is supported by an environment of adequate sanitation, health services and care, allowing for a healthy and active life”.

This definition was evolved from the primary definition by the UN System HLTTF in September 2010 (CFS, 2012). So to achieve such goals post-world war, in feeding the expanding world population, a holistic framework was needed to achieve food security amidst global food regime change. This meant production and consumption systems required adjustment with all their actors, activities, and outcomes to become more effective and efficient while understanding their surrounding complexities. Ultimately, the food system approach was used to enhance food security, where a food system can be defined as “the aggregate of food-related activities and the environments (political, socioeconomic, and natural) within which these activities occur.” These activities in the food supply chain can be divided into sub-systems: production, transport and distribution, and food preparation and consumption (Pinstrup-Andersen & Watson, 2011, p. 3-9). Therefore, food security is connected to food regime change and their effect on food supply chains. The reason the horticultural supply chain was chosen is because of its relevance to the rural community and agriculture, and its growing vulnerability towards local production in the current-prevalent, global, corporate-driven food regime. The global food system has become heavily dependent on staple food, and used as food weapon: even more so after the end of the Second World War, since the Green Revolution, and after the prevalence of Capitalism and globalization. The objectives of this paper allow food security to be assessed according to its political and socioeconomic dimensions along the supply chain with regards to stability that factorizes the remaining pillars, including availability, accessibility, and utilization. Primarily, it is important to understand and distinguish that the literature around food regime analysis revolves around two perspectives: political economy or economic

development. The former looks at the spread of TNCs into developing countries as a source of unequal power relations, conflict, and labor-related issues, loss of autonomy, increased production risk, and indebtedness (Joshi & Little, 1994; Wilson, 1986).

Conversely, the economic development perspective views TNCs as playing a positive role in addressing market failures and local competitiveness (Luo, 2001; Meyer, 2004).

Understanding the segregation between the two perspectives will allow us to understand better how food regimes, food systems, and food security are connected while minimizing propagandist agendas.

By the Mid-twentieth Century, the corporate fast-food chain has become an instrument of food regime analysis (McMichael, 2009). The success of the spread of fast food chains in the world is primarily attributed to its name 'fast', as speed of providing food is integral in a developing fast-paced consumerist society. The fast food industry has done so while offering a value of uniformity and convenience (Fraser et al. 2010).

Time-saving, on-the-go products are increasing in demand due to hectic work lifestyles. Globally, this has contributed to the overall proportional decrease in consumer spending on restaurants and grocery shopping, as well as an increase in consumer fast food expenditure with respect to the total amount of food expenses. Food corporations have incorporated their outlets in shopping malls to combine meal time with other work or non-work activities while accommodating for the convenience factor. This corporate strategy has expanded to include fast food exposure in unorthodox locations like department stores, office blocks, gasoline stations, and airports, which reflects a growing market demand for convenience and accessibility to fast food outlets.

1 - Supermarkets and Corporate Fast-food Expansion



The expanding exposure of fast food chains can further be justified by growing wages, longer workdays, and increased involvement of mothers in the workforce. Ultimately, the changing market has contributed to changes in agro-industrial production and processing among food supply chains, decline in consumer health, social disintegration, and environmental unsustainability (Jekanowski, 1999; O’Kane, 2011).

The spread of supermarkets also characterizes a shift in food system structures, where ‘Supermarketization’ or the ‘Supermarket Revolution’ refers to the diffusion of modern food retail operations into the developing world, facilitated by TNCs’ intervention, that lead to the replacement of traditional retail formats (Reardon & Timmer, 2008, p.189; Von Braun & Díaz-Bonillia, 2008, p.23). Nevertheless, supermarkets have facilitated the availability and accessibility of a diverse range of products at a fair price (Hattersley & Dixon, 2010). However, this phenomenon has had several setbacks like displacing traditional retailers, threatening business survivability of small-scale producers and

suppliers (Reardon & Hopkins, 2006), increasing unhealthy consumption patterns (Hawkes, 2008; Hattersley & Dixon, 2010), and contributing to import-dependency, food waste and loss, food price vulnerability, food insecurity, unsustainability, and environmental degradation (Woertz & Keulertz, 2015; Bahn, El Labban, & Hwalla, 2018; Hattersley & Dixon, 2010; Scholz, Eriksson & Strid, 2015).

According to McMichael (2009), food regime analysis emphasizes agriculture's and food's strategic role in the configuration of geopolitical power over nations' political economy revolving around food supply chain under the scope of capital accumulation aimed at constructing the world capitalist economy. Since the 20th century, the world's food system evolved over three food regimes caused by crisis, transformation, and transition.

The first food regime (1870-1930) was characterized by a period of colonialism and industrialization. The second food regime (1950s-1970s) was marked by post-colonial struggles to fight communism and the era of the Green Revolution and subsidized agriculture. The third or corporate-led food regime began in the 1980s with the prevalence of capitalism, including corporatization, liberalization, and globalization and continues until today (McMichael, 2009; Woertz, 2014). The focus of this thesis will be on the third or corporate food regime, especially with the emergence of the 'Supermarket Revolution' and corporate fast-food restaurants. Hence, the emergence of the corporate food regime is characterized by the rearrangement of food supply chains that are led by corporate retail repositioning through supermarketization and corporate fast-food expansion (Bernstein, 2015).

B. Transnational corporations, supranational institutions, and Global Agribusinesses in Constructing the Corporate Supply Chain:

The corporate food regime attributes its success to its most instrumental tools:

Globalization and Liberalization (McMichael, 2009). Researchers have identified transnational corporations as the primary tool of analysis to study the globalization of the food system (Heffernan & Constance, 1994, pp.29-30). There is no universally agreed-upon definition of TNCs; however, it can simply be stated as 'an enterprise which owns or controls production or service facilities outside the country in which it is based' (Weissbrodt & Kruger, 2003, p. 901-922). TNCs were found to be the main driving force shaping the global food system, including the manifestation of supermarkets and corporate fast-food chains (Monteiro et al., 2013).

2 - Transnational Corporations:



The figure above aims to show the involvement of TNCs in our daily lives. TNCs supply their products around the world and are found in every household. Supermarkets and corporate restaurants are consumers to these TNCs, which are evidently shown on supermarket shelves and other retail operations. Also, the products supplied by these TNCs are used as ingredients in food processing or food service operations. TNCs were able to gain market share in a small period of time through franchising.

“A **franchise** (or **franchising**) is a method of distributing products or services involving a franchisor, who establishes the brand's trademark or trade name and a business system, and a franchisee, who pays a royalty and often an initial fee for the right to do business under the franchisor's name and system.” – *International Franchise Association*

Consequently, through franchising, TNCs have gaining market power as well as cutting costs and provide efficiencies in the marketing and distribution of their products with the help of trade liberalization (Hawkes, 2006). Ultimately, the global food market is controlled by a small number of TNCs, yet their purpose stretches beyond the domain of supplying food. TNCs are global players that influence geopolitics and rural communities and have detrimental effects on public health nutrition and environmental sustainability (Caraher & Coveney, 2004; Heffernan & Constance, 1994). The emergence of TNCs has been facilitated by globalization and increase in direct foreign investments, where they have been implicated in manufacturing and marketing unhealthy food products, which have been linked to the increased risk and spread of N-NCDs globally (Hawkes, 2006; Wiist, 2010; Beaglehol & Yach, 2003). Also, the prevalence of TNCs in local areas increases the availability and accessibility of

Westernized industrial foods. This would diminish the status of food security and food sovereignty of nations due to their adoption of an imported, unhealthy, and unsustainable diet (Black, 2016). Especially in countries dependent on imports for their food security like the MENA region that imports around 50% to 90% of its wheat, dairy, oil, livestock feed, sugar, corn, rice, and soybeans (Oltmans, 2013). Countries that are more dependent on food imports have been argued to empower supermarkets in spreading the detrimental impacts of the nutrition transition on consumer health (Blouin, Chopra, & van der Hoeven, 2009; Hawkes, 2008). Nevertheless, trade liberalization can either aid or hinder food security (Diaz-Bonilla et al., 2000). The literature recommends having the proper infrastructure, congruent political relations, and good trading relationships with exporting countries (Woertz & Keulertz, 2015). The MENA region is the largest net importer of cereals in the world due to scarcity of arable land and water resources combined with a growing population; this would disallow food sovereignty of the region and further intensify its dependence on exporting countries to secure the food requirements of its growing populations (Sadler & Magnan, 2011). Implications of food import dependency mean that TNCs securing the supply of food to supermarkets and corporate food-service operations would be highly involved, where research has shown that food security, food sovereignty, and the availability of healthy foods would be diminished (Black, 2016; Monteiro et al., 2013). In the case of Lebanon, the sectarian political structure of the economy has hindered processes concerned with the privatization of the sector even though the country is committed by financial donors¹ to privatize. State-owned enterprises are concerned with trade, agribusiness, and

¹ Financial donors refer to the donations made at various Paris Agreements (1-3) during the period 2001-2007, where various ministerial declarations and international pledges committed Lebanon to privatize.

agricultural production (including managing water and energy resources) (Akoum, 2012, p.6). Furthermore, Lebanon's imports are controlled by a few politically-connected suppliers that are privately owned yet sectarian-driven. This would then also imply that the manifestation of TNCs relatively has a lesser impact on the country (Nasr, 1978).

The supermarket revolution and the corporate food-service expansion have been facilitated by TNCs, globalization, and economic liberalization. In addition, global agribusinesses are the backbone of these revolutions that rely on the role of supranational institutions and agricultural policies set by grain-exporting countries. The figure below shows global agribusinesses or agricultural inputs companies dominating global agricultural supply.

3- Agricultural Inputs Corporations Dominating the Global Agricultural Supply



International trade has been facilitated by mainly three supranational institutions; the IMF that finances and standardized economic frameworks, the World Bank that finances globalization projects, and the WTO by removing barriers to trade. These organizations were established to facilitate growth; however, they have mainly benefited the wealthy industrialized nations (Heffernan & Constance, 1994). The debate over whether trade liberalization facilitates economic growth to developing countries remains inconclusive, as the literature reports positive, negative, or even neutral correlations according to different countries (Greenaway et al., 2002). Nevertheless, these are active institutions that have control over the world market, and thereby have control over global agribusinesses and transnational corporations.

4- Supranational Organization's Relation to Global Agribusinesses and Transnational Organizations

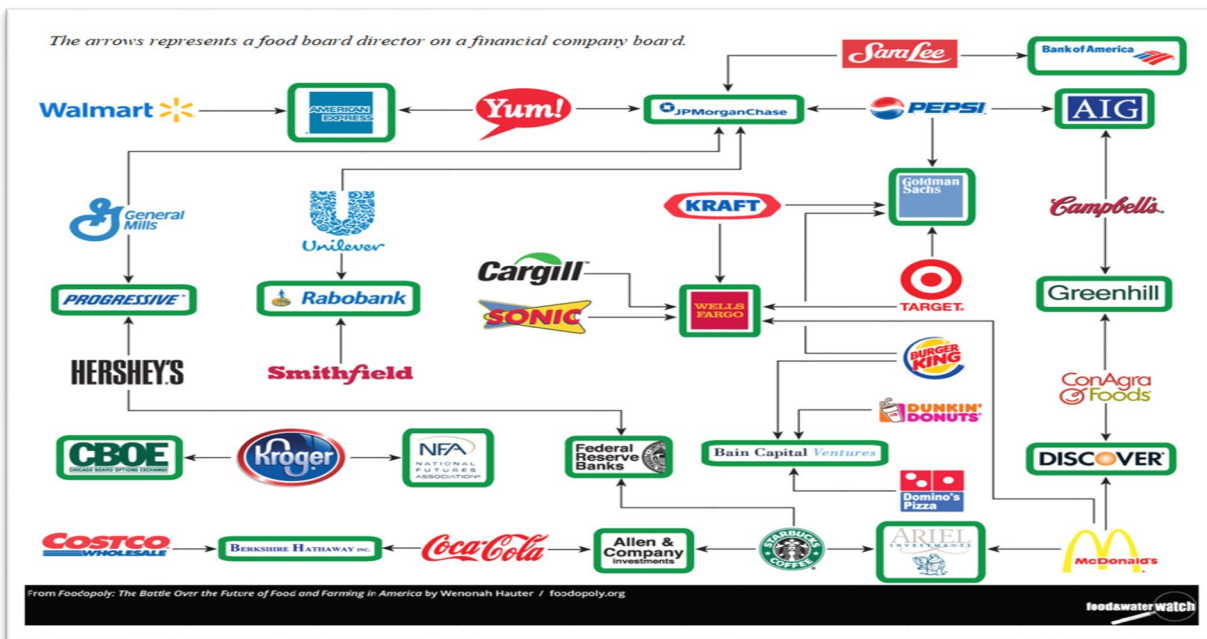


The figure above aims to show the relation of influential supranational organization to global agribusinesses, and thus transnational corporations, under the framework of the

IMF and rules of the WTO². In relation to the previous section, ‘food regime analysis emphasizes agriculture’s and food’s strategic role in the configuration of geopolitical power over nations’ political economy revolving around food supply chain under the scope of capital accumulation aimed at constructing the world capitalist economy’.

The figure below shows the food transnational corporation’s common link to the banks through the people that control them. The aim of the figure aims to show the relationship between transnational corporations, global agribusinesses, and supranational institutions and their relation to banks.

5 – Food Transnational Corporations and their Connection to Financial Institutions



Unraveling the case of Lebanon, financial growth has been noticed in one of the major economic sectors: the banking sector, as due to bank secrecy law of 1956, includes unrestricted capital flow and freedom to trade currencies (Turk Ariss, 2008). Another

² Lebanon is not a member of the WTO due to the reason that its admission was sought to create negative economic growth since the country was not able to compete on a global scale.

major sector important to the country's economy is tourism, since growth in this sector can encourage direct foreign investment and an increase in the number of tourists would stimulate economic activities; this would be achieved through Lebanon's liberal free-market economy (Tang & Abosedra, 2014). In addition, exporting goods and services is the fastest growing sector in Lebanon since 1993; however, it remains relatively small according to its size in GDP. Policy formulations encourage the rapid liberalization and protection of import-competing sectors through tax exemptions. Also, the debt-GDP ratio would be reduced by the privatization of some public assets (Berthélemy et al., 2007). Ultimately, this would imply that trade liberalization enhances economic growth in Lebanon. However, one can argue that the last literature cited is a working paper supported by the World Bank, a supranational institution that aims for globalization and liberalization, exposing a biased agenda affecting credibility of the facts presented. In reality, political parties and their sectarian tension in Lebanon have hindered privatization efforts with the claim to protect public sovereignty or preserve corrupt activities. Nevertheless, this part of the research is to acknowledge the reason behind corporate food expansion globally and in Lebanon as well as the actors involved, which include supranational institutions, global agribusiness, and multinational corporations. Determining if their involvement is positive or not in Lebanon requires further examination, but one should ask: If trade liberalization enhances economic growth, then who is benefiting from this growth and at what expense? One should also consider the influence of sectarianism and corruption in relation to post-colonialism, along with the prevalence of Capitalism.

C. Private Food Safety and Quality Standards and the Corporate Food Regime:

Over the last few decades, the corporate food regime has restructured global agricultural and food markets, especially with the rise of supermarkets and other food-related sectors like fast-food. With this transformation, procurement decisions and contractual agreements being made between producers and suppliers also have changed. This necessitates the employment of food quality and food safety standards. And, due to poor public governance in this sector in the developing world, private standards were integrated to govern the food system in compliance with the corporate food regime (Wouters & Geraets, 2012; Henson & Reardon, 2005). These standards have been set to regulate food safety and food scandal risk along the supply chain to reduce public health and economic risks. Also, consumers have become more aware of the social and environmental impacts of food, so these standards reinforce the safe production of environmentally clean food. Furthermore, global supply chains and vertical integration have motivated direct contractual agreements between producers and retailers. Private standards give the supplier a competitive advantage in terms of quality and a form of legislative method to differentiate products (Henson, S., & Humphrey). For example, GLOBALG.A.P or fair trade standards increase the tradability of products, which allows for the export of locally produced goods for more favorable prices. Other standards, such as GAP, GMP, HACCP, ISO 9000, SQF 2000, and SA8000 are viewed as foundational codes of conduct that would govern food supply chain of the agri-food system to ensure the supply of safe, quality food (Henson & Reardon, 2005). For developing countries, this would encourage increased investment and improved infrastructure that would stimulate the economic growth of a country (Wouters &

Geraets, 2012). However, according to counterarguments from the literature, a study determined that private food standards in the developing world have no effect on a company's export capacity; neither in volume nor in value (Schuster & Maertens, 2015). Thus, when evaluating private standards, it is advised to be critical and ask 'who they are developed by, who adopts them, the issues they address, and so on', which would remarkably vary their evaluation of them (Henson & Humphrey, 2010, p.1). Exporting countries (especially OECD) have been found to be the main driving force for adopting private food safety and quality standards in accordance with the limitations set by the WTO.

Global agribusinesses originating from the Global North have dominated the food system by attaining the most power and capital that allows them to acquire smaller stakeholders in the food system. Ultimately, global agribusinesses restructured agricultural systems by allowing for food manufacturers and supermarkets to determine what farmers grow, whereby contractual agreements and strict product specifications are enforced (Heffernan & Constance, 1994). The supermarket revolution and spread of corporate fast-food transformation is accompanied with an increase in contractual agreements and market linkage arrangements along with private grades and standards (Reardon et al., 2009). These specifications pertain to food quality and safety, where in the developing world, the reason for the rising need to employ food safety and quality standards, as mentioned, was poor public governance. This leads to the privatization of agri-food system governance to support the global free-trade agenda brought by the corporate food regime (Henson & Reardon, 2005). However, these private standards have been known to be costly on small-scale and medium-sized producers, and if these

standards are not met then these farmers might get marginalized from the modern food supply chain³, resulting in a negative impact on the livelihoods of rural communities (Rao, Brümmer, & Qaim, 2010; Minten, Randrianarison, & Swinnen, 2007; Neven et al., 2007). Also, farmers that sell directly to supermarkets have shown to be mostly engaged in horticultural activities. These farmers have more capital and yield due to an increased use of chemical pesticide and fertilizer and reduced transactional costs and related risks. In fact, these farmers are not profiting more than those farmers who are not selling to supermarkets due to the associated increase in expenses. Nevertheless, consumers are receiving a consistent, year-round supply of products directly from the farmer on a contractual basis (Hernandez, Reardon & Berdegue, 2007). However, one should question the health and environmental risks associated with producing the desired commercial produce that has been standardized by the market. This can be done by asking farmers about their production processes along the supply chain and how that affects the purchasability of their products. For example, consumer concerns have led private companies to refrain from using GMOs in products, including Fritos Lay corn products and McDonald's French fries (Nelson, 2001).

To understand food standards in the global value chain Lee et al. (2012) identifies four scenarios based on the degree of supplier-demand concentration:

³ Nevertheless, exclusion of small-scale farmers from the supply chain remains inconclusive, where some studies show that small-scale producers managed to maintain or enhance the exportation of their products (Henson & Humphrey, 2010).

Buyer-Driven Chains: Private standards are enforced by retailers on smallholder farmers, creating fewer capable intermediaries. This provides small-scale farmers the opportunity to expand due to their land and labor efficiency compared to industrialized farming, especially in providing fresh fruits and vegetables. So, larger exporters would encourage contractual farmers and small-holder farmers to participate in the supply chain. Safety is given more importance than quality. Examples from Mexico and Peru show that the adoption of GAP, GMP, and HACCP has helped these countries export FFV into the US market.

Producer-Driven Chains: Private standards are less enforced and are the responsibility of the processors, discouraging upgrading options for farmers. Quality is given more importance than safety. Opportunity to upgrade is limited with favoritism to small farmers that operate for export, which are controlled by a few transnational producers. Multinationals like Heinz and Campbell Soup Co. control variety and inputs to obtain their desired quality of tomatoes for processing through contract farmers.

Bilateral Oligopolies: Transnational producers place non-contract smallholder farmers at a disadvantage, and overall least beneficial scenario for small-scale farmers. There are high barriers to entry in this chain, and contract farmers compete to retain their contracts. Opportunity to upgrade for smallholder farmers is limited to organic and fair trade certifications; however, they are not protected from price control set by TNCs. Nevertheless, they provide resources and market access to their contract farmers. As an example, the global banana chain for export is mostly (80%) controlled by five companies, with only 12% of the revenue remaining in the producing country; while

labor and environmental conditions improve slightly despite standards set by transnational companies.

Traditional Markets: Prevalent in the developing world, smallholder farmers supply mostly to local demands with a low export capacity for niche products. This scenario provides farmers with autonomy over their activities; however, they lack adequate support. There are minimal barriers to entry with low safety and quality requirements. These producers are restricted from the export market due to their incapacity to meet minimum standards, which motivated them to switch to crops with less safety risk involved or fewer barriers to entry. The US and Canada imposed an import ban on Mexico's cantaloupe production due to *Salmonella* outbreaks, which later induced them to abandon the export market due to high cost associated with complying to required standards.

In Lebanon, producers have faced export restrictions on their agricultural products due to strict safety regulations set by the European Commission of the European Union. Achieving the desired food safety standards set for export has been a main challenge for the Lebanese Ministry of Agriculture and Chambers of Commerce, Industry and Agriculture in Zahle, Tripoli, and Saida due to the impactful loss of the Syrian market since the beginning of the Syrian Civil War. The European market seemed the most attractive option, where Gulf countries were difficult to integrate due to the increased competitiveness of the international agribusiness market (Leeters, 2016/2018). In efforts to promote export of horticultural products, USAID has been working to upgrade the 'certification, capacity, and quality of three Lebanese agricultural laboratories and agricultural product development plants' to guarantee product safety and receive an

internationally recognized seal of approval. These efforts have enabled agricultural growth and development, provided livelihood opportunities for rural communities, and created efficient, demand-driven agribusinesses in Lebanon (USAID, 2018). However, these organizations are usually politically-driven rather than humanitarily-driven, and their development projects are exclusive to most participants, duration is temporal, and overall effectiveness is exaggerated. Ultimately, if governments and NGOs are unable to solve inefficiencies in the food supply chain, then what would be some of the contributing roles that the private sector can deliver?

6 - Private Food Safety and Quality Standards



D. Traceability, Transparency, and Food System Efficiency:

One of the tools being used globally to optimize food system efficiency, while ensuring traceability and transparency along the supply chain is Blockchain technology.

Blockchain is an emerging development in supply chain tracking. Blockchain is a decentralized ledger technology providing secure real-time data access and is being used in finance, healthcare, government, among many other applications, which aim at increasing traceability of products or services. Traceability is important in supply chain management, especially in the food industry, where food safety is becoming a high concern to suppliers and consumers. This technology allows users to track the point of origin and its path along the supply chain, including all processes and transactions involved. Consequently, agents of the supply chain including consumers can have a better understanding about the methods used in production, checking if it was safely and sustainably produced. It is more than just being able to trace back steps; it creates trust between producers and consumers through a system of transparency. It is smart and secure software used by cyber security professionals, hence reducing human errors in traditional auditing methods. It provides consumers with reliable and un-falsifiable information that can be accessed through any smartphone. This technology is now being used by major supermarkets around the world like Wal-Mart and Carrefour with partnerships with major corporate suppliers like Nestlé (Dimitrov, 2019). The technology has been successful in the horticultural sector, where information related to sliced mangoes imported from South America can be tracked in about 2.2 seconds instead of a week of manual investigation. Data includes crop variety, planting origin, weight of product, harvest period, time spent in each process along the supply chain,

processes undergone, and among other information that insures traceability and transparency for actors across the supply chain, which is received securely and efficiently in a matter of seconds. It has also been used in the coffee and wine industry to detect best quality produce including safe and sustainable practices used in production for most favorable pricing. Traceable products like wine are 20-40% more valuable, so this technology can be used as a product differentiation strategy to compete in local and international markets. Other agricultural applications include traceable cultivation of lettuce, spinach, blueberries, potatoes, and also in livestock, which bring ample opportunity in the sector (Nguyen & Doan, 2019). The application is mostly used by corporate and large-scale firms; however, it has also the potential of improving small and medium farmers' production value, while improving their access to finance and crop insurance (Haider, 2018). Though, in the developing world, small and medium scale farmers already have trouble gaining international certifications for their production methods and quality produced; so this technology might be only viable for large-scale, corporate farms that are already certified and which have the capital to invest in the software itself and its system requirements.

Nevertheless, Blockchain was able to resolve conflicts like invoice dispute resolution and real-time data distribution in freight tracking and payment processing by removing 3rd party audits and processing time, which saves on costs related in transports and delivery. This can be additionally done by converting written contracts to smart contracts, where the system can then include conditions agreed upon by both parties automatically; thus reducing time and cost, while properly accounting for all costs. For

fresh foods, retaining the quality and shelf life of the produce depends on optimizing logistics so that it can reach retail as fast as possible from producers (Mearian, 2019).

However, the technology is limited by conflicts relating to implementation, organization, and trust. The technology is relatively new and requires technical knowledge in implementation, where organizations are required to revolt out traditional accounting and auditing methods across the supply chain. The use of technology is high, where all actors are required to participate or they will be marginalized out of the chain. It requires using digital information over written and oral agreements and trustworthy input from personnel sending and receiving the data, or else the system will be flawed (Wharton, 2018). Both the developing world and Lebanon might not be ready for this use of technology, since the level of professionalism is relatively low across the majority of actors, including the FV wholesale market. Most producers and suppliers attain informal relationships, based on oral and non-binding agreements. The results of this paper show that supermarkets procure on the same basis from the FV wholesale market, where facilities are not well developed. So a technology such as Blockchain in the horticultural supply chain is still farfetched. Nevertheless, there are nutritional, environmental, and societal factors that need to be looked into before adopting any advanced technology or knowledge by understanding certain implications of the corporate food regime on the local food system. The purpose of this section aims to show the influence of technology inspired by the corporate food regime on the local food system, positive in some sense yet costly in another, where the same can be implied for private food safety and quality standards adopted by corporate entities along the supply chain.

E. Implications of the Current Food System:

The emergence of globalized corporate food industries in place of local food producers has had negative consequences on society, environment, and public health nutrition (O’Kane, 2011). A framework presented by Gabrielle O’Kane portrays how the global food system and its implications have led to an emerging response to rely on traditional local food systems.

Beginning with the system outcomes of the current food system, the framework reveals a decreased food system sustainability and increased selective food insecurity⁴, obesity, and chronic disease. This was caused by a global food system failure comprised of the tools of the green revolution, i.e. intensive monoculture farming systems accompanied with a play in power and politics that supports this unsustainable food production pattern. As a consequence, food has become a commodity resulting from a competitive homogenous food supply, which led to negative environmental, social and economic, and health impacts. The environmental cost includes loss of biodiversity, soil and water pollution as well as an increase in global GHG emissions. As a socio-economic cost, marginalization and increased vulnerability of smallholder farmers increase inequalities. The environmental and socio-economic cost resulted in increased unsustainability of the system. As a health cost, the abundance of cheap, energy-dense food accompanied by the socio-economic cost has led to an increased rate of obesity and chronic disease. The combination of environmental, socio-economic, and health costs all contribute to selective food insecurity, usually the most vulnerable segments of society. More

⁴ Selective food security also means ‘food insecurity for some’ realizing that society is stratified into different socio-economic classes, where food system structures have different consequences on different segments of the society, especially marginalized segments of the society; that include the rural population working in agriculture or the rural population that migrated to the peripheries of city center in hopes of securing employment in another economic sector (O’kane, 2011, p.273).

interestingly, the framework shows a natural feedback response caused by ineffectiveness and inefficiencies of the system that reach the segments upholding power whether corporate or political that ultimately concludes with a damaging consequence to the global food system. Hence, the pressing need to go back to traditional local food systems. O’Kane offers a solution to the ineffectiveness of the current global food system, and it includes the political support for Community Supported Agriculture (CSA), community gardens, and farmer’s markets.

These locally beneficial tools assume to reverse the negative outcomes of the global food system, while at the same time benefiting the system. The emergence of organic products and increased availability of fresh food would strengthen rural economies as well as contribute to the sustainability of the system, food security, and reduced obesity and chronic disease (O’Kane, 2011).

7 – Farmer’s Market in Lebanon



In contrast to the agents of the corporate food regime, local food systems not only oppose the globalized food system but also offer a community food system substitute, a system that aims to construct meaningful relationships between consumers and local producers based on trust⁵. It intends to reduce food miles by focusing on the local community, which allows for the diversification of crop varieties, decreases the utilization of chemical inputs, and even converts back into organic agricultural practices. Therefore, local food systems can supply a diverse range of agricultural products that are fresh, safe, and nutritious. Ultimately, local food systems have the potential to improve food security and sovereignty, reduce waste and inefficiencies, and ensure environmental sustainability (Heffernan & Constance, 1994). Accordingly, there are two types of local food systems, as proposed by Heffernan and Constance (1994), which work concurrently and sometimes inter-connectedly: traditional and contemporary localism. Traditional localism restricts its growing and sourcing activities to the geographical area of the local communities with the motivation to access affordable fresh food, while contemporary localism aims to support local producers and sustainable food systems through the conscious procurement of local food items (McEntee, 2010). Concerning the local food system alternative, as the ones proposed by O’Kane (2011) include CSA, community gardens, and farmer’s markets, this depending on the context could carry both principles of localism.

⁵ Interesting in Lebanon, a well-known supermarket is branded around their motto of trust with respect to their value; it might as well believe it is constructing meaningful relationships between consumers. However even though they source some of their products from local producers, they also import European brands (like Casino, Netto, Tesco, etc.). This is interesting when tracing back the historic establishment of this enterprise in the region that fits the description relating to the 2nd food regime concerning Lebanon and part of the Middle East, where the establishment aimed ‘to sell imported English goods to colonial British powers living in Mandate Palestine and Syria’. (Haddad, 2019, p.1)

F. An Ongoing Nutrition Transition in Lebanon:

Nutrition transition is defined as the adoption of the ‘Westernized diet’ and the abandonment of traditional food consumption patterns. The transition from a diet based on consuming foods high in fiber such as coarse cereals, legumes, fruits, vegetables, and starchy roots has been replaced with a modernized diet characterized by consuming more refined grains, saturated fats from vegetable oils, sugars and sweeteners, grain-fed animal source, and processed foods (Drewnowski & Popkin, 1997; Seyfert, Chaaban, & Ghattas, 2014). Dietary changes often reflect nutritional outcomes such as changes in average stature, body composition, and morbidity (Popkin & Gordon-Larsen, 2004). Also, this shift in consumer consumption patterns has led to the increase in diet associated non-communicable diseases and to the prevalence of overweight and obesity rates (Drewnowski & Popkin, 1997; Seyfert, Chaaban, & Ghattas, 2014). The increase NCDs and obesity has mostly been attributed to supermarkets’ capacity to reduce prices by exercising economies of scale, superior retail logistics and inventory management, centralization of procurements, and distribution consolidation (Timmer, 2009; Pingali, 2006; Weatherspoon & Reardon, 2003). Hence, the nutrition transition has been facilitated by the supermarket revolution and corporate fast-food expansion that encourages the consumption of energy-dense, nutrient-poor processed foods leading to the deterioration of the public’s nutritional health (Hawkes, 2008; Hattersley & Dixon, 2010).

Some researchers claim that supermarkets are becoming a source of cheaper, diverse, quality (safe and nutritious) goods that can be attributed to its preferred structured supplier relationships, which allow supermarkets to negotiate desired quality standards

for best prices due to the availability of several suppliers in a competitive market (Louw et al., 2006; Hattersley & Dixon, 2010). Furthermore, an expanding middle class has contributed to the supermarket revolution by increasing customer base with higher purchasing power, whereby supermarkets are able to serve the vast demands of this segment (Popkin, Adair, & Wen Ng, 2011; Timmer, 2004). Moreover, the more affluent segment of the society has generally transitioned to healthier products due to their financial capability, while the less affluent segment has incorporated a supermarket-based path that is more affordable and convenient (Lawrence, Lyons, & Wallington, 2010). Consequently, supermarketization and restaurant corporatization has generally improved the availability and accessibility of diverse food to people. However, it has reduced the capability of marginalized segments of the population to adopt a high-quality diet and has rather caused them to buy calorie-dense, nutrient-poor foods at cheaper, affordable prices (Hawkes, 2008; Louw et al., 2006; Neven, et al., 2006, Hattersley & Dixon, 2010). The provision of unhealthy processed foods by supermarkets promoted for a low price have increased the prevalence of obesity and NCDs, especially to low income and less educated households (Kearney, 2010; Musaiger & Al-Hazzaa, 2012). A study analyzing the effects of the nutrition transition in developing countries found that the average caloric availability increased from around 1950 Kcals/person/day to around 2680 Kcals/person/day during the period ranging from the 1960s to mid-2000s (Schmidhuber & Shetty, 2005). This increase has been associated with the increase in average caloric availability from meat (119%), sugar (127%), and vegetable oils (199%) (Kearney, 2010).

Moreover, the nutrition transition in the MENA region has contributed to food insecurity resulting from poor quality diets due to increased use of refined processed foods and diets high in sugar and saturated fats, and low in fiber (Seyfert, Chaaban, and Ghattas, 2014). This has further increased the prevalence of diabetes and cardiovascular diseases that are already amongst the highest in the world. In the Middle East, N-NCDs (particularly cardiovascular disease, cancer, and diabetes) are the most frequent contributors to increased morbidity and mortality rates resulting from poor quality diets (Musaiger & Al-Hazzaa, 2012). In some observations, improved dietary quality has been associated to cost more in order to consume more fruits and vegetables, whereas dense energy foods provide a cheaper yet unhealthy alternative (Drewnowski & Darmon, 2005). In addition, data from the MENA had shown that overweight individuals were more likely to have been stunted while growing up; such a double burden of disease is mostly related to “hidden hunger” or micronutrient deficiencies of a high-calorie diet (Seyfert, Chaaban, and Ghattas, 2014). Furthermore, cheap processed foods being a source of high calories of poor nutrient content contribute to obesity as well as hidden hunger (Asfaw, 2011). Some of the drivers behind the increased demand for processed goods have been accredited to urbanization, liberation of women’s rights, changes in consumption patterns, and population growth (Louw et al., 2008). According to studies conducted in the Arabian Gulf and Egypt, an emerging trend for supermarkets and the increased demand for industrially produced meat or packaged foods have been witnessed due to the widespread distribution of retail chains (Dixon 2014; Woertz, 2013). An analysis of food consumption behaviors of consumers in the Arab world showed increased consumption of processed meat and trans-fats (‘harmful’ diets)

and a lower than recommended intake of fruits, vegetables, and seafood (“protective” diets) (Abuyassin & Laher, 2016). Therefore, changing dietary patterns brought by the nutrition transition has increased the prevalence of N-NCDs, especially to MENA countries (Seyfert, Chaaban & Ghattas, 2014; Musaiger & Al-Hazzaa, 2012; Hattersley & Dixon, 2010).

8 – Nutrition Transition amidst Corporate Food Expansion



This section aims to show implications of corporate food expansion on population by exploring the nutrition transition, especially on the less affluent socioeconomic segments of society in the MENA region. In addition, the nutrition transition as byproduct of corporate food expansion shows how nutritional public health, environmental, or socioeconomic factors may get overlooked during food regime transition. Thus from a consumption point of view, the demand for fruits and vegetables and other protective food has generally decreased on an individual level. Then from a

supply point of view, corporations are encouraged in supplying imported and processed goods, and are more focused on the FMCG sector than the fresh foods section, since it is more profitable and easier in terms of operations and inventory management. In general, FMCG products have a higher shelf-life than fresh foods, and thus product deterioration becomes a lesser risk in terms of profitability. In the results section, the importance of shelf-life and quality preservation among horticultural producers is integral in determining negotiation power with retailers.

G. An Immature Corporate Food Expansion in Lebanon:

Corporate food expansion, including supermarketization and restaurant corporatization are prevalent in Lebanon. However, its expansion remains immature or not fully embedded in the system due to the resilience of traditional formats. Some researchers argue that the emergence of modern retail formats, such as supermarkets and corporate restaurants, will not necessarily displace traditional formats nor increase access to unhealthy foods unless modern stores can rise in number and distribution (Goldman, Ramaswami, & Krider, 2002). This would include the co-existence of traditional formats like grocery stores and minimarkets beside modern formats like supermarkets (Bahn & Abebe, 2017). In addition to the resilience of locally or family owned restaurants that have adapted to corporate food expansion. Even though supermarketization and corporate food-service expansion might lead to the exclusion of small-scale farmers from the supermarket supply chain, there remain opportunities in horticultural and livestock for small producers to be part of the corporate food supply chain (Poulton, Dorward, & Kydd, 2010; Neven & Reardon, 2004). In line with the evidence reports in Accra, Ghana,

although the country is undergoing supermarketization amidst corporate food expansion, household surveys reveal the resistance of traditional food retail shops that provide access to affordable food of acceptable quality to local consumers (Oltmans, 2013).

The literature claims that developing country consumers would rather shop daily for FFV at traditional grocery stores to guarantee quality and freshness at cheaper prices due to lower overhead costs (Neven et al., 2006, Hattersley & Dixon, 2010).

Conversely, supermarkets are perceived by some consumers as better in terms of quality as it has better storage and refrigeration capacities (Oltmans, 2013). The same is true for corporate restaurants, including their strict quality standards required along the supply chain. However, in the case of processed foods, supermarkets tend to prevail due to superior procurement procedures, inventory management, and merchandising, which can further exacerbate the nutrition transition and the supermarket revolution (Neven et al., 2006; Reardon & Hopkins, 2006).

In Lebanon, geography and socio-economic conditions have limited the expansion of modern food retail formats, where traditional formats prevail in urban, peri-urban, and rural settings included even in high poverty areas (Bahn & Abebe, 2017). Nevertheless, the nutrition transition has been proceeding in Lebanon, even though the supermarket revolution has not matured due to the resilience of traditional retail formats and the importance of the wholesale FFV sector in the supply chain (Seyfert, Chaaban & Ghattas, 2014). Therefore, there remain opportunities for horticultural providers in the midst of the manifestation of the corporate food regime, while it's minimizing nutritional, environmental, societal, economical, and political implications. The research will attempt to unveil the limitations faced by horticultural providers when participating

in the supply chain. This requires an understanding of the procurement decisions and contractual agreements of corporate supermarkets and corporate restaurants in Lebanon when procuring horticultural products, which will be explored in the upcoming chapters of this paper.

CHAPTER III

METHODOLOGY

A. Research Design:

The research uses a mixed-method, combining qualitative research methods as a primary source of information and utilizes literature on corporate food regime analysis focusing on supermarketization and corporate food expansion in the developing world, as a secondary source.

Qualitative research methods were used to describe and explain relationships between corporate food companies and their horticultural providers, which describe variations between the different types explored by the use of semi-structured interview. The flexibility of the method allows exploring phenomena as the manifestation of the corporate food regime in Lebanon. Qualitative research methods include interviewing procurement officers, supply chain managers, or food safety and purchasing personnel of supermarkets and corporate restaurants. Locally-based horticultural providers, including producers and suppliers, were subsequently interviewed. This method allows for a more comprehensive understanding of the relationship between corporate food establishments and their respective providers. In total, four groups were interviewed: corporate supermarkets, corporate restaurants, horticultural producers, and horticultural suppliers.

Research design is iterative, where data collection and research questions are adjusted according to participant responses.

B. Data Collection:

1. Informed Oral Consent

Prior to proceeding with the interview, the researcher hands in a consent form in the preferential language of the participant (English/Arabic), where the participant was briefed on the terms and agreements of their participation. Written informed consent was not collected to protect confidentiality, and then instead after briefing the participant and answering all their relevant questions, a copy of the consent form was handed to the participant (See Appendix). Any socio-economic risk involved will be protected by the research team by keeping the identities of the participants and the institutions they work for anonymous. This was made clear to the participant prior to the commencement of the interview session, where the investigator explained briefly the participant's rights, risks, and confidentiality. The participant was audio-recorded after gaining their consent, or hand-written notes were gathered upon declining recording procedures.

2. Inclusion and Exclusion Criteria

- The participant should be currently employed and have proper knowledge of the field with at least three years of experience.
- The participant should be serious and not recognize the study as a commercial or advertising opportunity.
- The participant should be honest, and if any question leaves them uncomfortable then they are reminded of their right to not answer.
- The participant should be above 18 years old.

3. *Assembling and Confidentiality of Data*

After collecting the data from the participant, the information is placed in a secure device, where a personalized folder of the participant will be created. The information was translated and transcribed to include all relevant information. The folder includes identifiers understandable by the investigator, and any identifying information like names, addresses, and contact information were removed.

C. Sample Size and justification:

Two major corporate entities were sampled for the purpose of exploring the manifestation of the corporate food regime: Corporate restaurants and corporate supermarkets. Corporate restaurants are food-service establishment concerned with the purchase of meals and corporate supermarkets are self-service retail establishments concerned with the resale of food and other household items, both managed under a corporate ownerships structure. Further categorization can be found in the following sections. The total number of corporate restaurants and supermarkets brand is irrelevant due to the qualitative nature of the research study. As a rule of thumb, more is better; however, a balance in the categories sampled was strived for. For example, the number of international chains with respect to local chains was balanced. Plus, the number of corporate supermarket brands is limited. So, the sample size would not have an upper limit as long as there is a non-recurring value added among the participants. As a convenient sample, the number of supermarkets surveyed was 6; having a cumulative total of 12 brands operating 97 retail outlets, while the number of corporate restaurants interviewed was 5; having a cumulative total of 8 brands operating 146 outlets. The

total number of corporate entities surveyed was 11; having a cumulative total of 20 brands operating 243 outlets.

After surveying a significant number of food corporations or food retail stores, horticultural providers could be identified. Horticultural providers were divided between producers and suppliers, where producers are mainly concerned with the cultivation of horticultural products while the supplier acts as a middleperson between producers and consumers. The recruitment strategy for horticultural providers varied according to the nature of the participant. Corporate suppliers were dealt with formally and professionally as with corporate entities mentioned above. While producers and suppliers at the FV wholesale market were dealt with informally through unscheduled visits. Different categories of providers were interviewed in different operational areas in Lebanon, distributed across Bekaa, South, North, and Mount Lebanon. A purposive sampling method was used to recruit horticultural providers based on the information shared by corporate entities discussed above alongside different producers according to their land size and ownership structure as well as their cultivation methods used. So, participants were grouped under preselected criteria relevant to answer the particular research questions explored by this paper. This is the preferred research method for analyzing market research or supply chain analysis, where the population was divided into four principle strata: horticultural producers, FV wholesalers, FV wholesale distributors, and specialty producers and processors. However, producers have indefinite categorizing attributes, and population size is large and unknown, so data concerning this segment was limited by deducing information from corporate entities and horticultural suppliers interviewed. The necessary sample size for this segment was

limited, where the qualitative nature of the research study allows for a comprehensive understanding of the horticultural supply chain.

Consequently, 12 horticultural providers were interviewed, with 8 different categories of horticultural producers and 4 horticultural suppliers (Distributed over FV wholesalers, FV wholesale distributors, and specialty producers and processors).

D. Recruitment and Data Collection Strategy:

The strategy used to recruit corporate chains in participating in this research was formal and professional, as company contact information of the head office can be searched online. An electronic mail was sent, or the contact was phoned directly to be able to reach and communicate with the person concerned with the topic. After receiving approval to participate in the research, an appointment was set, mentioning a convenient time and location with respect to the participant. At the beginning of the meeting, the investigator and participant are introduced to each other. Shortly after, a language-convenient consent form was handed to the participant to inform them briefly on the research topic and the research method used. The consent form also informs participants of their rights, where they have the right to stop or not answer if they felt uncomfortable during the session. It also informs them of the social and economic risks involved and how the research team promises them to protect them by keeping their identity and that of their company anonymous from third parties or publication material. Then, the participants were respectively asked if they consented in having their audio recorded during the interview. To respect anonymity, the participant was not requested to sign any document, but handed a copy of the consent form. The participants had the freedom to decline being voice recorded, where hand-written notes were taken during the course

of the interview. After, the company's procurement officer that is responsible for procuring horticultural products from their suppliers was interviewed using a semi-structured questionnaire (see Appendix) and accordingly adapted with respect to the answers obtained from the participant.

E. Research format:

For corporations, a brief explanation about the company and the role of the participant was investigated. Then, a series of open-ended questions concerning procurement, market, assistance, and relationship with suppliers was inquired. This includes information about their suppliers and on what basis do they operate. In addition to the standards, certifications, credit terms, and contracts requested from their suppliers.

For horticultural providers, participants were asked about their demographic profile, including their knowledge and experience in agriculture. Then, they were asked about their agricultural production, supply, market, and assistance information. They were asked about the nature of and basis of their relationship with suppliers or procurers. Also, they were asked about the standards, certifications, and contracts requested from their procurers.

Finally, for both types of participants, the last set of questions focused on the participant's perceptions, while exploring possible advantages and disadvantages of the subject that is driving their initial choice.

The participant was left to talk freely about their subject without restriction. The investigator intervened when the participant seemed confused about the nature of the subject or in case the participant drifted from the objective surrounding the question

being asked. The participant was asked to repeat their statements if their answer was unclear. Relevant but incomplete statements were asked to be further elaborated on. If the participant showed that they were uncomfortable by the nature of the question, then they were reminded about their right to not answer. Participant's suspicions were diminished by stating the objective behind the aforementioned question, while reminding the participant that anonymity will be respected. The participants were requested to meet in an isolated room to minimize distractions and improve communication quality.

Trust of the FV wholesale participants was tricky. A casual approach was utilized to form a conversation rather than a serious interview format. Traders were not always available, so participants were recruited when they were already available, usually early in the morning. These participants were interviewed after the producers, so in case of misinformation, there would have been a conflicting narrative. Initially, this was suspected, but the concealment of information was a greater barrier. The concealed information was revealed through several interviews provided by producers and retailers, which always had the same narrative.

The average interview took around 20 to 25 minutes.

The use of the modified 9-point hedonic scale to measure participants' perceptions was found ineffective and unpractical, so measurements were based on qualitative analysis.

F. Categorization and Analysis within a Lebanese market context:

Participants were divided into corporations and horticultural providers.

Corporations were divided into corporate supermarkets and corporate restaurants, where their origin (Local/ International), Ownership Structure (Corporate/ Family), Type (A, B, C, or D)⁶, number of brands the organizations own, and their cumulative number of operating chains were identified.

Type- A Supermarket: Based on current observational outlooks of the Lebanese market, there are supermarkets having several stores that are distributed within or on the outskirts of city centers, depending on the size of the establishment because real estate is usually expensive. They are large in size (The branches outside the city are usually larger; however, the same supermarket brand can be located within city centers but with smaller space or under different brands), contain several aisles that sell food and household items with a lot of variety, provide customers with an optional supermarket cart for their self-service retail shopping experience, and use RFID technology on checkout. In most cases, they can be found in major shopping malls, but are also not limited by them.

Type- B Supermarket: They are similar to the Type-A Supermarket, however lack in distribution and relative size. They usually have one to a few branches and located near densely populated areas within city centers or on a central road outside city centers.

Type- C Supermarket: It is similar to function as a Type-A Supermarket and size of a Type-B Supermarket, but has a different organizational structure, a diverse corporate strategy, and a unique supplier-retailer relationship. It is considered a retailer's cooperative defined as 'associations of independent retailers, unlike corporate chains.

⁶ The classification is unique and used for the purpose of this research study.

Wholesaler-sponsored voluntary chains of retailers who engage in bulk buying and collective merchandising.’ (Kotler, Hibbard, & Grayson, 2020) It is not necessarily a co-op (a consumer cooperative) as commonly referred to.

Type- D Supermarket: Its distribution is limited to one area and has a relatively smaller size and tighter space for a shopping experience. This doesn’t allow for the availability of a wheeled-cart, but rather a hand-held cart. Some might categorize these stores as small-retailer (Dekkene) with RFID technology, but the availability of all sorts of food and household items can be found within these stores.

Notice that size is not quantified and not a defining indicator for a supermarket in Lebanon probably due to: high real estate prices within city centers, the resilience of small-retail operations despite the elements of the corporate food regime, and a lack of urban space. This is due to pre-established (unplanned) urban centers and along major connecting routes located near the coast, where most major cities and where most the population is located. According to some definitions of supermarkets, that categorizes them to have 15,000m² to 25,000m² of space with more than 12,000 items. This is probably not the case for most supermarkets in Lebanon, especially as discussed before. A better definition would be an enterprise procuring high volume, diverse range of products and ‘operations that serve the consumer’s total needs’ for non-food and food items; which includes fresh fruits and vegetables, baked, meat, and dairy produce along with canned, packaged, or chilled goods (Kotler, Hibbard, & Grayson, 2020).

Supermarkets in Lebanon are categorized as family or corporate owned based on their origin, however they both fall under the corporate food regime or supermarketization

phenomenon as they source their products from TNCs to secure the supply of FMCG products. Supermarkets usually have more than one outlet, where a corporate organizational structure and brand is adopted by both types. The inclusion of family owned supermarkets emphasizes the local origin of the retail establishment compared to other types that were integrated due to direct foreign investments. In short, whether family or corporate, supermarkets are phenomenon of the corporate food regime, compared to the traditional Dekkene that lacks the diverse range of products displayed and operational expansion capacity.

For corporate restaurants, the restaurants were classified as either locally owned or internationally franchised for the purpose of this research. In general, to fall under the category of corporate restaurants, they should have a corporate brand, have several branches distributed over more than one geographical area, and have a delivery system to transport fast-food. It can have a dine-in option, classifying it as a diner. Also, the commercially sold food should prioritize the speed of service of standardized food items sold in large quantities. Also, it should be accessible to the majority of the population segment, including the middle socioeconomic class. So it can serve a larger market segment in order to produce large quantities.

Supermarket and restaurant categorization was deliberate and based on observational analysis.

Horticultural providers were divided between horticultural producers and supplier:

For horticultural producers, agricultural land size (Small /Medium/Large), land ownership type (Family-owned/ Rented), location, agricultural methods used

(Traditional/Conventional/ Greenhouse/Balade/IPM/Certified/Organic), and wholesale distribution channels (FV wholesale, FV wholesale distributors, and Specialty producers and processors) were used as categorizing factors.

For the purpose of this research, agricultural land size was categorized according to the following: **Small** {Very Small: less than 10 Dunam; Very Small to small: 10-20 Dunam}; **Medium** {Small to Medium: 20-40 Dunam; Medium to Large: 40-60 Dunam}; **Large** {Large to Very Large: 60- 500 Dunam; Very Large: Above 500 Dunam}.

For horticultural suppliers, type (FV wholesale, FV wholesale distributors, Specialty producers and processors), location, distribution channel, certification requirements (Low, Medium, High), quality standards supplied (Low, Medium, High), and relationship structure (Informal/Professional, Contractual/non-binding, Opportunistic/Symbiotic) were used as categorizing factors.

G. Study Context:

Lebanon is a small country in the Middle East by the Mediterranean Sea. It enjoys a Mediterranean climate and has arable land distributed from the North to the South including Mount Lebanon , where production occurs on the coastal plains or terraces, or the open fields of the Bekaa Valley. Most farmers in Lebanon are small or medium scale farmers and rely on conventional farming practices.

Lebanon produces a variety of products for local consumption and export capacity.

Lebanon is a net exporter of fresh fruits and vegetables. It produces a variety of products, including fruit trees like apple, pears, oranges, apricots, clementine, plums, lemon,

cherry, olives, banana, avocado, grapefruit, pomegranate and some nut trees. It also produces open field vegetation like potato, onion, garlic, wheat, corn, watermelon, squash, and some beans and peas. Lebanon participates in viticulture to produce table grape or wine. It also produces tomato, cucumber, zucchini, eggplant, bell pepper, lettuce, and cabbage in open field or in greenhouses. The country also produces dairy, livestock, poultry, and fish for local consumption.

Agriculture in Lebanon plays a relatively small role comprising a less than 5% of GDP and is considered the least productive economic sector (FAO, n.d.). Agriculture in Lebanon used to depend on exports to Syria and the GCC. However, trade relations deteriorated due to the Syria's Civil War and increased international competition concerning food safety requirements, respectively. Lebanon pursues to penetrate European markets, however the quality standards required are high and internationally recognized private certifications are necessary, allowing for minimal opportunities in international exports (Leeters, 2016/2018).

H. Data Analysis:

A narrative or descriptive analysis was used, where patterns from concepts and insights were used to select relevant information to answer predetermined research objectives. Individual responses by the participants were stated or summarized, where common themes could be recognized under the sections explored during sampling. An inductive approach was utilized, where patterns revealed from the observational data were used to confirm certain hypotheses. Data collection and analysis was simultaneous to construct an understanding of the relationships, efficiently. The supply relationships, as the main process, were analyzed during data collection.

Secondary data was used as a foundation, where literature around food regime analysis, supermarketization, fast-food corporatization, and significant geopolitical transformations were used as guiding tools. These concepts would set forth an understanding of the social, economic, and political dimensions that transcend lessons learned from previous related research concerning the corporate food regime or the horticultural supply chain. The literature exposed gaps in research, where this study was motivated in narrowing them. The research focuses on the manifestation of the corporate food regime in Lebanon with a specific scope on the horticultural supply chain. Previous literature had explored that there were opportunities for developing countries in their horticultural supply chain amidst corporate food expansion. This research aims to have a beneficial impact on the local food system and the actors it involves, including supermarkets, restaurants, producers, suppliers, government, consumers, and others concerned with the food or horticultural supply chain.

To summarize, a set of objectives were identified that focused on the Lebanese horticultural supply chain amidst corporate food regime expansion. A semi-structured interview format was created to answer the research questions explored, where secondary research guided the questionnaire design. In parallel, participants were identified to include supermarkets, corporate restaurants horticultural producers, and horticultural suppliers in effort to understand the horticultural supply chain in Lebanon and the elements surrounding it. The interviews allow us to understand the procurement decisions, standard requirements, and contractual agreements of corporate supermarkets and restaurants in Lebanon when procuring horticultural products from their suppliers. It will also contribute in discovering opportunities for and barriers faced by Lebanese

horticultural providers. This would create an understanding of the relationship structure and the power dynamic between corporate food entities and their suppliers, where potential limiting and facilitating factors can be exposed. The information revealed combined with the literature explored and the investigator's exposure and knowledge in the field would then be used in recommending government policy action and private intervention through the actors involved in the food supply chain.

CHAPTER IV

RESULTS AND DISCUSSION

A. Food Regime Analysis: The Case of Lebanon

The first two sections, A and B, explore the manifestation of the corporate food regime in Lebanon based on historical geopolitical developments concerning agricultural production, food trade, and policies thereof (Objective 1). To understand corporate retail restructuring and how the global supply chain has changed, then it is important to look back at historical developments relating to agriculture and trade. Nevertheless, corporate retail transformation is a global phenomenon; however, for every country or region the rearrangement of the supply chain within the global context is unique. To understand the manifestation of the corporate food regime in Lebanon, it is necessary to look at the history involved within Lebanon during the period of the first and second food regimes, which would provide us with a foundation to how the food system has developed over the years and how it is manifesting.

1. The First Food Regime and its Transition in Lebanon:

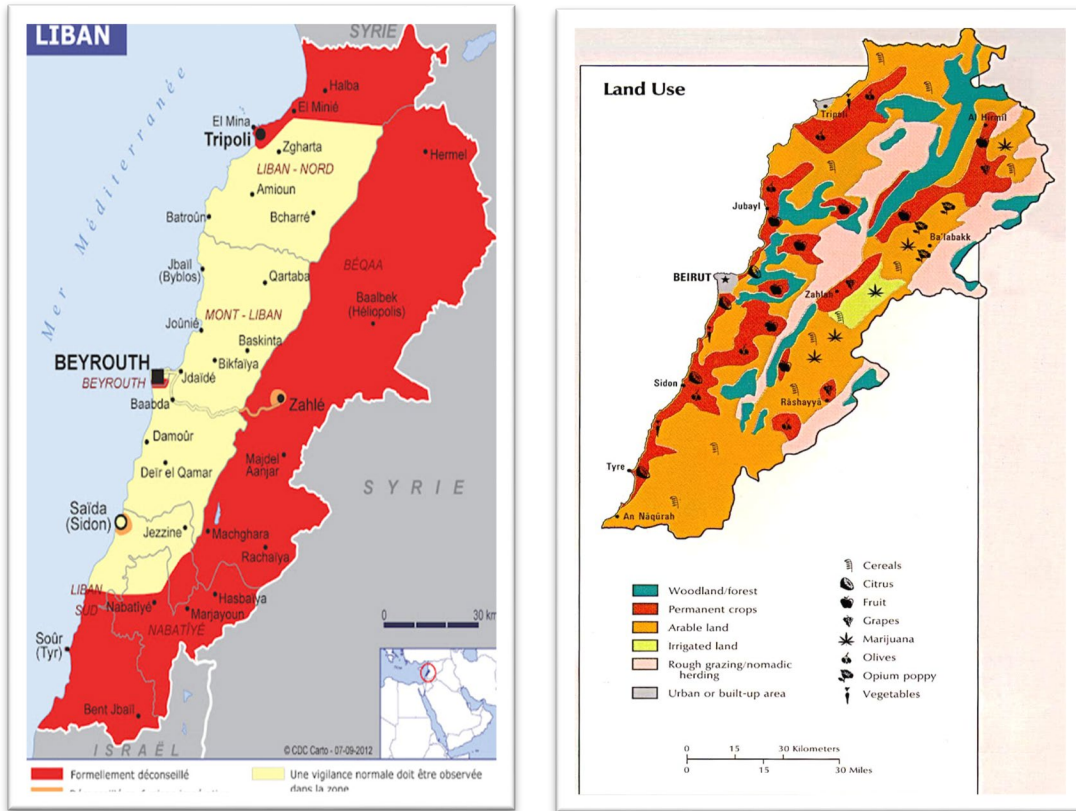
The first food regime (1870s–1914) begins with Europe’s colonial hegemony over settler states in Asia and Africa; where exported wheat and tropical fruits were the main commodities being transported back to Europe (Dörr, 2018). This is where expansion in cultivated areas can be realized along with the overexploitation of peasants. The basis for supplying cheaper wheat from these colonies than farms in Europe depended on unpaid labor costs, especially among family farms (Friedmann, 2005). The first food

regime ends with the beginning of the First World War in 1914, followed by the grain price collapse and the Great Depression (1929 – 1939), and setting the stage towards the end of the Second World War (1939 to 1945) for the second food regime (1940s–1970s) with a shift in global power through US adopted agricultural and foreign policies (Magnan, 2012).

In retrospect, drawing out from the region's colonial dominion, Lebanon was not yet part of the European-based Allied coalition rule (1917–1920) or French rule (1920–1943) during the first food regime, but was part of the Ottoman Rule (1516–1917). What was then happening during the pre-world war Lebanon concerning agriculture and trade? Under the rule of Bashir Shihab II (1789-1840), the commercial economy of Beirut became interdependent with the agricultural economy of Mount Lebanon. This alters the political landscape by restructuring feudal obligations that allowed for the agricultural expansion into cash crops (Fawaz, 1984). This then led to Europe's penetration into Lebanon's economic and political structure. Lebanon's sectarian structure created foreign tension within the Ottoman Empire. The French sided with the Maronites and the British sided with the Druze, which created political struggles over the right of land between the two sects (Salih, 1977). Prior to the League of Nation's Mandate given to France in 1920 post World War 1, Mount Lebanon only included the central part of current-day Lebanon, but the Mandate still allowed for the inclusion of the North towards Syria, the South towards Palestine, and the Bekaa Valley. This geographic expansion of de facto borders certainly would change Lebanon's political economy by opening new agricultural lands and making way for new foreign trade

policies that would later influence the manifestation of the corporate food regime on the country's food system.

9 - Mount Lebanon Expansion into New Agricultural Land



Source: Biddlenoe, 2012 & CIA, 1993

It is important to state that the region was tailored under a laissez-faire liberal economic structure during this period up until Arab domestic uprisings (1908-1909) and the Ottomans' involvement in foreign wars (1911-1913). The Turks increased interference in global geopolitics and alliance with Axis powers had eventually led to the Famine of Lebanon in 1915. The famine was due to Lebanon's investment and reliance on exporting cash crops to Europe (mainly silk), which had been impaired through sea blockades set by the Allies. This that restricted the export of cash crops and import of

foodstuff from the West, accompanied by a land blockade established by the Turks that restricted the import of regional foodstuff (Collelo & Smith, 1989). This crisis marks the end of the first food regime and up until the defeat of the Ottoman Empire and the primary employment of the French Mandate in 1920, which begins setting the stage for the second food regime when the OETA immediately sought the importation and distribution of seed grains and livestock to cater for the needs of the people. In addition, financing through army bankers was made available along with the restoration of postal services and the establishment of a stable currency (Keogh & Graham, 1955).

The most commemorated agrarian development during Lebanon's transition along food regime analysis goes back to silk production during the 1860-1914 periods that coincide with the period of the first food regime. In Mount Lebanon, the mulberry tree became a monoculture dominating around 80% of the agricultural landscapes, spreading massively in the Bekaa and Coastal areas of Lebanon. Surprisingly, the fall of the feudal structure governing the state (1858) led to a shift from large-scale to small-scale farms and thus encouraged private investment in producing silk with financial incentives supported later on by the Ottoman government. The peasants now independent of their landowners became dependent on the merchants, and thus the landowners sought lower economic and political power to remain part of the transforming agrarian system. The landlords had become dependent on brokers and merchants, who acted as intermediary suppliers between the ports and the French market, allowing them to have a relatively larger profit. The region in this period recognized a shift from subsistence farming of cereal to cash crop systems to meet European demand. Also, in this period, most of the rural population was employed in the manufacturing of silk. While Mount Lebanon also

grew barley and corn, it still had to import its remaining demand from Syria and part of the Bekaa. France in this period was fully invested in the silk industry importing around 40-50% of the world's silk production, and Mount Lebanon was able to penetrate this market. Another motivator was when the Ottoman rule in 1882 removed the taxes on newly planted mulberry trees for the first three years to meet the rising demand for silk. By 1895, the French consul reported a declining investment in silk production and recommended the shift to other profitable crops, where vinicultural methods inspired by the French encouraged grape production. Also, this led to the uprooting of the mulberry tree and replacing them with olives, figs, citrus production along with tobacco. However, the decline in profitability and the number of trees was not realized up until 1914 (Firro, 1990).

2. The Second Food Regime and its Transition in Lebanon:

The second food regime (1940s–1970s), begins with the end of European colonization over settler states and these states' independence (1943) during the end of World War II, where the United States claimed the hegemonic role as a major cereal exporter to the import-dependent developing world. The shifting political power was realized with agriculture developments of the Green Revolution (1940s-1960s) and the emergence of agribusiness corporations in food processing and input markets (Dörr, 2018). The dynamic had shifted to produce a surplus that would be imported to the world market especially ex-settler states and to set the stage for the food manufacturing industry to become a major actor in the food supply chain.

In 1958, the United States intervened in Lebanon's affairs to restore order and peace in the country. This was a military intrusion that was motivated by Eisenhower's anti-

communist doctrine that aims to strengthen pro-western regimes. In this case, the communist insurgence of the United Arab Republic (Syria and Egypt) and internal opposition threatened the pro-Western regime of President Camille Chamoun (Thomas, 1980). As realized, this event falls with the major geopolitical conflicts happening globally in correspondence to the Cold War (Particularly 1953–1962 period). This plays a vital role in food regime analysis because it would decide a country's foreign policy, especially on trade and eventually on agriculture. The anti-communist doctrine of the United States administration reinforced its strategy in the form of aid on a reward basis rather than on need (AbuKhalil, 2005). In 1954, President Eisenhower signed the PL-480 that was later refurbished in 1961 into the Public Law 87–195 under the Kennedy Administration that aims to bolster recipient nation's social, economic, and political development (Office of the Historian, n.d.). Subsequently, the United States granted Lebanon a sum of \$86.2 million in the form of food aid during the period from 1946-1980 (Addis, 2011).

Thus, the protection and prevalence of pro-western ideologies over pan-Arab communist principles, along with the foreign facilitation of trade and capital, shaped the path for the structure of the Lebanese economy. In the 1960s, Western financial institutions penetrated the Beirut market dominating 75% of the total number of foreign companies. By 1972, industrial exports (including finished or intermediate goods) displaced export of raw goods (especially agricultural) by a 24.6% difference and grew to account for two-thirds of total export value. And by 1973, commodity imports were equivalent in value to 53.6% of Lebanon's GDP. During this period, an import quota was administered by the Ministry of Trade and then assigned licenses that were

obtained by a few politically-powerful traders creating an oligopoly, where by 1974 four companies accounted for two-thirds of total imports from Western Countries. Therefore, agricultural inputs, food, and textile products were controlled by an oligopoly or an oligarchic ruling class (Nasr, 1978, p.3-6).

Western hegemony has had an influence on the political economy involved in rural agricultural production; encouraging the creation of competition between Arab countries producing below the production cost of the local market and capitalist states on imported agricultural products. The structure of agricultural production would then witness a drastic change due to economic and political pressures of urban merchants. The agrarian change in Lebanon contributed to a decline in total agricultural production with a 53% decrease in cereal production from 1948 to 1970, where cereal needs were then imported from Australia and the US. Concerning poultry, the country became self-sufficient and exported a portion of its production to Arab countries by 1962-3. In addition, Lebanon had witnessed a surge in imports of meat, livestock, and milk during this period due to significant subsidies made from the EEC for dairy products. The shift in agricultural production was motivated to produce other high-yielding agro exports like fruits; mainly apples and citrus realizing a 700% and 250% increase in production during 1955-1971. Apples were grown on small and medium sized plots in the mountains, while citrus was cultivated on the coastal South by a 'capitalist farm' (Nasr, 1978, p.6). By 1974, 91% of Lebanese fruit exports were absorbed by the Arab market. Also, mainly in the South, the production of tobacco increased three-folds, and that of sugar beet rose by five-folds during the 1955-1970 period. However, rural economic growth was not realized as expected due to importers of US cigarettes control of the

market and the hegemonic monopoly of sugar importers that controlled the only sugar processing plant in the country (Nasr, 1978).

Interestingly during the 1950s, big capitalist farms producing primarily citrus, sugar beets and potatoes in Akkar, Bekaa, and the southern coastal plain emerged by procuring land off absentee or feudalist landlords. By the mid-1960s, three-fourths of the overall rural population still owned land, where 67% had less than 3 hectares of land, and 50% had less than 1 hectare of land. These farms mostly relied on family labor and can be considered family farms. The system consisting of landowners, bankers, usurers, and traders further exploited farmers with the facilitation of feudalistic practices even after liberation over Ottoman rule. Also, in relation to the Green Revolution's involvement during the second food regime, the assimilation of its tools was supplied by big Western agribusiness firms and facilitated by their local agents. By 1970, a small number of traders (25 traders for two-thirds of apples; 20 traders for 80% of citrus products) controlled marketing resources, including transportation, storage, and financial resources allowing them to buy products for cheap from the producers and sell high to consumers. At the same time, the private sector and foreign banks controlled agricultural credit because it was neglected by the public sector leaving these farmers in debt (50m LBP in 1950 reaching 160m LBP by 1973). By 1973-75, two firms Unifert and Le Comptoir Agricole, monopolized the agricultural inputs market, realizing high returns rates of 300% on some insecticides. As a result, the GDP share of agriculture decreased (20% to 12% from 1948 to 1964), government spending in agriculture decreased (reaching 2.3% in 1973), and the active population working in agriculture decreased (48.9% to 18.9% from 1959 to 1970). As a result, rural migration to city

centers away from the agricultural sector and into the industrial and service sectors has changed the division of labor. Lack of government involvement in the agricultural sector allowed for the penetration of foreign capital and the domination of the private sector allowed an increase in corporate power over the local economy (Nasr, 1978).

3. *The Third Food Regime in Lebanon:*

The shift in the political economy concerning agriculture marks the foundation for corporate involvement in the food industry, where supermarkets and corporate fast-food chains redefine a new corporate-driven food regime (1970s - Present), accompanied by a nutrition transition that still shapes the food system, especially in the developing world. In 1984, during Lebanon's civil war, 'Juicy Burger' opened in Beirut with a hope of becoming 'McDonald's of the Arab World' and thus introducing the industry of fast-food in the country (Ritzer, 1996). In 1997, McDonald's had entered the market, starting with its primary location at Ain Mreiseh (Ghazi, 1998). This has opened the door for other local and international corporate fast-food chains to penetrate the local market along with the consequences relating to it. The healthy local Lebanese diet would now compete with the unhealthy western food brought by the corporate food regime.

Lebanon is one of the Middle Eastern countries affected by the third wave of supermarketization, a phenomenon reported in the developing world (late 1990s-early 2000s), including Central and South America, Asia, Eastern Europe, and part of Africa (Oltmans, 2013). Interestingly, key supermarkets in Lebanon began long before during the second food regime. For example, Bou Khalil (Lebanese-based) opened in 1935 during the French Mandate over Lebanon (1920-1943) and Spinneys (Egyptian-based) followed in 1948 after the country's independence (1943). Supermarkets in Lebanon re-

emerged during the 3rd wave of supermarketization with the opening of Monoprix's (French-based) establishment in 1999, The Sultan Center (Kuwaiti-based) in 2008, and Carrefour (French-based) in 2013 after the beginning of the civil war in Syria that led to the closing of border channels in 2011. Furthermore, one of the largest and successful supermarkets, Charcutier Aoun (Lebanese-based), began as a family-operated grocery shop in 1953, expanding and merging with other retailers in 1953 using refrigeration and contractual leasing of part of the stores (significantly the meat/Charcutier section), integrating a family-owned local meat production facility by 1982, further expanding into different locations in 1999, and corporatizing and rebranding by early 2000s and onwards. Ultimately, several social, economic, and political developments concerning the corporate food regime manifestation took place in Lebanon during this period. The manifestation can be explained in the next section concerned with emerging social movements and its effect on the food system.

4. Food Regime Analysis: The October Revolution

On the 17th of October of 2019, a social movement emerged due to failed governance of an arising economic crisis. This movement had catalyzed an economic and political shift. Similarly to the transitions of the first and second food regime, historic events accompanied by geopolitical transformations alter current food regime models and thus food systems change. This section aims to identify the pivotal event in Lebanon that may mark the end or the continuation of the corporate food regime that is present in Lebanon during the time of this event. So, the section explores a possibility of a fourth

food regime inspired by global change⁷. However, the next section will focus on local change that allowed the realization of a new food regime model⁸.

In Lebanon, a significant proportion of the common people realized that the system was flawed, and sectarianism only brought corruption and ineffective governance. Austerity measures were unbearable on the people, especially the poor who struggled to meet their basic needs. The crisis was further deepened due to the country's reliance on the banking and services sector, rather than investing in agriculture or industry. Between the years 1967-1975, the GNAP of Lebanon entered a period of stagnation, where corruption permeated government institutions and drastic change in policies followed. From 1975-1988, market structures were destroyed by the Civil War and agricultural production declined with the exception of prohibited crops that flourished during this period. From 1989 onwards, the agricultural sector entered a period of negligence until, in late January, the social movement of the October Revolution sought to form and economic rescue plan to save Lebanon economically, financially, and socially. Some of the proposed reforms tackle restructuring of the Lebanese economy with increased government support in agriculture and manufacturing, where local production is encouraged over imports.

⁷Global transformations include the Covid-19 pandemic and its accompanied forced economic lockdown by governments around the world, including Western countries. Also, global recession, Britain's exit from the EU, Russian and Chinese trade wars with the US and its allies, an unstable Middle East due to deteriorating US-Iranian relations, and demonstrations against government around the world (including Lebanon, Iraq, Hong Kong, India, France, Catalonia, Chile, Ukraine, United Kingdom, among others)

⁸ The paper remains focused on the third or corporate food regime in Lebanon, however this section explores possibilities influenced by current events and that requires further examination.

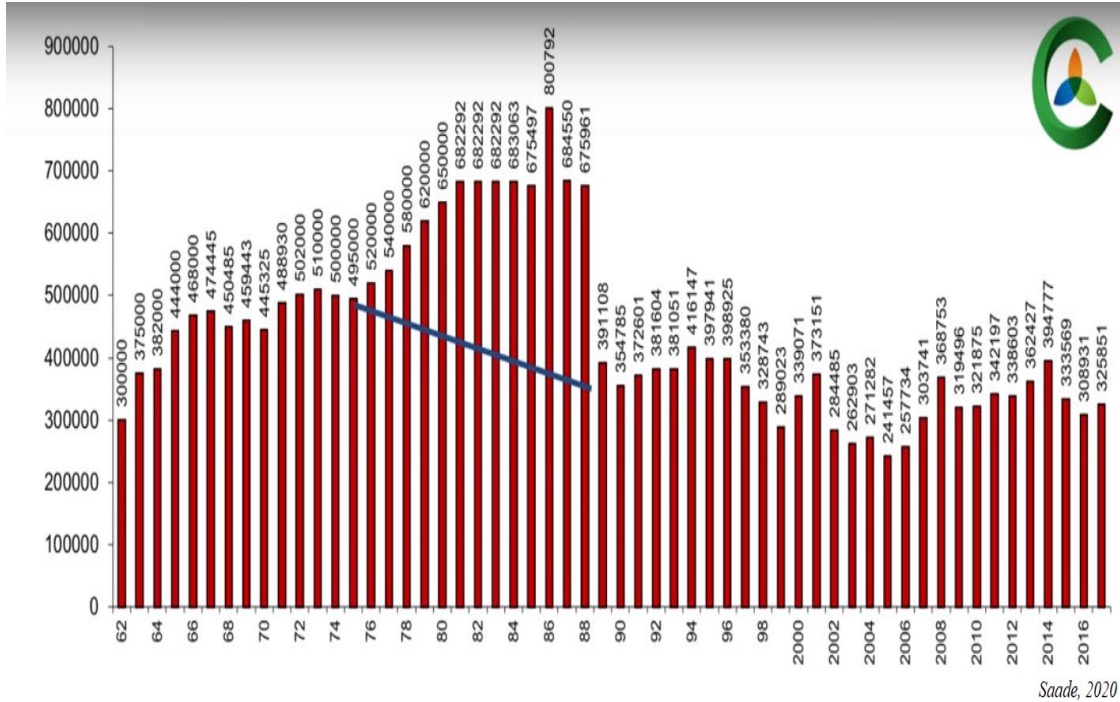
10 - Supermarkets Promotion of Local Production



Source: Spinneys-Lebanon, 2019

The deteriorating economic situations and currency devaluation have pushed supermarkets to encourage the sale of local production. One of the reasons that led Lebanon to this stage can be explained in the section below.

11 - The GNP of Lebanon 1962-2018 (in constant value of LBP x 1000)

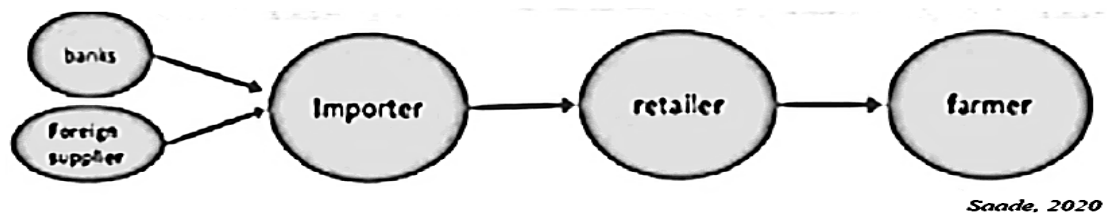


Comparatively, the GNP⁹ of Lebanon had decreased by 10.45% from 1970-1996, when the West's GNP increased drastically by 384% in the USA and 544% in the EU. Since 1992, the government's expenditure on agriculture was almost absent. During the reconstruction process of Lebanon, the FAO, UNDP, World Bank, the EU, and the bilateral support of France, Italy, Germany, USA, and Holland had provided support to Lebanon. However, each of the countries and unions involved had their own agendas, and while Lebanese authorities were unable to redirect foreign investments effectively due to corruption and sectarian conflicts. A top-down approach was utilized by the international organizations, which was not adaptable to Lebanese conditions. The investments were wasted due to the lack of vision in economic and social policies concerning with rural agricultural society, in addition to the lack of a proper agricultural

⁹ GNP is the value of all finished agricultural goods and services produced in a country in one year.

framework and policies to execute a plan. Hundreds of development projects have been launched in Lebanon by several NGOs. However, the lack of a national coordinating body allowed for ineffective implementation, sometimes yielding negative results. The apparent substantial development impact on rural communities and the agricultural sector was not reached. On the private level, agricultural input companies stimulated and maintained the agricultural sector in Lebanon ever since the Civil war in 1975; however, they eventually lacked cohesion and cooperation in preventing the dismantlement of the agricultural sector due to financial crisis of 2019. The failure is contributed to the 1992 reform that converted cash sales into credit sales, and in absence of low interest agricultural credit, importers provided input working capital to retailers and farmers. The farmers were not able to pay back their loans due to poor agricultural returns, which increased credit year after year. By October 2019, agricultural inputs reached about 80M USD, where farmer's debt to retailers reached 60M USD i.e. the retailers' debt to banks and importers. Thus, the financing system of Lebanese agriculture secured by importers had collapsed.

12 - Agricultural Financial Crisis



In addition, the financial cycle of the agricultural value chain was further affected by the structure of the FV wholesale market, whereby traders dealt with farmers on consignment basis of differed payment basis paid in LBP, however with the ‘financial crisis of 2019 combined with banks blocking credit to wholesalers, created a liquidity vacuum with delayed payments to farmers’ (Saade, 2020). Thus, the FV wholesale market is considered a main contributor to inefficiency in the horticultural supply chain. The expected impacts of the financial crisis include lower yields, quality, and quantity, but more importantly increased social unrest in the agricultural rural communities until stability of the Lebanese Pound and cash operations resume utilizing the local currency. Ultimately, the free-market became uncoordinated and inefficient, and the government’s negligence of agriculture was unable to compete with subsidized global agro-production and emerging global food standards (Saade, 2020).

13- The Value of Agricultural Production: Field Crops (2015-2020)

Value of production (in US dollars)						Field Crops
2020	2019	2018	2017	2016	2015	
(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	
13,400,000		36,900,000	38,500,000	28,500,000	34,250,000	Cereals
34,000,000	85,350,000	118,600,000	124,250,000	125,700,000	165,200,000	Potatoes
612,000	1,250,000	1,250,000	1,000,000	1000,000	1,250,000	Legumes
6,500,000		17,100,000	15,500,000	17,700,000	18,200,000	Onion
176,000	325,000	650,100	450,250	800,000	900,000	Garlic
3,250,000		6,000,000	7,280,000	8,500,000	7,350,000	Forage crops
300,000	557,000	380,000	247,000	150,000	160,000	Peanut
58,238,000		180,880,100	187,850,000	182,350,000	227,310,000	Total Field crops
<p>2020 Field crops value is estimated to decrease by almost 70% compared to 2018 decrease is 64% for Cereals, 72% for Potato and 61% for Onions</p>						

Saade, 2020

The value of agricultural production, including horticultural products grown in open fields or greenhouses are expected to decrease in the year 2020 and onwards due to the financial crisis and social unrest, until financial stability is regained and a clear agricultural framework for the future of the agricultural sector in Lebanon is set in place. The figures 3, 4, and 5 show the value of agricultural production in Lebanon for the years 2015-2020 in USD; the year 2020 is the forecasted value.

14 – The Value of Agricultural Production: Vegetables and Flowers (2015-2020)

Value of production (in US dollars)						VEGETABLES & FLOWERS
2020	2019	2018	2017	2016	2015	
(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	
						VEGETABLES AND FLOWERS
73,900,000		136,000,000	106,200,000	108,850,000	112,850,000	Open field vegetables
80,650,000		148,500,000	101,750,000	69,900,000	85,950,000	Green house vegetables
4,950,000		10,250,000	3,550,000	4,250,000	4,200,000	Open fields & Green house Flowers
159,500,000		294,750,000	211,500,000	183,000,000	203,000,000	Total Vegetables and Flowers
Vegetables and flower 2020 crop value decrease is estimated at 44% as compared to 2018 Decrease of 44% for Open field and Green House vegetables and of 53% for flowers						

Saade, 2020

15- The Value of Agricultural Production: Forest and Prohibited Crops (2015-2020)

Value of production (in US dollars)						FOREST AND PROHIBITED CROPS
2020	2019	2018	2017	2016	2015	
(\$)	(\$)	(\$)	(\$)	(\$)	(\$)	
4,350,000		7,200,000	3,720,000	2,500,000	6,150,000	Forest Products
7,600,000		12,450,000	15,800,000	19,250,000	12,800,000	Prohibited Crops
<p>As compared to 2018, estimated decrease in Forest Products value for 2020, is 40% Decrease in prohibited crops value is 39%</p>						

Saade, 2020

Historically, it is interesting how the political and economic turmoil comes in parallel with the Dissolution of the Soviet Union in 1991; the year before the reconstruction plan for Lebanon. After that, pro-liberal sects endorsed the agents of capitalism with the help of foreign interventions from the US and France, and more recently, Germany and the Netherlands. They endorsed the country with aid, investment, and facilitated international trade. This had a temporary boost on the economy, bringing short-term liquidity and growth but eventually failed due to the government's corrupt policies and overfunded investments. The country had already been suffering from rising gasoline and wheat prices before the October Revolution. This might have acted as a turning point to shift the countries socio-economic and political discourse. Monetarily, the availability of USD in the market diminished drastically, resulting in an increased price of the USD in exchange for the local LBP. This means that everyone's purchasing power dropped down, and the price of imported items like fuel, wheat, and medicine increased substantially.

In parallel, Western imperialism is also fought by communistic parties in Lebanon, which has increased tension since the United States economic sanctioning of Iran and its local allies, Europe's and the US sanctioning of Russia, reduction of foreign aid due to the Trump Administration's America First policy¹⁰, Europe's and Saudi Arabia's declined support due to rise of a predominant internationally unfavorable parliamentary block in the Lebanese government and US trade wars with China as a rising competitive superpower; amidst rising tensions in the Middle East along with the global recession, unrest, and pandemic. This means political allegiances are shifting and therefore leading to a shift in economic policies and international trade. The economic crisis in Lebanon would push the country to reduce imports, increase investments in production, and re-explore trade routes. According to the interviews, corporate-led supermarkets and international corporate fast-food restaurants in Lebanon import some if not most of their items, meaning that they will have to incur a higher cost to supply these products. The company would, as a result, either have to increase their prices on high demand items that can't be usually substituted or dissolve some of the items that can be substituted by other or local providers. This means less available diversity for customers due to a declined purchasing power. However, this gives opportunities for producers in Lebanon to be able to fill market gaps that were previously filled by imported items.

Even before the revolution, supermarkets like The Sultan Center, Monoprix, and Bou Khalil had already lost the battle with others predicted to follow. Hundreds of restaurants closed their doors due to the economic crisis the country was facing. A lot of

¹⁰President Donald Trump was elected in 2016 and aid to Lebanon had increased from 419M USD in 2016 to 726M USD in 2018; a 73% increase. Later, foreign aid from the US to Lebanon decreased by about 72%; from 726M USD in 2018 to 201M USD in 2019 ; a 52% decrease since 2016 (USAID, 2020). This might be attributed to the Lebanese parliamentary elections of 2018 and creation of the largest parliamentary block with Hezbollah, an enemy of the US, as a major member.

transformations are underway along with a shifting regional and global political landscape. A lot of third-world countries are now looking towards the East rather than the prevailed-West. Change is underway, and Lebanon, considered a public regional good in the Middle East and located by the Mediterranean Sea would surely be affected by the changes. As the political landscapes shift locally, regionally, and globally, economic and social reforms are bound to follow, including a shift in agricultural and trading policies. The corporate food regime seems to be embarking onto a new phase, perhaps into a novel food regime. A food regime based on regional-localization rather than globalization due to increased food miles-related- fuel costs and imported prices, limited free-market economies to reduce corruption in the agro-supply chain, and an increased government-led regime alongside a corporate-led environment, because governments would support local small and medium enterprises in the production sector or large TNCs will probably acquire their competition while at the same time resorting to more sustainable modes of operations.

B. Participants and Results

Section B provides information of participants interviewed for the purpose of this research study and their contribution in identifying the procurement decisions and contractual agreements of supermarkets and corporate restaurants in Lebanon when procuring horticultural products explored (Objective 2) in sections D and E. In addition, section F evaluates opportunities for and barriers faced by Lebanese horticultural providers when participating in the supply chain under the premises of the corporate food regime (Objective 3).

1. Supermarkets:

Participants	Origin	Ownership Structure	Type	Distribution	Number of Brands	Number of Branches
1	International	Corporate	Type-A	Dispersed	3	26
2	Local	Corporate	Type-A	Dispersed	1	15
3	Local	Family	Type-B	Localized	1	6
4	Local	Family	Type-B	Localized	1	1
5	Local	Corporate	Type-C	Dispersed	3	42
6	Local	Family	Type-D	Localized	3	7
Total	73% Local	86%Corporate	-	86%Dispersed	12 Brands	97Branches

2. Corporate Restaurants:

Participants	Origin	Ownership	Type	Distribution	Number of Brands	Number of Branches
1	Local	Corporate	Fast-food	Dispersed	1	37
2	Local	Corporate	Diner	Dispersed	1	24
3	International	Corporate	Fast-food	Dispersed	1	20
4	Local	Corporate	Diner	Dispersed	3	39
5	International	Corporate	Fast-food	Dispersed	2	26
Total	68%Local	100%Corporate	-	100%Dispersed	8 Brands	146

3. Horticultural Producers:

Participants	Land Size	Land Type	Location	Agricultural Methods	Distribution Channel
1	Very small to small (2 Dunams)	100% Family Owned	Mtn. Lebanon – Aley District	Traditional	Subsistence
2	Small to Medium (12 Dunams)	100% Family Owned	Mtn. Lebanon – Chouf District	Balade/Greenhouse	Direct Sale
3	Large to very large (300 Dunams)	100% Family Owned	West Bekaa	Conventional/IPM non-certified	FV wholesale Distributors
4	Large to very large (500 Dunams)	20% Family Owned 80% Rented	South Lebanon (Chouf & Jezzine)	Conventional/IPM non-certified	FV Wholesale
5	Very large (10000 Dunams)	50% Family Owned 50% Rent	Bekaa Valley + Multi-regional (Hermel District)	Global GAP Certified/IMP non-certified/Greenhouse	Specialty Producer and Processor
6	Large to very large (200 Dunams)	100% Family Owned	Bekaa Valley (Ras Baalbak)	Mix between conventional and IMP non-certified	-Specialty Producer and Processor -FV wholesale market -FV Distributors -Direct sale
7	Large to very large (500 Dunams)	25% Family Owned 75% Rent	Bekaa Valley (Hauch Nabi)	Conventional	-FV wholesale
8	Large to very large	100 Dunam owned 35-40 Contracts	North Lebanon (Batroun)	Organic Certified	Direct sale

4. Horticultural Suppliers:

Participants	Type	Location	Distribution Channel	Certification	Quality Standard	Cliental Relationship
1	Specialty Producer and Processor	Zahle, Bekaa	95% Corporate Restaurants 5% Close-proximity supermarkets	High	High	Professional, contractual, and symbiotic
2	Specialty Producer and Processor (Organic)	Jrebta, Batroun District - North	Supermarkets	High	High	Professional, contractual, and symbiotic
3	FV Wholesale Distributor	Malaab El Baladi, Beirut	Imported goods to supermarkets and other retailers	Medium, not required	High	Professional, semi-contractual, and opportunistic
4	FV wholesaler	Ferzol, Bekaa	Diverse	Low	Low	Informal, non-contractual, and opportunistic

C. Horticultural Production and Supply Chain in Lebanon:

1. FFV Wholesale Market in Lebanon:

First, to visualize how the market is, imagine it as a central hub, where different traders sell local and imported fruits and vegetables. It has a monopolistic character in its competition¹¹, where there are many traders that are selling almost the same product with little differentiation. In Lebanon, the FV wholesale network contains around 500 traders; but when filtering the small traders, you would find around 150 to 200 traders, distributed among the different regional FV wholesale markets.

16 - A FV Wholesale Market in Lebanon



So, it is run by the private sector with little government regulation, where the municipality would issue a permit for these traders to run their operations on publicly owned land. Relatively, these traders and the largest of them hold a lot of market power since they have no liability over the merchandise being sold. So, the traders have no ownership on any of the merchandise, except if they had their own production. They do not buy the products from the farmers, but rather collect from them on a consignment

¹¹ Monopolistic competition refers to having several sellers offer differentiated products, where products differ slightly but serve similar purposes. Consumers are made aware of product differences, and sellers exert some control over price.

basis. There is no proper accountability, where the farmer has no choice but to place all trust in a trader to sell their products locally and sometimes export them abroad if the goods were exceptional and up to international standards. For this service, the traders in Lebanon are accustomed to charge a 6-10% profit margin from the farmer, which is relatively higher with respect to other countries' FV wholesale markets in the region, which is set around 5-6%. The commission set by the trader is not fixed across all the farmers, where the margin is set depending on the trader's relationship with the farmer. This relationship is built on years of loyalty or profitable ventures, which means that the quality of the produce supplied by the farmer indicates the strength of the relationship between them and the trader. Also, since the farmer is dealing with perishable and seasonal goods, then they are limited by time; and have to sell it as soon as it is harvested or they will incur a loss. If the farmers are producing in large quantities, then it would be logistically costly and time-consuming to sell all their products to multiple channels. The role of wholesale traders in the FV wholesale markets resolves this problem. These traders have market access to supermarkets, greengrocers, restaurants, and exporters. They also have a stream of farmers collectively producing bulky quantities; however, due to the perishable characteristics of the goods, this allows retailers to take advantage of traders' selling price. Of course, the trader wants to maximize on their profits; however, their low level of liability, lack of accountability, and the nature of their product would force them to salvage whatever they have in their inventory. This is because as time increases, the quality of the produce declines along with its selling price, depreciating to zero. In return, as a contingency of possible loss, one farmer reported that "supermarkets buy for example lettuce for 500 LBP/head from

the supplier and sell it for 1500 LBP/head accounting for the product and overhead costs, in addition to the permissible profit margin (around 25%)” – (Horticultural producer, Chouf). The farmer recommended solving the waste problem (30% on their account):

“If waste was reduced then you can turn the value of the accounted losses into profits that can be used instead to pay traders an incremented price; so that the head of lettuce is sold to the retailer for 1000LBP rather than 500 LBP, while at the same time, preserving the permissible profit margin of the supermarket”.

However, the supermarket’s procurement officer mentioned that “procurement of FFV occurs daily, and where supply matches the forecasted demand, to insure that waste is minimal”– (Procurement officer, Supermarket Type-A). Thus solving the waste problem at the level of the supermarket as the farmer recommended is inapplicable and insignificant in improving the return gained by producers or suppliers when dealing with supermarkets.

In Lebanon you can find nine FV wholesale markets distributed across the regions.

There are two in Beirut: Sin el Fil and Mala`ab Al Baladi; other FV wholesale markets can be found in Akkar, Tripoli, Saida, Tyre, Nabatieh, and Bekaa. In relation to the agricultural uniqueness of each region, retailers and suppliers have distinguished each FV wholesale market with products relative to the topography, proximity, and quantity produced. In the Bekaa, there are favorable deals for potatoes and onions; in the North (Tripoli and Akkar), there are favorable deals for tomato, cucumber, zucchini, and eggplant; and in the South (Saida and Tyre), and banana and citrus products have more

encouraging deals. A farmer reported that, “the FV wholesale markets in Beirut are established on a sectarian basis, where the markets are divided among the east and west side; Sin el Fil and Mala`ab Al Baladi, respectively”. According to observations, the former is receptive to produce coming from the North, including Mount Lebanon, while the latter is more amenable to produce coming from the South. This is due to the sectarian division and their relative proximity on the outskirts of the city center. However, the division is not strictly limited by sectarianism, but historically it was. Beirut is an urban area, where agricultural production is almost non-existent. Locally produced products found at FV wholesale market are brought from different agricultural regions. This is why a higher cost can be found due to the additional energy cost incurred for transportation. However, some supermarkets are willing and able to incur this cost on themselves as they can gain more favorable deals and overall more profit.

From an overall perspective of the supply chain, from farmers, processors, wholesalers, other traders, and retailers, categorize fruits and vegetables into three grades. These grades are sorted according to the quality standards mentioned prior, where each grade has its relative price. The mechanisms for assessing quality between different providers may differ, where the FV wholesale market grade products based on appearance, freshness, farming methods used, sensory testing, and farmer reputation. However, corporate procurers have similar mechanisms that are much more detailed with the additional lab test that show chemical and microbial composition complimentary with requirements set by private certification bodies. There is no established grading method to distinguish different grades for horticultural produce, where standardization is uncertain, so the product is graded upon perception and influenced by negotiations

between the provider and the procurer. The 1st grade being the premium, fancy grade acquires a higher quality and, therefore, a higher market price. However, the supply of this grade is usually rare and comprises a small portion of producer's harvest, where it is more attractive to sell this grade directly to processors, high-end restaurants, or any outlet that is willing to pay a premium price. This means that the produce found at the FV wholesale markets are mostly 2nd and 3rd grade products. So as it seems when farmers acquire a 1st grade product, they gain negotiation and market power over their desired distribution channels. This is due to its desirability among consumers and limited availability in the market. This means that producer's power is relative to the quality of their production, and therefore their applied farming methods used during production.

2. Wholesale Distributors in Lebanon:

In addition, there are wholesale distributors and have three primary channels: local, export, or import; or a combination thereof. These wholesalers are traders and can be regularly found at the distinctive FV wholesale markets. Their classification is different due to their additional capacity and power to distribute their products locally, regionally, or globally. These traders sometimes have their own production capacity along with other contractual farmers. They also can make deals with other traders at the FV wholesale market as well with agricultural insurance brokers (Damman) to benefit from their distribution capabilities. The increased number of produce gathered allows this trader to negotiate better deals with the local or foreign markets. The majority of exported fruits and vegetables are sent to regional Arab countries, mainly Syria, Saudi Arabia, Egypt, Jordan, Gulf countries, among others. Export capabilities are correlated

to geopolitical and economic conditions of the exporting and importing country. For example, Syria, before its civil war, was Lebanon's top export proxy; however, the demand for export diminished, which had a negative effect on Lebanon's agricultural sector. Also, the increased globalization and competition in the Gulf had diminished the amount of FV being exported from Lebanon. Now, only 1st grade, premium, or certified products can penetrate the market. Furthermore, there is an opportunity in European markets for table grapes, avocado, and other citrus products; however, the European markets have high competition and high standards for penetration like requiring international certifications (like Global GAP) (Ruijs, 2017). It is the responsibility of export wholesalers and their producers to build the capacity required to penetrate foreign markets. In 2012 (approved 2011), the 'Agri Plus' program was launched by the government agency, IDAL, which replaced the 'Export Plus' program. This program aims at supporting exporters in penetrating foreign markets through streamlining production, improving packaging and cooling centers, and promoting high-quality local products at international fairs or exhibitions (IDAL, 2012). However, the role of the government and non-governmental organizations in supporting agriculture has been ineffective or inefficient, and the role of agricultural cooperatives remains weak. In addition, import wholesalers are responsible for importing foreign produce into the local market. Imported items include regional goods that ensure availability of basic goods like potatoes from Egypt and other horticultural goods like tomato, cucumber, zucchini, and eggplant from Syria, and garlic from China, along with other premium or tropical goods that are imported from around the world. Imported items can be found in all the

distinctive FV wholesale markets across Lebanon, and are distributed along the supply chain to supermarkets, restaurants, hotels, and other retailers.

3. *Specialty Producers and Processors in Lebanon:*

Furthermore, there are specialty producers and processors that produce high-quality, certified, or value-added products. These products are produced with advanced agricultural methods by mostly large-scale or land-owning producers, which have sufficient capital to invest as well can promise consistency to their customers. For supermarkets, these products can be found packaged or labeled with a brand; these are usually washed, cleaned, and sanitized. The packaging provides for this high-quality produce to retain its shelf-life and quality; and, therefore, its market power. The label creates a relationship between the customer and the producer, where the quality received on a transaction will be repeated in other transactions made by this farmer. Thus, customers are searching for a consistent supply of quality, safe food, where transparency of agricultural inputs used like irrigation water, pesticide, and nature of the seed used is an emerging concern. This is why organic or Balade/IMP uncertified products are distinguished among consumers; however, the Lebanese population is price sensitive to the relatively high price of organic products. Also, there is no certification standard that recognizes the legitimacy of Balade products. Analytically¹², a private label would create a relationship between the customer and the producer, where customers can trace back who their producers are and how they are producing their products. Noteworthy certifications include Global GAP as an internationally recognized trademark, which includes a set of standards for good agricultural

¹² The analysis is based on information conveyed by farmers marketing their products with a private label and reports by supermarket representatives from interviews conducted throughout the research.

practices to ensure production methods are sustainable and safe. This can be maintained by auditing potential contamination in the land, irrigation water, fertilizer, manure use or pesticide usage, equipment, and worker health and hygiene. This certification aims at improving quality, safety, productivity, and sustainability. Other certifications used in agroindustry include HACCP certificate that identifies and controls potential food safety hazards in food production. Also, production that is meant for restaurants, especially corporate and multi-chain, demand a consistent supply of high quality produce processed under strict requirements including cut size, color, shape, structure, and variety. These corporate restaurants, local or international, require insurance in the form of internationally recognized private certifications like ISO 22000, FSCC 22000, BRC, or IQM to be approved as a reliable supplier for processed produce. So, premium vegetables are sold raw or semi-processed to corporate restaurants, while premium fruits are showcased and packaged in supermarkets or used in industry to make jams, molasses, juices, vinegar, or alcoholic beverages.

The table below shows the different horticultural providers in Lebanon and their relationship with their suppliers.

4. 5. Summary of Relationship between Horticultural Providers and their Sources

	FV Wholesalers	FV Wholesale Distributors	Specialty Producers & Processors
Primary Source	Local Farmers	Regional Imports	Own Production
Reason	Traditional/Historic, Product turnover	Availability	Commercial, value-added
Relationship	Informal	Professional	Internal ¹³
Credit Terms	Consignment, Cash	Credit	Internal
Standards	Low to Average+ ¹⁴	Low to Average-	Premium
Certification	Rarely	Sometimes	Always
Negotiation	Quality-based	Availability, Quality-based	Quality-based
Secondary Source	FV wholesale Distributors	International Imports/Export	FV wholesale Distributors
Reason	Availability, Diversity	Diversity	Availability, Diversity, Quality
Relationship	Professional	Professional	Professional
Credit Terms	Credit/Consignment	Credit	Credit/Consignment
Standards	Average - Premium	Premium	Premium
Certification	Sometimes	Most Likely	Always
Negotiation	Quality-based	Quality-based	Quality-based

¹³ Specialty producers and processors are privately owned producers that produce their own production and source them to corporate procurers.

¹⁴ The quality of local production versus regional production is more favorable due to freshness, locality, and overall quality of the product.

D. Understanding the Relationship between Supermarkets and their Suppliers:

First, to know how and why procurement decisions are taken by supermarkets regarding their horticultural supply chain, then we need to first identify who and where they are sourcing their produce from. Four types of supermarkets were classified for the purpose of this research study: Type-A, Type-B, Type-C, and Type-D Supermarkets. Second, after uncovering the reasons why the different categories of supermarkets decide to deal with their suppliers, then we can uncover on what terms, contracts, or standards define the supermarket-supplier relation concerning horticultural products.

17 - FFV Section in a Supermarket



1. Type-A Supermarket:

'Type-A Supermarkets' in Lebanon, source FFV mainly from the FV wholesale market, better known as 'Souk el Khodra', where representatives from the supermarket are distributed across all the FV wholesale markets in Lebanon; especially in Beirut, Bekaa, Tripoli, and the South. The reason behind this diversification is to get better offers in terms of value provided to the customer. In addition, wholesale prices are generally around 25% cheaper than retail prices. Each day, the supermarket representatives venture the market to procure FFV to ensure freshness of the produce in opposition to the high perishability of the products. The representatives get better deals for citrus products from the South, cucumber and zucchini from the North, and potato and onion from the Bekaa Valley. This is attributed to the proximity of the production with respect to each of the FV wholesale markets. The supermarket provides its own transportation rather than outsourcing to middlemen suppliers or distributor, who would on top of the fuel cost incurred, would take a margin off the profit. There are no binding contractual agreements for locally traded produce, so retailers have an inconsistent and unset relationship with their suppliers. A contractual agreement would compromise on the supermarket's negotiation terms with suppliers since they are dealing with inconsistent, perishable, and seasonal products. The nature of horticultural products in relation to binding agreements diminishes potential returns, since value of the product diminishes with time. In contrast to FMCG products that are uniform, unseasonal, and non-perishable. So, a binding agreement in the FFV sector is unfavorable in terms of price for the supermarket because you can get better deals every day. This highlights a certain power dynamic in the market, where farmers are the most affected party of the

supply chain. To understand how farmers are the ones most affected in the supply chain, especially when, in most cases, there is no direct relationship between them and the retailer, one should first understand the dynamics of the FV wholesale market.

Some supermarkets reported that their waste is minimal, because of their operational strategy adopted, where they supply items daily to match the demand. This is done by looking at previous day sales and where perishability on average for horticultural products is three days, one day for herbs and four days for potatoes. Type-A supermarkets also try to do promotions daily to reduce waste; a lower price would attract more customers. The supermarket even reported that the perishing produce has its own customers. A juice section was established to increase the turn over for the product. They would adopt these tactics daily to bring waste to a minimum. This means that the waste problem solves itself by being directly economical, so it is not the main issue to be tackled.

On another note, Type-A supermarkets make weekly shipments from around the world on a contractual basis via refrigerated aerial transport. The transaction happens between a foreign company and a local supplier. This is more expensive than typical waterway transport; however, the low shelf-life of the products requires the fastest and most efficient way to transport products from farm to retail store. Of course, these items are not grown locally and would be priced at a premium due to the additional cost incurred during transport, lack of local substitutes, and value-added quality. The products are transported to a refrigerated centralized storage unit controlled by the supermarket corporation, unlike local produce that are dispatched directly from the FV wholesale market to the retail stores. The imported products are then distributed accordingly to the

stores depending on the forecasted demand. Imported items include berries, pineapple, mango, grapes, and pears; unlike local deliveries that are made daily, imported items are delivered one to three times a week.

18- Imported Fruits and Vegetables



Moreover, a local family-owned Type-A supermarket in Lebanon outsource their FV section to investors. These investors are contractually bound to terms set by the supermarket, where space is provided within the supermarket for a certain percentage of the profits. Other terms include trust in reporting and accounting, as well as to provide good quality produce with a high emphasis on local production. This is interesting when analyzing the supermarket's historical and political background, where most of their branches are found in the Northern part of Lebanon (or the East-side with respect to civil war divisions). Other than its interesting sectarian divide within the country, its

focus on local production, in the face of Syrian products, has a political denotation driven by historical post-civil war events¹⁵. Ultimately, the supermarket's political affiliation with the east-side opposing factions, which recently is part of the largest parliamentary block, are influenced in their operational policies in procuring primarily from local sources over Syrian competition. Moreover, local-balade products are highly favored; since their quality and prices are more favorable. The owner claims that, "the products are less-chemically exposed, tasteful, and cost less. There is no certification to prove their acclaimed quality standard; however, its quality is known visually and through taste". The supermarket also imports items from FV wholesale traders, like mango, pineapple, and other fruits from western markets; however, with the declining economic situation and deflation of the local currency, the demand for these products has significantly decreased. The economic recession forces both parties to pay in cash only, credit is unfavorable due to the bank's limiting quotations on cash withdrawal and the unstable price of the currency disallows paying twenty days or one month in arrears. The supermarket obtains its products from FV wholesale traders that are reliable in matching to the supermarket's requirements. Even though the relationship between local suppliers and FV wholesalers is opportunistic and non-binding, the supermarket representative still manages to form an informal relationship with some credible suppliers.

Interestingly, Type-A branded supermarkets have several stores allocated within city centers in Lebanon; however, their sizes don't necessarily have to abide by the Type-A

¹⁵ The Syrian interference or invasion of Lebanon during the civil war in 1976 and that legitimately lasted until 2005. In 1989, two rival governments were formed, where the east-side opposed the Syrian insurgence and leading to the War of Liberation. The rebelling government was defeated and Syria's involvement in Lebanon was strengthened by the legitimacy gained by the Arab League in 1991.

categorization. They can be medium-sized as a type-B supermarket or even smaller sized as type-D supermarkets. The diversity in the categories provided defines a supermarket in Lebanon, where customers can get all their food and some of their non-food needs from one location. The range of products provided in each category is relative to the size of the establishment. More interesting, a well-known Type-A supermarket expanded in recent years to have discount stores under a new brand, attracting a low-to-medium socio-economic class, where they can find items on promotional discounts- cheaper than supermarket prices. They have also expanded to include a new brand under the company's supervision, which functions exactly as the typical 'Dekkene'. It is interesting to witness how supermarkets are adapting to the country's resisting retail structure. This type of store fits the crowded urban centers with a relatively smaller space and lower real estate cost, however taking advantage of the company's large-scale operations that provide them an economy of scale advantage and power that the supermarket already has. The normal Dekkene usually lacks this power and economic advantage. The power behind economies of scale threatens the survivability of local or family-owned retail stores and might transform the structure of the retail sector into a more corporate-led environment. The traditional Dekkene is safe as long as they keep providing the convenient sale of some fresh foods alongside their FMCG inventory.

In some supermarkets (mainly type-A), you can find premium products from local and international sources supplied directly by producers or supplied by wholesale distributors. They are branded with a producer label and sometimes packaged to preserve the grade-quality of this produce, so that it decreases lose value over time.

These products are of premium quality, so a premium price is expected. Some of these items are semi-processed into peeled, pre-cut, or hollowed to serve a convenience factor to the customer.

19- Packaged and Labeled FFV



There are six parameters to a successful merchandising strategy: product, place and time, promotion, stock level, and price. The use of psychological merchandising strategies is common across all types of supermarkets (mostly obvious in Type-A supermarkets and less apparent in Type-C supermarkets) starting from entry to exit, going from aisle to aisle or section to section, and in addition to sensual and categorization merchandising strategies, which encourage unplanned shoppers spending. For 1st grade products in horticulture, the price would be unfavorable to the majority of the population. Some specialty stores other than supermarkets have reduced the price of premium or organic products by cutting out the middleman¹⁶ and dealing directly with producers. Retailers are aware of the desirability of these products,

¹⁶ The use of middleman instead of non-gender words like middleperson is intentional; since observationally and statistically, most agricultural providers are male. Even though, there has been efforts to encourage female participation through woman's cooperatives; their participation is still low.

however logistically restricted to deal directly with producers; the retailers attempt to make their 2nd and 3rd grade products look like 1st grade products with their merchandising strategy utilized in the FV section by proper categorization, restocking, and resorting along with floor cleanliness, light level, and refrigeration.

In short, Type-A supermarkets primarily source their products from the FV wholesale market due to its convenience, volume, and cost of products found at this traditional market. The relationship between the supermarket and the FV wholesale market is opportunistic with no binding contractual agreement. Credit terms are paid daily on a cash basis, usually utilizing the local currency. Standards required by the supermarket include safety, appearance, taste, shape, size, structure, color, and processability of the product in relation to affordable prices.

As a secondary source, Type-A supermarkets obtain imported goods from wholesale distributors to diversify inventory. The relationship between the supermarket and the wholesale distributor is professional with binding contractual agreements. Credit terms are paid on credit basis using the foreign currency of the importer. Supermarket standards require a diverse range of products of a distinguished quality standard, including packaging and labeling.

As a tertiary source, Type-A supermarkets obtain some products from specialized producers and processors to further diversify inventory to include semi-processed or locally grown organic products. . The relationship between the supermarket and the specialized producers and processors is professional with binding contractual agreements. Credit terms are paid on credit basis. Supermarket standards require a

diverse range of products of a distinguished quality standard, including packaging and labeling. Production is usually produced or processed locally.

20 - Products of a Specialty Producer and Processor



2. *Type-B supermarket:*

Other ‘Type-B Supermarkets’ can be divided into two major sections: the ones within or around major city centers and ones distributed further apart near village areas. The latter store size is usually relative to the population existing around them, while the prior seems to have a randomized size depending mostly on the available space, real estate status and costs, the number of competitors, the population size surrounding it, and it’s proximity near a major road or highway. In regards to the horticultural supply chain, they get their products mostly from the FV wholesale markets, where appearance, taste, shape, size, and processability (example: friability of potato) are the main characteristics looked at. What differentiates one supplier from the other is the ability to negotiate a good price for the desired quality.

Some of the supermarkets (mainly in type-B and type-D supermarkets) prepare semi-processed products on a daily or on-demand basis from the produce they usually sell as raw; shortening shelf-life but increasing inventory turnover. This is done to increase turn over while at the same time not overproducing semi-processed items that might jeopardize the shelf-life of the produce, leading to additional waste and economic loss. One of the specialized suppliers identified had two different certifications; Global Gap and ISO 22000. Another local supplier regularly found at a type-A supermarkets abides by European regulations and IMC certifications for internationally recognized and approved organic farming practices. Since these certifications are usually costly and demand a higher level of investment in production and operations, these certified-grades of products are typically sold for a premium price. There is a customer base for it, usually attractive to the high-medium to high socio-economic classes, especially with

the emerging awareness of food safety, concerning the water quality used in irrigation, the amount of pesticides and chemicals sprayed, and the nature of the genetic material planted (non-GMO). According to supermarket supply chain manager, “a substantial portion of the population value hygiene and are becoming aware of the degree of safety required in production” to prevent sickness and developing non-communicable diseases that have been responsible for an increased rate of morbidity and mortality. The awareness of food safety among a partial segment of consumers is realized among retailers, where the availability of safe food provides them with an additional revenue stream. The differentiation in inventory attracts different socioeconomic segments that search for quality of the product over its price.

In addition, the most important part of the process is during procurement. All crates should be thoroughly inspected to avoid supplier tricks in handling; where the bad batch is sometimes hid at the bottom of the crate due to partial success of the harvest. Several procurers had noted that this kind of behavior happens occasionally, and directly returned if realized. Conventional agricultural production is sensitive to environmental conditions and pest outbreaks. The uncertainty leads to mismanagement that can negatively affect crop quality and eventually product quality. The uninsured loss encourages cheating behaviors to cover up on losses and especially when government protection is unrealized. Certain suppliers at the FV wholesale market are more reputable and known to have good quality in terms of proper agricultural practices used by their farmers; so it is by the supermarket’s representatives’ experience to identify the right supplier to acquire a favorable level of produce that is produced properly. This is why these representatives, in some cases, go back to the source to check that the

agricultural operation is run correctly. Checking if acceptable water quality is used to irrigate, pesticide use is limited to a minimum, and sanitary practices are utilized along the supply chain. This follow-up in inspection and proper matching of demand with supply allows having minimal waste, where customers and administration would both be satisfied with the results. However, on-farm inspections by procurement officers are not necessarily related to procurement strategies defined under supermarkets due to the process's occasional consistency. The on-farm inspection by the procurement officer is rather carried by the individual's ethical considerations about their profession.

Nevertheless, the procurer doesn't always have the chance to interact with the principal producer, since the produce at the FV wholesale market are sold by traders and where the procurer would most likely purchase products originating from several farmers in a single business transaction.

In review, Type-B supermarkets primarily source their products from the FV wholesale market due to its convenience, volume, and cost of products found at this traditional market. The relationship between the supermarket and the FV wholesale market is opportunistic with no binding contractual agreement. Credit terms are paid daily on a cash basis, usually utilizing the local currency. Standards required by the supermarket include safety, appearance, taste, shape, size, structure, color, and processability of the product in relation to affordable prices.

As a secondary source, Type-B supermarkets obtain imported goods from wholesale distributors to diversify inventory. The relationship between the supermarket and the wholesale distributor is professional with binding contractual agreements. Credit terms are paid on credit basis using the foreign currency of the importer. Supermarket

standards require a diverse range of products of a distinguished quality standard, including packaging and labeling.

As a tertiary source, Type- B supermarkets obtain some products from specialized producers and processors to further diversify inventory to include semi-processed products. . The relationship between the supermarket and the specialized producers and processors is professional with binding contractual agreements. Credit terms are paid on credit basis. Supermarket standards require a diverse range of products of a distinguished quality standard, including packaging and labeling. Production is usually produced or processed locally.

3. *Type-C Supermarket:*

There is a particular 'Type-C Supermarket' in Lebanon that is managed under a cooperative entity and operates as a retailer. They manage three brands of supermarkets all over the country under a binding contractual agreement that determines mainly a share of the profits from the different stores. The different supermarkets have a united strategic management and centralized procurement that allows them to buy in bulk and get better prices; however, day-to-day management might slightly be different.

Concerning the horticultural supply chain, the retailer acquires a sister-company that supplies them daily with locally grown FFV; it also has an export capacity. This company is responsible for warehousing, packaging, and logistics; their collaboration is a win-win situation, where both parties are interested in the success of each other's business, especially when this cooperative entity has forty or more outlets; attracting a large portion of the customer base. The retail cooperative's operational strategy allows them to buy and sell items for a lower cost, which will attract customers of a low to medium socioeconomic status. In addition, there are imported items that are supplied by wholesaler distributors. Some of these items include onions and potatoes, and the rest are exotic fruits that aren't locally available. The retailer's relationship with its sister-company is non-contractual, where no written contractual agreements are necessary due to the symbiotic legal relationship existing between them. In contrast, when dealing with external suppliers, a written contractual agreement is required. The written contract specifies quality standards, payments terms, and return policy that are pre-established prior to the business transaction. In case the sister-company couldn't secure a supply of a demanded item, then the cooperative will resort to the FV wholesale market, the one

nearest in proximity to the retail store. Also, direct supply from farmers unexpectedly happens if there is a good deal.

In general, there is no strict quality standard required by Type-C supermarkets; every quality has its respective price. However, it was reported that people look for quality before price due to the sensitivity of fresh produce, and where cooperative's prices are usually more favorable to the customer. Quality includes taste, color, and processability (friability in potatoes; turning red is unfavorable). The cooperative, however, lacks a food safety certification to probably minimize overhead costs; however, they have food safety and pest control consultants that inspect their facilities occasionally. Also, there were no governmental inspections that were reported or any regulation that is required or followed up with.

The procurement officer is responsible for matching quality they find in the market with its buying cost. If it is not favorable, then they would simply reject it. The expansion of the retail operations allows supermarkets to have power over their suppliers. The power larger retailers have over their suppliers is due to the availability of substitutes in a competitive market and the perishable nature of FFV. The sister-company's best interest is to supply an exceptional quality of products due to the shared interests involved. In case, an unfavorable batch is delivered, it would be directly returned with a notice to the supplier along with a proof of violation. The procurement officer noted that, "the relation between the supplier and the retailer is not based on trust, but rather on the ability to work well together", but this might as well be what corporate trust is. This includes achieving high product turnover and profitability, which is favorable for both parties. The relationship quality is determined by the way suppliers to deal with the

retailer, which includes offering promotions, discounts, and accustomed to the feedbacks set by the retailer. This is what differentiates large, well-distributed retailers in their power to negotiate terms and deals with their suppliers.

Concerning payments, they are either done by cash for each transaction, usually with their sister-company, the FV wholesale market, or direct sale from the farmer. However, the payment terms are different for their external suppliers, where payments are made every fifteen days on a credit basis; this has been difficult with the instability of the currency. The October Revolution has led to losses, where prices of imports and even local products increased substantially. The inflation decreased customer spending, so the supply significantly regressed. The market losses due to the recession are common across all types of supermarkets due to normalization and facilitation of imports found on retailer's shelf space. Adaptive measures by supermarkets might differ across types; however the measures revolve mainly around delisting the number of imported items from the supermarket's inventory; as previously realized by Type-A supermarkets. As an adaptive measure carried by Type-C supermarkets, where "payments are done directly rather than delayed; because in fifteen days, the fluctuation of the price of the Lebanese pound in exchange for the USD can be significant, especially when dealing with a large supply of products. The limitation of credit set by the banks was insignificant because the retail sector allows for cash-based transactions, providing liquidity that allows dealing with suppliers on a cash basis only, rather than the usual credit system used before the declining economic situation. In a crisis, the worst-case scenario is adopted, especially when dealing with a large establishment, reckless

decisions based on optimism can lead to devastating losses to the company and jeopardize thousands of jobs”.

Nevertheless, there are other retail cooperatives found in Lebanon; they are less distributed and have an insignificant market share. They are small in size, but contain a range of fresh products alongside other FMCG products. These entities do not possess the power of Type-C supermarkets nor are they recognized by brand, except to the people residing in the proximity of the retailer. So it does not have a corporate structure as Type-C supermarkets. So a corporation has the capacity to expand and gain economies of scale that allows for gaining negotiation power over their suppliers. So, ownership structure of the supermarket may influence the supermarket-supplier relationship, however it is not entirely governed by it. In the next section, a Type-D supermarket that is family-owned has proved to gain reputation and market share.

In short, Type-C supermarkets primarily source their products from a sister-company farmer’s cooperative as a vertical integration strategy to provide volume of products at a low cost. The relationship between the supermarket and their supplier is symbiotic with no binding contractual agreement. Credit terms are paid daily on a cash basis, usually utilizing the local currency. Standards required by the supermarket include price with respect to the value of the product.

As a secondary source, Type-C supermarkets obtain imported goods from wholesale distributors to diversify inventory. The relationship between the supermarket and the wholesale distributor is professional with binding contractual agreements. Credit terms are paid on credit basis using the foreign currency of the importer. Supermarket

standards require a diverse range of products of a distinguished quality standard, including packaging and labeling.

As a tertiary source, Type- C supermarkets obtain some products from the FV wholesale market due to its convenience as a substitute, availability of volume, and relative cost of products. The relationship between the supermarket and the FV wholesale market is opportunistic with no binding contractual agreement. Credit terms are paid daily on a cash basis, usually utilizing the local currency. Standards required by the supermarket include availability of supply for a good price.

4. *Type-D Supermarket:*

In Lebanon, 'Type-D Supermarkets' are interesting, because along with Type-B and Type-C supermarkets, they have resisted the spread of Type-A supermarkets for decades. One particular chain stands out, where it has gained a significant market share and reputable status among the locals of Beirut. A special case emerged from what was referred to as West Beirut during the Lebanese Civil War (1975-1990), where a family-operated retail store has gained a reputable reputation among local citizens, controlling a substantial market share. I would refer to this phenomenon as 'Dekanization', where a small local family business matured utilizing the elements of the corporate food regime (Supermarketization, Trade Liberation, and globalization), under a post-war sectarian political economy with limited urban space. It had started as a typical Dekkene, but its spread within the capital city of Beirut and acquisition of fresh and non-fresh groceries along with household items would later categorize this brand of stores as a supermarket, despite its relatively smaller space. It has refrigeration and chilling units to preserve the shelf-life of fresh and frozen items. They also utilize some of the Type-A merchandising strategies, including attracting passing individuals with the smell of freshly baked goods that can be located at the entry of most of the stores.

In terms of operations, it is similar to Type-B supermarkets in power, and where most of the products are procured from the FV wholesale markets from several suppliers. There are no binding contractual terms with these suppliers and are paid in cash. Daily rounds around the market are made to negotiate the most favorable offers. There is no stable supply from one supplier, as the offer can change from day to day. Imported items can be found from these suppliers, whether regionally from Syria or Egypt, or from abroad,

mainly Europe. The prior are imported or smuggled through land-based transport, and the latter are imported via refrigerated planes through wholesaler companies. Regionally imported items like potatoes, onions, tomatoes, cucumbers, and other seasonal fruits and vegetables can be produced locally. This often creates a price dilemma due to their lower cost of production; however, Lebanese products are perceived better in terms of quality. Imported items like berries, pineapple, and mango from foreign suppliers are usually of a higher quality and priced at a premium. Quality includes appearance in terms of lack of damages, internally unspoiled, and product safety in terms of water quality, pesticide usage, and sanitary working-environment used during production. Inspections of agricultural projects are made randomly by the procurement officer; however, no consultation is provided as it is the expertise of the farmer, not the trader. In addition, semi-processed goods are prepared by the retailer like hollowing zucchini and eggplant; it is more favorable than acquiring these products from suppliers. Some fruits and vegetables are packaged with Styrofoam base and wrapped with nylon or boxed within a plastic container, and labeled with an expiry date, prepared by the staff operating under the retailer. Some items like blackberries, Armenian plums, and cherries are packaged, preserved, washed, and ready-to-eat are procured directly from suppliers. External suppliers are paid every ten days, or paid for a previous receipt on handling a new batch of products. This is to sustain supplier continuity and ensure product integrity and salability. A written contract is encouraged between external suppliers to guarantee working terms for three to six months in advance. This type of supermarket has market power, but it does not surpass that of Type-A supermarkets due to its larger size and distribution over several area parameters.

Type-A supermarkets are establishing Type-D like supermarkets under an alternative brand while attaining the same market power over suppliers. However, for now, the Type-A Dekkene lack fresh products like fruits and vegetables and animal or animal byproducts; and only focuses on the FMCG sector. This is an advantage for Type-D supermarkets and ensures their resilience. Yet, if Type-A supermarkets manage to insure these products in their Dekkene-like shops, then Type-B and Type-D supermarket's survivability would be jeopardized and eventually acquire their pre-existing market share. This is also due to consumers favoring a diverse range of products for favorable prices, and which can be secured through Type-A supermarket's negotiating power over their suppliers and their large-scale operations.

In review, Type-D supermarkets primarily source their products from the FV wholesale market due to its convenience, volume, and cost of products found at this traditional market. The relationship between the supermarket and the FV wholesale market is opportunistic with no binding contractual agreement. Credit terms are paid daily on a cash basis, usually utilizing the local currency. Standards required by the supermarket include safety, appearance, taste, shape, size, structure, color, and processability of the product in relation to affordable prices.

As a secondary source, Type-D supermarkets obtain imported goods from wholesale distributors to diversify inventory. The relationship between the supermarket and the wholesale distributor is professional with binding contractual agreements. Credit terms are paid on credit basis using the foreign currency of the importer. Supermarket standards require a diverse range of products of a distinguished quality standard.

As a tertiary source, Type- D supermarkets obtain some products direct sale to provide locally produced products to customers with favorable quality and cost. . The relationship between the supermarket and the producer is professional with no binding contractual agreements. Credit terms are paid in cash utilizing the local currency. Supermarket standards require value products of a local and traceable and transparent production.

The table below reviews the summary of the relationship between the different types of supermarkets and their horticultural suppliers, while unraveling the reasons, payment terms, contracts, negotiation dynamic, and standards required by supermarkets

5. 6. Summary of the Supermarket-Supplier Relationship in Lebanon

	Type-A	Type-B	Type-C	Type-D
Primary Source	Wholesale Markets	Wholesale Markets	Cooperative Production	Wholesale Markets
Reason	Convenience, Volume, cost	Convenience, Volume, cost	Vertical Integration, cost, volume	Convenience, Volume, cost
Payment Terms	Cash, LBP	Cash, LBP	Cash, LBP	Cash, LBP
Contracts	Non-binding	Non-binding	Non-binding	Non-binding
Negotiation	Opportunistic	Opportunistic	Symbiotic	Opportunistic
Standards	Safety, price, and quality ¹⁷	Safety, price, and quality	Price, value	Safety, price, and quality
Secondary Source	Wholesale Distributors	Wholesale Distributors	Wholesale Distributors	Wholesale Distributors
Reason	Product Diversification	Product Diversification	Product Diversification	Product Diversification
Payment Terms	Credit, Foreign Currency	Credit, Foreign Currency	Credit, Foreign Currency	Credit, Foreign Currency
Contracts	Binding	Binding	Binding	Binding
Negotiation	Professional	Professional	Professional	Professional
Standards	Diversity, quality	Diversity, quality	Diversity, quality	Diversity, quality
Tertiary Source	Specialized producers and Processors	Specialized producers and Processors	Wholesale Markets	Direct sale
Reason	Product Diversification	Product Diversification	Substitute, volume, cost	Favorable deal in terms of quality and cost
Payment Terms	Credit	Credit	Cash, LBP	Cash, LBP
Contracts	Binding	Binding	Non-binding	Non-binding
Negotiation	Professional	Professional	Opportunistic	Opportunistic
Standards	Diversity, quality	Diversity, quality	Availability, price	Value, local, Traceable Transparent

¹⁷ Quality includes appearance, taste, shape, size, structure, color, and processability of the product.

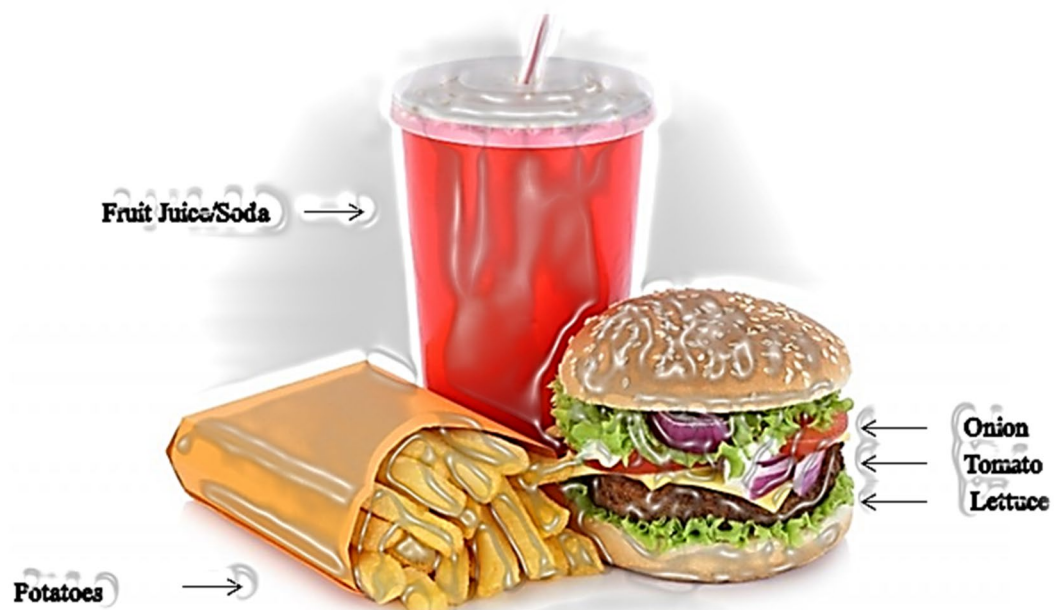
In summary of the results, supermarkets primarily source their products from the FV wholesale market and secondary from FV wholesale distributors. Procurement reason from the FV wholesale market includes its convenience, volume, and cost of products. The relationship between the supermarket and the FV wholesale market is opportunistic with no binding contractual agreement. Credit terms are paid daily on a cash basis, usually utilizing the local currency. Standards required by the supermarket include safety, appearance, taste, shape, size, structure, color, and processability of the product in relation to affordable prices. While, FV wholesale distributors are chosen to diversify inventory, regionally to secure availability of products and internationally to provide tropical or high-quality products that are not usually available. The relationship between the supermarket and the wholesale distributor is professional with binding contractual agreements. Credit terms are paid on credit basis using the foreign currency of the importer. Supermarket standards require a diverse range of products of a distinguished quality standard, including packaging and labeling. As a tertiary source, supermarkets obtain some products from specialized producers and processors to further diversify inventory to include semi-processed or locally grown organic products. The relationship between the supermarket and the specialized producers and processors is professional with binding contractual agreements. Credit terms are paid on credit basis. Supermarket standards require a diverse range of products of a distinguished quality standard, including packaging and labeling. Production from this supplier is usually produced or processed locally.

Significant differences can be noticed in Type-C supermarkets and direct sale transactions most apparent in Type-D supermarkets. Type- D supermarkets obtain some products direct sale to provide locally produced products to customers with favorable quality and cost. The relationship between the supermarket and the producer is professional with no binding contractual agreements. Credit terms are paid in cash utilizing the local currency. Supermarket standards require value products of a local and traceable and transparent production. Type-C supermarkets differ in their organizational structure in relation to the other types, where a closer relationship between producers and retail is achieved. Type-C supermarkets primarily source there products from a sister-company farmer's cooperative as a vertical integration strategy to provide volume of products at a low cost. The relationship between Type- C supermarkets and their supplier is symbiotic with no binding contractual agreement. Credit terms are paid daily on a cash basis, usually utilizing the local currency. Standards required by the supermarket include price with respect to the value of the product. The sporadic and lack of access of direct sale was expected to have a larger role, therefore there is minimal access for producers to sell directly to supermarkets.

E. Understanding the Relationship between Corporate Restaurants and their Suppliers:

First, to know how and why procurement decisions are taken by corporate restaurant regarding their horticultural supply chain, then we need to first identify who and from where they are sourcing their produce from. Two types of corporate fast-food chains were classified based on the restaurant's majority ownership structure for the purpose of this research: Local and International. Second, after uncovering who are the suppliers and the reasons why different types of fast-food chains decide to deal with their suppliers, we can uncover what terms, contracts, or standards define the fast-food chain-supplier relation concerning horticultural products.

21 – Horticultural Ingredients in a Typical Fast-food Meal



1. Corporate Restaurant's Horticultural Supply Chain:

Local corporate restaurants have a mix of Lebanese and western-inspired food. Lebanese fast-food includes sandwich wrapped products, including Taouk, Kafta, Shawarma, Falafel, Mankoushe, or Saj. You can also find western-inspired meals like Francisco, Crispy, and Fajita sandwiches or burgers. International restaurants, especially Western or American, sell mainly sandwiches, burgers, and pizzas. Western and western-inspired foods are usually offered with a meal containing French fries and a carbonated drink. Some of these restaurants offer salads, mainly Coleslaw or Caesar, offered as a side-meal. What is most common in fast-food dishes is the high-reliance on wheat-based bread. This is interesting because Lebanon imports most of its wheat and is subsidized by the government. Concerning the horticultural supply chain, items used in the production may include potato, cabbage, tomatoes, iceberg lettuce, onions, mint, parsley, green pepper, and mushroom. It is more common to find vegetables than fruits in fast-food preparation, where mostly cabbage is used to make coleslaw, potatoes to make French fries, and tomato, lettuce, onion, or pickles are used inside the sandwich. Tomatoes and onions are rather prepared by the central kitchen due to their delicate, water-holding, spherical yet unstandardized nature upon slicing. Fermented cucumbers can also be supplied by these companies; however, other processors are more responsible for supplying fermented items, separate from the horticultural supply chain. This is because fresh and fermented products have different operational structures. Moreover, fruits like lemon are used in sauces or used as juices, similarly with apple, orange, and carrot (vegetable, is sometimes used with Coleslaw). Fresh juices are more commonly found at larger corporate food chains and also predominantly used in juice

shops. However, 1st grade fruits are sold directly for a premium or typically offered at high-end restaurants as a token of generosity by the end of a meal or they may be used in processing. In other words, 1st grade fruits are not typically purchased or used by fast-food restaurants. Observationally, international corporate fast-food chains are less likely to use fruits in their operations than local corporate restaurants. In addition, local chains reported more ingredients being used than international chains; however this might be attributed to concealment of information by the international chain. This does not mean international chains don't use fruits in their operations, if fruit juices are offered at these restaurants, then the question asked would be whether: is it freshly squeezed or is it diluted with convenient, ready-to-use sugared-powder?

2. Importance of Food Safety Standards to the Corporate Restaurant's Food Supply Chain:

In the preparation of mass-produced, standardized food, there is a large and growing concern for food safety. If food safety is compromised, even in a single meal, it could jeopardize the business survivability of these corporate chains. It is vital for corporate restaurants to follow scientific protocols along the supply chain to ensure safety of every ingredient. If one ingredient was compromised, then a pathogenic entity might develop and infect consumers, leading from mild to severe food poisoning, or even death. It can also pose a legal and financial risk on the corporate entity if they were sued or word got out. It is critical to inspect all processes from handling, preserving, preparing, and delivering the food. To ensure this, corporate food restaurants have a lot of risks in preparing each meal. So to minimize this risk, "private food safety certifications are necessary as an operational value first over marketing potential";

implied by a food safety officer of a local corporate fast-food restaurant. This can be found in both local and international corporate restaurants, especially the larger chains.

22 - Food Safety in the Corporate Food Supply Chain



3. Private and Public Food Safety Certifications used in Corporate Restaurants in Lebanon:

For Corporate restaurants, inspections are done regularly along with lab tests to check for debris, microorganisms, chemical composition, and other physical characteristics that determine the quality and safety of the produce used. The test is done randomly and regularly by taking random samples through internal and external audits. The procedures and hazard thresholds abide by the standards set by the private certification bodies; by both the corporate restaurant and their supplier. A Certificate of Analysis would be required from the supplier by the corporation to check if both reports are congruent. Mostly used certifications include ISO 22000, where ISO is an independent, internationally recognized body, which provides a food safety management system to identify and control food hazards, and ensures that food is safe for consumption. This is provided by locally registered companies, who undergo the inspections, reports, and consults the company on potential hazards and how to control them. Each branch has a

system to ensure food safety, starting from inspection on receiving to final delivery. Reporting on receiving is crucial, where temperature and humidity are checked every couple of hours. Also, warehouse inspections and maintenance are done to ensure the cleanliness of the facility and that operations are running without complications. In case there are any problems with the produce, package, or label, then it would be returned to the supplier. Any undesired outcomes can be traced back to the original source and the processes it went through, where corrective action can be taken. It is easier to deal with local suppliers, as they can solve problems more swiftly than international suppliers. Other internationally recognized certifications used include FSCC 22000¹⁸, BRC¹⁹, and SQF²⁰, which are also used locally by corporate restaurants. The prices of these certifications are variable and dependent on the type of facility and its size along with the magnitude of its operations, which verify employee, consultant, software, and audit and accreditation costs.

On the other hand, there used to be an active public food safety system in Lebanon, when private certifications were unaffordable by owners of food-service establishments. The Ministry of Public Health assesses food safety of facilities, equipment, workers, and systems utilized to reduce hazards from receiving to final delivery of food. The

18 The **FSCC 22000** provides a flexible food safety system for food companies to use while, in parallel, assess that legal compliances are not violated. FSCC 22000 is valid for three years after the company passes its 1st and 2nd onsite audits done by the certification agency.

19 The **BRC** requires more descriptive processes that guide the organization on reaching food safety, quality, and legal obligations set by the certification body. The BRC certification process is easier and is valid for 1 year, where one onsite audit is required on a yearly basis and that renews the validity of the certification.

20 The **SQF** certificate has two levels, where Level 2 is concerned with food safety and Level 3 is focused on quality. The certification body requires one onsite or offsite audit followed up by another onsite audit that addresses major non-conformities in the next 14 days and minor non-conformities by the 30th day after the first inspection. (ISO Update, 2018)

ministry used to reward food restaurants with gold and silver standards based on their respective scores, or fine those if standards are below the required and if not shut them down. However, this system was shown to be inefficient or even counter-effective in some cases, so eventually, the initiative was disbanded, but food safety inspections remain with some consultations followed up with legal repercussions (MOPH, n.d.).

The Ministry of Economy and Trade also is involved in the food system, especially in protecting consumers through the Consumer Protection Directorate. Its aim is “to ensure a safe, fair, and equitable trading environment exists for consumers and commerce alike.” The directorate inspects restaurants and supermarkets about the following: Food safety, deceptive advertisement, and quality of goods; high prices of goods, services and utilities; consumer awareness; counterfeit goods; and enhance consumer confidence in government. This is achieved by undertaking routine inspections, collaborating with other agencies, investigating consumer complaints, and recommending advice to the business and consumers (MOET, n.d). In terms of results, none of the corporate participants reported in using publicly-rewarded food safety certifications. Corporate restaurants used strictly international private food safety certifications while reporting occasional interference of government agencies to inspect operations are up to the legal requirements and minimum food safety standards required by the state.

4. Relationship between Corporate Restaurants and their Suppliers:

In general, the relationship between corporate restaurants and their suppliers is symbiotic. The supplier’s best interest is to be able to sell a significant amount of premium products for a better-than-market price to large, distributed, and reputable corporate restaurants; it creates desirable turnover and profit. The corporate fast-food

chain has high regard for quality and safety; this cannot be compromised, even though their meal preparation should be fast. This is why ready-to-use ingredients are favored, where human error can be minimized with the use of special machinery that standardizes quality and safety of the production. Strict quality requirements ensure standardization of mass-produced meals, while providing safe, quality, and fast food. Fast-food chains prefer local supply to guarantee freshness while costing less than imported premium goods, however depending on the customers' demands; the chain may resort to imported horticultural goods. Some quality standards cannot be met by the local supply, so it has to be imported. In addition, corporate restaurants would rather have several suppliers, so that they are less dependent on one supplier. They would have a primary supplier, but at the same time have secondary suppliers. These suppliers would be up to the requirements set; they would be familiar with the quality standards and operations of the company. They might supply a few branches so that in case there was a problem in the supply chain, they would be equipped as a potential substitute. The corporate restaurant's relative size in distribution and turnover decides their negotiating power with their suppliers. Ultimately, although the relationship between the producer, supplier, and the corporate restaurants is symbiotic, where they are all bargaining better deals than in the common market, however corporate restaurant's availability of substitutes and demand for consistent and strict quality standards from their supplier provides them with further dominion over the supply chain. Nevertheless, if the supply for certified, premium, semi-processed, convenient, and safe ingredients was insufficient, then the supplier would have no choice but pay them with premium prices that the supplier or producer negotiates. Still, it is always desirable to sell to large

corporate restaurants; local or international, because securing an outlet for a perishable good is always a priority; and not everyone is willing and able to pay a better-than-market or premium price. So the power is in the hands of the corporate entities in most cases, especially for horticultural produce, since they are ready to buy a large quantity of perishable produce to be used on a daily basis and to be paid on time with more favorable prices and conditions than in the common market.

However, there is a difference between local and international corporate restaurants, not in supply but in their organizational structure. International fast-food chains are commonly franchised by multinational corporations or holding companies based locally. International fast-food franchises have similar suppliers, standard requirements, and contracts that local corporate fast-food chains utilize; however, the mode of operation and transparency is different. Meaning, as an international brand to be able to standardize quality over several countries, there is a bureaucratic relationship between the franchisee and the franchiser, which influences the mode of operations strategically and on a daily basis. There would be the main franchiser fast-food corporate company, and under its supervision, you have regional establishments that manage franchises in different countries in their allocated region. The level of transparency between the franchisee and the franchiser is low, where the supply management of the franchisee is unaware of the specificities in the qualifications looked for in their supplier. Most of the international fast-food items are imported and fall under the approved suppliers set by the franchiser company. This is first done to protect company secrets and to optimize the standardization of food meals. However, for horticultural products (including tomato, lettuce, and onions) it differs, because of its higher perishability and

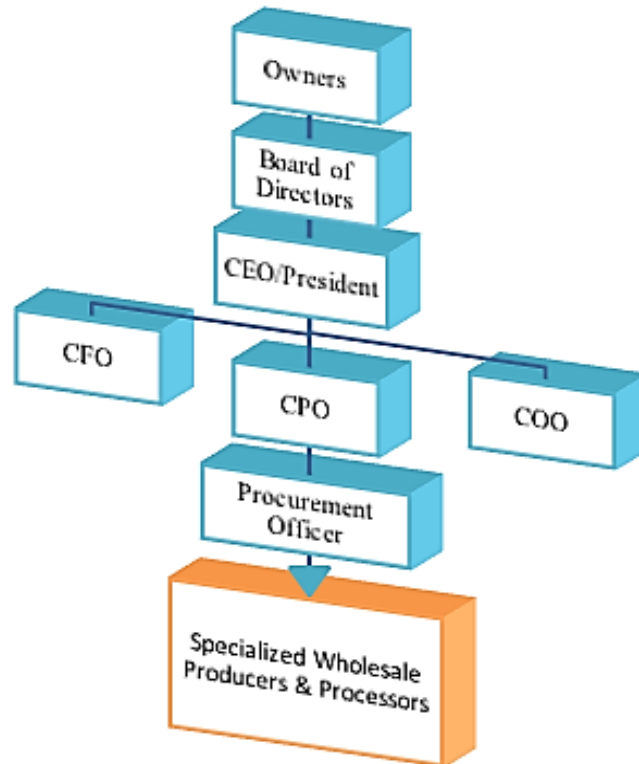
requirement to be served fresh. So a local horticultural supplier should be identified by the franchisee and approved by the franchiser upon sampling. The supplier should have certified quality and safety standards matching the franchiser's requirements while being able to supply a standardized and consistent supply of fresh vegetables; every few days and directly to the chains. The corporate restaurant usually has a centralized warehouse or central kitchen; however, for pre-processed horticultural products, it is optimal to transport items directly from the supplier to the restaurant chains. This is done to minimize spoilage and also to retain freshness and quality of the produce. So the franchiser has control over the supply chain by limiting the suppliers to the franchisee, whereas local corporate fast-food chains have full control over their operations. Nevertheless, even with the different managerial system, both local and international fast-food corporate chains have similar supply chain requirements concerning their horticulture line, since they both tend to have the same supplier or supplier qualities; i.e. specialized wholesale producers and processors; and not from direct sale, supermarkets, greengrocers, nor the FV wholesale market²¹.

In the figures below, organizational differences can be observed between the organizational structure of the local corporate chain and the international corporate chain. In the figure below, the organizational structure of the local restaurant defines ownership structure clearly, where local restaurants have a direct owner that can optionally be part of the board of directors. The president of the organization is a member of the board of directors as an executive officer presiding over the CFO, COO, and the CPO. Mainly, the CPO is responsible for procurement operations deals with the

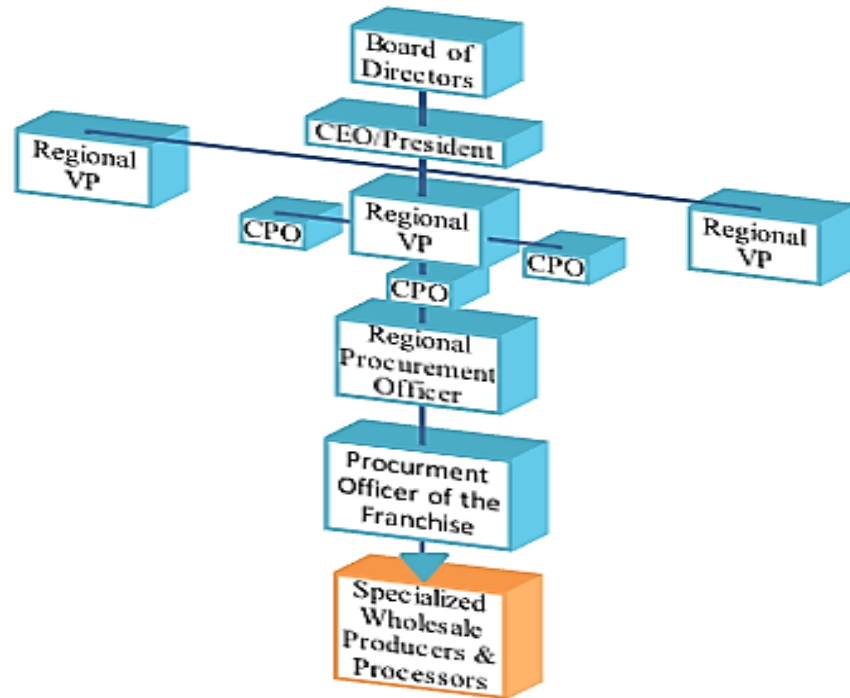
²¹ The same cannot be applied for non-corporate restaurants

suppliers, including recruitment and transaction of supply relationships after gaining approval from the CEO.

23 - Organizational Chart: Locally Owned Corporate Chain



24 - Organizational Chart: Internationally Franchised Corporate Chain



In the figure above, the organizational structure of an international corporate chain is much complex. The difference is that the ownership structure is defined by shareholders, where the board of directors acts as an international executive branch led by the CEO or the president. The president of the corporation manages regional offices across the world. The regional offices are managed by the vice-president residing over the CFO, COO, and the CPO of the local offices. Mainly, the CPO is responsible for communicating with the regional offices and the procurement officer of the franchise. The procurement officer identifies local suppliers to be approved by the regional offices, so the procurement officer of an international corporate franchise has less

control over local corporate restaurants. Nevertheless, the organizational charts²² presented above, show that both the local and international corporate chains obtain their horticultural supply from specialized producers and processors.

In contrast, supermarkets, greengrocers, FV wholesale markets, or farmers are unable to meet consistent supply of quality products demanded by the corporate chain due to their unbound, unstandardized, and uncertified supply. Also, the credit terms posed by the corporate chain are unfavorable to these suppliers, where cash is essential for business transactions. Especially, with the banking policy followed after the October Revolution, where cash liquidity and price of imports became problematic. This places international fast-food chains at a higher risk, since in general they import a large portion of their supply from abroad, including all items with the exception of horticultural products that might be supplied locally, purely from abroad, or have a mix of both, depending on the unique strategies abided by the different corporations. Similarly, the economic situation has led to an insufficient or inconsistent supply of imported items and on-credit policy remains unchanged but the period of payment was shortened significantly for both local and international chains. Many restaurants had closed down or halted operations, or fast-food chains revenue declined significantly (approximately 20-40% decrease, reported by some of the participants as general figures); however, their operational strategies, reputation, and long-lasting relationship with their customers and suppliers allow them to sustain business operations.

²² The organizational charts presented are not officially published by any of the corporations, but only a representation of the organizational dynamics realized from the findings observed.

5. Standards Required by Corporate Horticultural Supply Chain:

Corporate restaurants, both locally owned or internationally franchised, require a higher quality standard than supermarkets. This also means that their primary supplier is different, and the dynamics of the relationship is not identical. Corporate restaurants source their products from specialized wholesale producers and processors that produce semi-processed vegetables. This includes primary washing and cleaning, shredding, peeling, cutting, sanitizing, and packaging; they have a strict standard for safety as well as quality. Quality includes shape, size, structure, color, taste, appearance, and processability. The variety used during production and its adaptability to the topography and climate are a central piece of preparing fruits and vegetables up to the standard of the corporate restaurant. This is followed up by favorable farming methods used, including uncontaminated water quality and minimal pesticide usage. These are inspected through lab tests and field visits, which are done by the supplier and the corporation under the standards set by the private certification body utilized, and followed up by food safety or pest control consultants that ensure operations are up to standard. The third factor includes post-harvest methods through processing and delivery that ensure food safety and quality assurance along the supply chain.

Both local and international corporate food chains are selective in choosing their suppliers, and in most cases, have a primary approved supplier and secondary alternative suppliers. Their suppliers are usually food safety certified and interested in supplying the finest quality in congruence with their supplier's strict specifications. It is in the supplier's best interest to match and supply the desired quality, because of the large quantities purchased for a 'better-than-market' or premium price. The corporate

restaurant would then have control over their suppliers, especially when they have a substitute. Fruits and vegetables are usually undermined in their food safety hazard, where they can pose a great risk. The corporate restaurant chain has no problem paying a satisfactory price to their suppliers, as long as food safety and quality are guaranteed, which are crucial to their operations. So, it is the supplier's responsibility to supply the desired quality standard by managing all aspects along the supply chain; including production, storage, process, and transport until it reaches the central kitchen, where inspection and further processing occurs and then transported to the different chains. Production is carefully managed, and operations are inspected by private certification bodies or consultants. Starting from the type of species planted, water quality used, and pesticides minimal usage, and then directly after harvest, they are semi-processed, washed, sanitized, packaged, and prepared according to the requirements of their clients. Produce are transported in monitored and refrigerated closed trucks daily, or twice per day or twice per week. They are supplied to the central kitchen, and only if these suppliers are approved by the company, then they can distribute ingredients directly to the restaurant chains. Raw produce is delivered to the chains, where minimal processing is done in a central location in order to standardize production across all chains, or a standardizing machine at the chain allows for decentralized supply. Also, the central kitchen or warehouse formulates pre-prepared portions that are more convenient to use in the kitchens of the different branches, like:

“Shredded and sanitized cabbage is placed in 1 or 2 Kg nylon bags. This is done to preserve shelf-life and freshness of the product, as well as limit potential contaminations. For example, it is unfavorable and unsanitary to prepare a large batch

of coleslaw as it will lose crispiness if left unused for thirty minutes and become hazardous after two hours. So, centralized distribution ensures standardization of quality and minimizes food safety risks. In addition, tomato, onion, and pickle slices, for example, require a specific size, so that they can be complimentary be placed inside a burger.” – (Food Safety Officer, Locally Owned Corporation)

As a last resort, produce are imported from the global market, mainly Europe or the US, because FFV transported over a larger distance require refrigerated aerial transport to preserve shelf-life and market value. This requires a large investment to operate and charges a premium price. The main produce imported by corporate restaurants is potatoes.

6. Corporate Restaurant’s Supply and Standards Required for Potatoes:

There are two types of potatoes utilized, and they tend to have different suppliers. Most of the products are supplied through approved, certified, or specialized producers and processors, utilizing local production primarily and regional production secondarily. For potatoes, it has two functionalities; both used as French fries; however, there are varieties suitable to be used inside the sandwich or burger, and the other used as French fries to be served outside the bread-based meal in boxes or platters. The prior is a local variety (Commonly Agria), which is chosen for its weight, taste, and color after frying. The latter is imported for its unique shape, crispiness, and taste; and is usually double coated. These specifications are not available in the local variety, so they are imported and incur an additional premium cost to secure required quality standards. However, this variety cannot be used inside the sandwich because its rough shape could tear the sandwich. This is where the local substitute plays its role; within the sandwich because

it doesn't have tearing potential, in addition to its advantage of being local, fresh, and relatively cheaper. However, regional potatoes are substituted when local availability is insufficient. It is the responsibility of the supplier to maintain a consistent supply or his business would not be continuous across-seasons. So these locally based suppliers would use regional production from Syria or Egypt when local supply is diminished. It is the supplier's task to be able to maintain the quality standards set by the corporate food chain. Thus, in corporate restaurants, the main horticultural produce that is imported is French fries; peeled, sliced, chilled, and ready-to-use. However, it is more favorable for these companies to obtain these products locally to ensure freshness and promote local production for a lower price than imports, especially with the events leading to the October Revolution and after, where the prices for imports almost doubled. There is no local or regional substitute that can match the standards of the imported variety favored by the local and international corporate restaurants. According to a supply chain managed of a corporate restaurant, the problem was mainly attributed to the inability of the desired species to adapt to the local climate. So, even if the supply was available, the quality standard should also be matched to be able to penetrate the corporate food supply chain.

However, the main suppliers for potato- French fries are Lamb Weston or McCain that corporate restaurants import and to be used in their supply chain. Interestingly, the formulation rather than the variety is fundamental by looking into how these fries are produced based on the ingredients:

Lamb Weston: "Potatoes, Modified Potato Starch, Vegetable Oil (Contains One or More of the Following: Canola, Palm, Soybean, Sunflower), Rice Flour, Dextrin, Salt,

Leavening (Disodium Dihydrogen Pyrophosphate, Sodium Bicarbonate), Dextrose, Xanthan Gum.”

McCain: “Potatoes, Sunflower Oil, Batter (WHEAT Flour (with Calcium, Iron, Niacin, Thiamin), Modified Starch (Maize, Tapioca), Rice Flour, Salt, Corn Starch, Natural Colours (Turmeric Extract, Paprika Extract)).”

Thus, to be able to match the local quality with the imported variety is impossible without development of a food processing factory, which will require further imports of secondary raw material like vegetable oils and wheat, among others. So, it is best not to repeat the mistakes of the past, but rather focus on improving the quality of locally produced potatoes without the high level of processing done by these corporations. It requires corporate restaurants to abandon the long distance importation of nutritionally compromised products and adoption of local or regional supply, even if initially it compromises perceived quality standards by 10-15%. The imported variety may have a higher shelf life up to 720days to maintain global supply; however on a local scale the artificial-long shelf life is counterproductive as it compromises on natural freshness of local origin and that may be perceived as superior to the frozen, highly processed , nutritionally concerning, imported variety.

7. Distinction between Corporate Restaurants and Supermarkets in the Horticultural Supply Chain:

Both locally owned and internationally franchised corporate restaurants have a more structured supply chain than supermarkets, which is based on non-binding opportunistic relationships. In contrast, corporate restaurants have more professional interactions with their suppliers, and therefore there are more contractual agreements specifying quality

standards required, return and compensation policy, payment terms, among other requests that solidify the relationship between them. In terms of quality, requirements are strict; following certification protocols to ensure food quality and safety are not compromised. The contractual terms are dependent on the nature of the produce used; however they are usually long-term contracts because corporations favor suppliers that are able to have a consistent and standardized supply that is capable of operating continuously. Moreover, contracts are negotiable between both sides and agree on a predetermined price for a period of time. The contracts also ensure that the company obtains the required quota of produce promised by the supplier. Trust and transparency is an integral component in defining the relationship between corporate food chains and their suppliers, especially due to the long-term, professional, and profitable desirability of both segments; as long as quality, safety, consistency, and service-oriented relationship are insured by the supplier and up to the requirements set by the corporate food chain.

The figure below summarizes corporate restaurant types and their relationship with their horticultural suppliers.

8. 7. Summary of the Restaurant-Supplier Relationship in Lebanon

	Locally Owned Corporation	Internationally Franchised Corporation
Primary Source	Specialized producers and processors	Specialized producers and processors
Reason	Quality, safety , consistency	Quality, safety, consistency
Relationship	Professional, strict	Professional, strict
Terms	Credit	Credit
Contract	Binding	Binding
Standards	Premium	Premium
Certifications	Always	Always
Negotiation	Predetermined, symbiotic	Predetermined, symbiotic

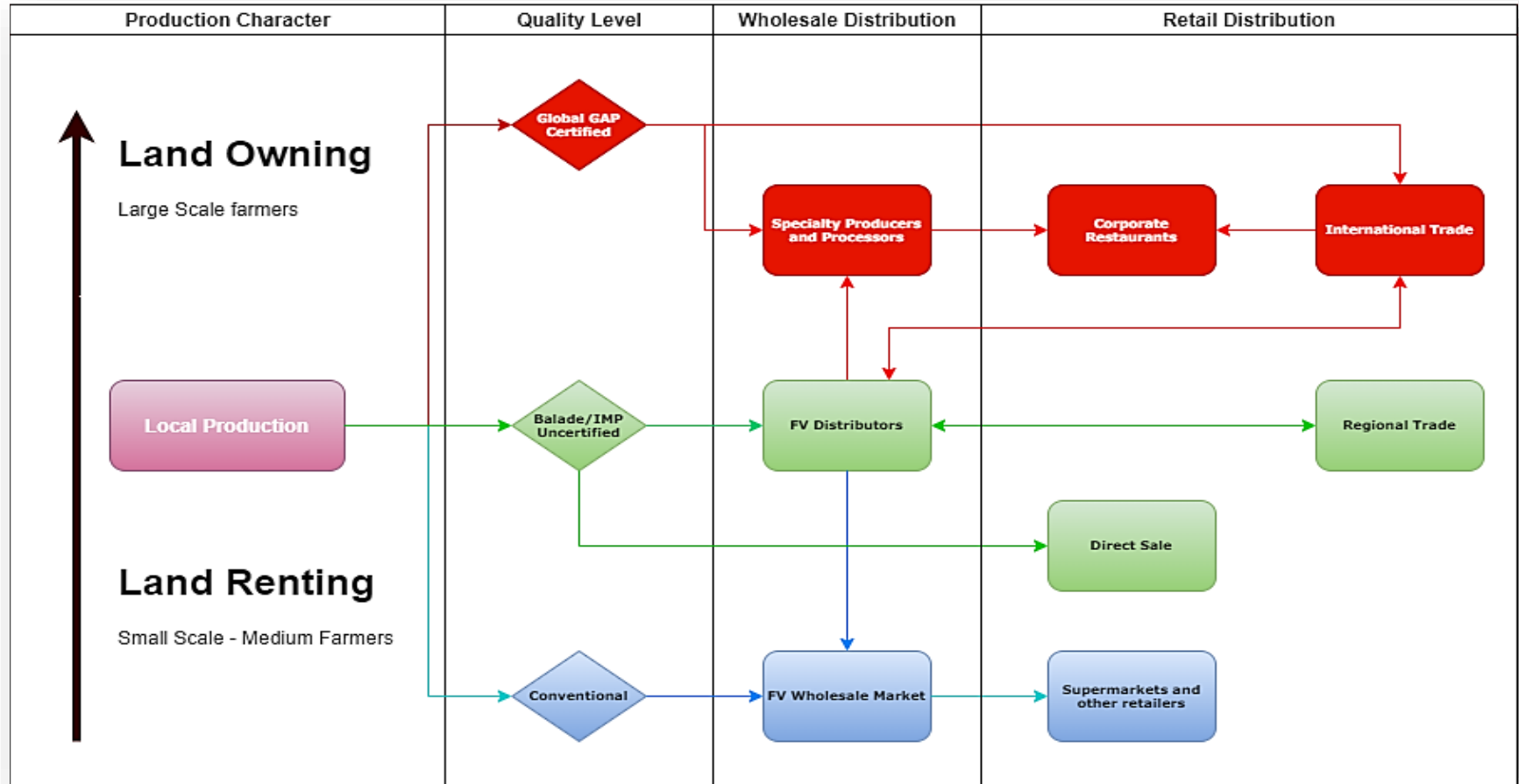
There is no difference between locally owned and internationally franchised corporations in terms of their relationship with their horticultural suppliers in the food-service sector in Lebanon. Both types, source their products from specialized producers and processors for their safe and quality level produce, including always having a private certification and process goods up to the requirements of the corporate chain. Their relationship is professional with strict requirements and negotiation is predetermined and overall symbiotic due to favorability of deals between the supplier and the corporate restaurant. Payment terms are on credit basis and paid without delay. The relationship is bound with a contractual agreement, ensuring a consistent supply of premium grade products along with the aforementioned details concerning payment terms and relationship structure, including a strict return policy.

In addition, the similarity between corporate restaurant types was not expected. Locally owned corporate restaurants were expected to have a different supply chain requirements compared to internationally franchise corporate restaurants. Due to the adoption of necessary private food safety certifications amongst both types, then they tend to have similar types of horticultural providers, i.e. specialty producers and processors that are usually are corporate-led. Corporate restaurants and food safety standards seem to co-exist, so for future comparisons the difference between corporate and non-corporate restaurants can be surveyed, where majority of non-corporate restaurants are expected to source their products from the FV wholesale market, greengrocers, or directly from producers especially if located in rural areas.

F. Opportunities for and Barriers to Horticultural Providers in the Corporate Food Supply Chain in Lebanon:

In order to analyze the opportunities for and barriers faced by Lebanese horticultural producers when participating in the supply chain under the scope of the corporate food regime, then these farmers should be classified. However, this would be very difficult due to their individual uniqueness; education, experience, wealth, power, and attitudes, and range of definitive aspects, like farm size, variety, methods, and produce quality, value-added processes, and price. Nevertheless, it is easier to identify the channels used by horticultural producers in Lebanon and then deduce significantly relevant classifications of the farmers. As a result, product quality, farm size (small-scale versus large-scale), and land ownership (owned versus leased) were found to be prevalent characterizing factors for horticultural producers. After identifying the channels used by farmers with respect to their characterizing factors, then the limitations and opportunities faced by horticultural producers when participating in the horticultural supply chain can be unraveled. To begin, there are two major sources for horticultural production: locally produced or imported; however, their distribution along the local market is primarily the same. Wholesale distribution channels can be divided into three major channels: FV wholesale markets, wholesale distributors, and specialty producers and processors (Displayed in the third column in the figure below).

25- Horticultural Distribution Channels with Respect to Quality Level and Production Character:

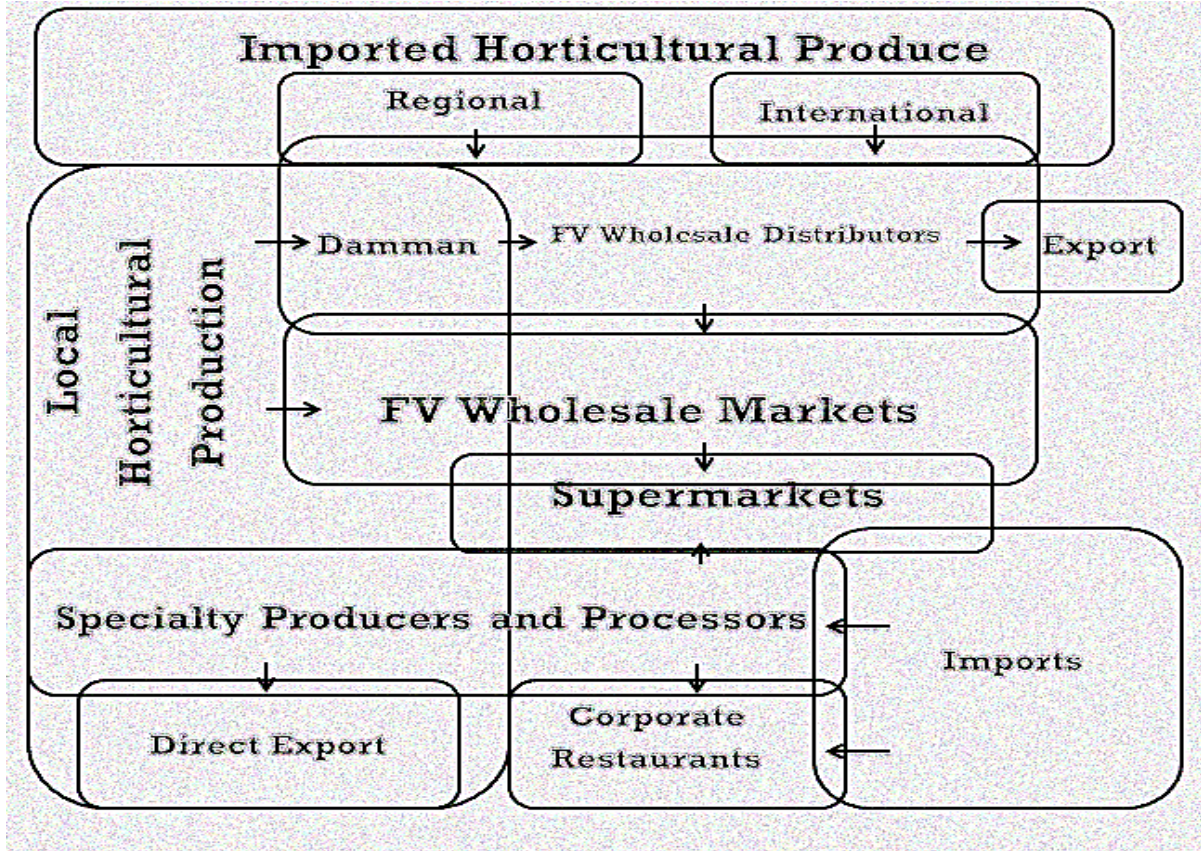


The figure highlights some of the key findings explored in this section, where horticultural products are characterized by the quality level (Second column) that is correlated to farming methods, and that is mainly influenced by the production character (First Column) characterized by the production's land size and land tenure arrangements. The fourth column displays the corporate entities discussed in this paper: Supermarkets and corporate restaurants, including other channels like direct sale, export, and import capacity. To summarize the results displayed:

1. Corporate restaurants get their horticultural supply from specialty producers and processors as well as from international trade. The producers who are more likely to supply this channel have internationally recognized private certifications due to their advantage of being large-scale or land owning characteristics; that allows them to produce a high-quality produce with strict standards, while insuring a stable and consistent supply.
2. Supermarkets and other retailers obtain their supply mainly from the FV wholesale market, which has the largest portion of conventional farmers; and where farmers are more likely small and medium scale farmers or operate on rented land. However, it is not limited by size or land ownership structures, but farming method (Quality Level).
3. FV wholesale distributors have an export and import capacity. International imports require a high level of certification, while regional requires a lesser level of certification, however have a Balade or IMP level quality, which utilizes greenhouses, clean irrigation water, natural seeds, or a minimal use of chemical inputs. These quality levels are able to sell directly to retailers, to customers, or at farmer's markets. Also, FV distributors also operate at the FV wholesale market, where they have a capacity to sell local production of all qualities, but mainly conventional.

The next figure represents overlapping relationship structure between producers, suppliers, and retail channel.

26- The Horticultural Supply Chain under the Scope of the Corporate Food Regime:



The arrows represent a supply chain relationship and the overlapping boxes highlight intersectional relationship structures.

The figure above can be summarized as follows:

- Local horticultural Producers supply their produce to a damman or FV wholesale distributor, where the supply can be distributed for export or to the FV wholesale market.
- Other producers can supply their products directly to the FV wholesale market.

- The FV wholesale markets supplies supermarkets, as well as other retailers and some restaurants.
- Corporate restaurants procure their horticultural products from specialty producers and processors as well as from imports.
- Other local producers supply their production to specialty producers and processors through contractual agreements.
- Both specialty producers and processors and some local producers have the capacity to directly import their production without middlemen suppliers.
- Supermarkets obtain their produce mainly from the FV wholesale market, but also have a direct channel for imports from suppliers.
- Specialty producers and processors mainly produce locally, but rely on imports if products are out of season.
- Some local producers are able to sell a small portion of their products directly to supermarkets when quality or deal is favorable.
- There is a proportion of wholesalers, damman, middlemen suppliers, or even retailers that have a local production capacity.
- There are regional and international imports procured by the FV wholesale distributors and distributed to the FV wholesale markets, where supermarkets and other retailers can procure these products.

1. Limitations of Agricultural Land Ownership and Size in Lebanon:

According to the previous figure titled “Horticultural Distribution Channels with Respect to Quality Level and Production Character” shows the relationship between land ownership and agricultural land size, which both have a direct correlation with quality level produced. Thus, the larger the land size or if the land is owned by the producer, then there is higher chance for that producer to produce a higher quality product than a producer with a smaller or rented land. Quality determines market and negotiation power. So power is related to land size and land ownership structures. Moreover, real estate prices in Lebanon are high compared to regional averages. The high prices to own land prevents producers to easily have access to own land. Thus, production costs related land diminishes producer’s profits. Most farmers are producing on rent basis as it seems feasible on the short term. The nature of rent-based production discourages the farmer in investing in technologies or certifications that would increase quality of production. Farmers usually do not have direct access to supermarkets and have no access to corporate food restaurants. So in a way they are semi-marginalized from the corporate food supply chain. Corporations are looking for consistent quality throughout the year, where renting small size farms are unable to compete. Barriers to entry are high and require a high-level production capacity to produce quality goods. The utilization of sophisticated methods that require a talented labor force is also necessary. The land owning capacity ensures a stable supply. The large land size provide supplier with consistent supply. Agricultural certifications are only accessible to large land-owning producers due to legal and cost related restrictions. Most corporate restaurants require their supplier to have an agricultural certificate like Global GAP.

Furthermore, small or medium sized, land-renting producers have adjusted to produce using conventional methods. The use of pesticides and chemical fertilizers is prevalent. Conventional farming methods have increased yield, however it decreased quality of agricultural products. Moreover, consumer's increased awareness on food safety hazards during the production process has been prevalent in recent years. Thus, the quality value of conventionally grown agricultural products has decreased. The decrease in quality reduces the power of the producer and their ability to negotiate better prices on their products.

Ultimately, conventional, small or medium sized, land-renting producers are marginalized from the corporate food supply chain, directly by corporate restaurants and indirectly by supermarkets. The only distribution channel that remains for these producers is the FV wholesale market that has low barriers to entry.

2. Limitations of the FV Wholesale Market in Lebanon:

According to the farmers, most of the horticultural production is consigned to the FV wholesale market, where all types of farmers list their production through broker-like traders. The farmer either transports their production, or a Damman or middleman supplier collects from the fields of farmers to be displayed at the various FV wholesale markets. The FV wholesaler is responsible for selling farmer's produce to retailers for wholesale prices. In compensation of the broker's services, the trader deducts a 6-10% commission of the total revenues as payment. There are no specific quality standards required, where every batch of produce has its respective price based on the quality, season, and availability in the market. There are three recognized quality grades: 1st Grade, 2nd Grade, and 3rd Grade; 1st Grade being the finest quality. Again, there is no

standard mechanism to grade products; however it is based on perception and negotiation power. The quality grade is correlated to the degree of agricultural production used mainly and value-adding processes including packaging to preserve freshness and increase consumer's perceptions in quality of the product and labeling to build a relationship with customers. Sensory analysis of the product are typically used to grade conventional and IMP uncertified production, however private certifications increases quality by using proper production methods on a scientific basis with required lab report of soil and water quality used in production. This provides specialty producers and processors who are certified with an added market and negotiation power that reinforces there top quality grade advertised. 1st grade produce are usually sold to higher-end or corporate restaurants, sold to processors, or direct sale, so it is harder to find this grade at the FV wholesale market. Consequently, this means 2nd grade and 3rd grade produce are generally found at the FV wholesale markets, and which are supplied by the majority of farmers, conventional farmers. The quality grade of the product is directly correlated to the production method utilized by the farmer. So the superior the farming method and experience of the farmer, the more probable they would produce a larger percentage of 1st grade produce, which is usually sold for premium prices. The limited availability and high quality of the produce allow for more favorable price negotiations, which helps producers to seek more satisfactory deals from the market. This means they wouldn't probably sell their limited 1st Grade produce to the FV wholesale market due to its discouraging conditions. However, 2nd Grade and 3rd Grade produce are maybe of lesser quality but found in larger quantities. So the farmer fearing potential losses of a perishable product would use the FV wholesale market to salvage revenue, even if

conditions were unfavorable. In addition, the FV wholesale market has been found to be inefficient due to corruption, lack of liability and accountability, and high commission of the trader.

3. *Limitation of the Political System on the Horticultural Supply Chain:*

Subsequently, corruption includes governmental and sectarian-based clientelism, undisclosed or smuggled fruits and vegetables passing through the Syrian border, and inadequate facilities in handling FFV found at the FV wholesale market. According to some farmers, “government and sectarian-based clientelism occur when public funds are used to procure agricultural inputs and are then distributed to politically affiliated officials or their allies, who then creates unfair advantage between producers”. Also, production from regional neighbors like Syria, have relatively lower costs in production; so their uncontrolled penetration into the local market creates unfair competition. The farmer complained, “It is unfair because smuggled produce has lower production costs and evict value-added taxes”, which allows for these products to be sold for a significantly lower market price. This then would create a ripple effect that would eventually lead local farmers to lower their initial selling price in order to be able to compete in the local market, reducing their overall profit and market power. However, Lebanese horticultural production is still perceived better in quality, especially Balade/IMP uncertified products, which are affordable and have an esteemed status in the perception of Lebanese consumers. Nevertheless, the FV wholesale market set up is effective; however, it is relatively inefficient with respect to the commission rate sorted out from farmers with respect to their outdated facilities or value-adding procedures. It has been noted that their sorting and handling in delivery can be significantly improved.

Moreover, the commission rate (6-10%) is higher in Lebanon than the regional average (5-6%). This might have an undesired outcome on the profits gained by Lebanese farmers. Also, since this system is based on trust, there is no proper accountability that tracks and audits inventory; cheating can occur regularly with no enforcement by the law. Also, the lack of liability allows traders to incur unfavorable prices in the right of the producer, due to the produce's perishable nature and where retaining quality ensures more favorable prices.

4. *Limitations of the Food Supply Chain Revealed through the October Revolution:*

The October Revolution had a negative impact on the food retail sector and producers, where sales and profits for food companies decreased due to a decrease in purchasing power, inflation, and bank control on withdrawals. So, people were buying less, which led companies to reduce their purchasing capacity from producers or suppliers. The price of the local currency devaluated by half and so imported commodities priced in USD doubled in price. This forced both supermarkets and corporate restaurants to reduce and remove some of their imported items, including tropical horticultural products, potatoes (or chilled French fries), among other horticultural products imported from international markets. Even local production had increased in price simply because the raw material used in production also is imported, mainly gasoline, agricultural inputs, and packaging material. However, this social movement might turn out to be a pivotal point that would force Lebanon into a novel food regime understanding that is necessary for the country's survival. Lebanon imports most of its food stuff, medicine, fuel, and among other things.

As of December 2019 the Trade deficit reached a value of 1021.82M USD (The GDP of Lebanon for 2019 was 56.9B USD; thus the trade balance was approximately -1.795% of Lebanon's GDP without accounting for currency devaluation). As of mid-April 2020, the value of the local currency devaluated chaotically due to ineffective government policies and corruption, leading to the October Revolution social movement, and intensifying with the Covid-19 lockdown a month prior, whereby safety measures discouraged economic activities. At the same time, public debt valued around 122,473B, the highest value since the history of Lebanon. As of 2018, Lebanon is the 3rd most indebted country in the world with a 151% Debt to GDP ratio, where it is expected to increase dramatically due to recession, instability, and extension of international loans²³ (Trade Economics, 2020).

The IMF and World Bank have used debt or aid as a neo-colonial, hegemonic tool on nations to influence their economy, resources, markets, and geo-politics without military intervention. Thus it is unfavorable for a country to take loans, especially if that sum is not used to accelerate growth (Azhari, 2020). The country would be surviving on false growth after taking a loan, and if bonds are due and unable to be paid by the government. This might lead to international pressure forcing the country to prioritize paying the debt, where other government expenditures for fuel, food, medicine, military, and public remittances would be neglected until payment is covered. A defaulting country would be unattractive for future loans or investment. In the same sense, paying off the loan would just decrease the government budget on those commodities and necessities. In terms of food security, insecurity would surely rise due to a spike in

²³ The \$1.2 billion 10-year sovereign Eurobond maturing in March 2020 trades at 82 to the USD for an implied yield to maturity of 175%.

poverty, where governments would have trouble importing and subsidizing wheat and fuel; and imported agricultural imports would be highly expensive. Ultimately, this would result procurers of supermarkets and corporate restaurants to resort to local or regional production over imported goods, where substitutes are available, to be able to maintain favorable prices for consumers and turnover a profit.

Lebanon's agricultural sector relies heavily on fuel and agricultural inputs. A large scale farmer reports, "Fuel is used mostly to pump water from the ground or transfer it across large distances. It is also used in mechanization and transport. In total, energy costs account to around 35% of total costs used in agricultural production". Agricultural inputs, including seeds, fertilizers, pesticides, irrigation equipment, equipment, and machines, are mostly, if not all, imported through local agricultural inputs companies and sold directly to farmers or agricultural pharmacies. Since the October Revolution, the price for agricultural inputs had skyrocketed, and farmers had trouble transporting and selling their products. Luckily, the agricultural season was ending, but the aftermath remains in effect. With the new agricultural season starting after the winter, farmers witnessed that the price of inputs and the cost of their operations had significantly increased. This would lead to transformations in the sector, where farmers would rely less on the tools derived from the Green Revolution. They might resort to more organic or IMP uncertified/ Balade production for a value added product. However, the majority of farmers, i.e. conventional farmers that will remain dependent on those tools, will lead to an overall increase in food prices, especially for locally grown fruits and vegetables. Regional produce would be easier to penetrate the local market due to their relatively lower production costs. Conventional farmers that usually pay agricultural input

companies on credit basis would struggle, and since banks disfavor agricultural loans to small and medium farmers, this will transform agricultural input companies into agricultural banks to maintain business operations; revitalizing the financial failure of the past. The farmers that do not comply with change will forfeit their agricultural operations, where larger or corporate farmers might take advantage of the situation and buy or rent more agricultural land from the small and medium farmers, creating a corporate-feudalistic land ownership model that combines the agents of capitalism and feudalism together. The government can prevent this model by promoting, investing, and intervening in policies and projects pertaining to agriculture, agroindustry, and agricultural trade, or else they will find themselves facing a grander peasant and class movement that might result in further violence and economic depression. In parallel, the role of agricultural input companies should be reconsidered and transformed into agricultural input producers, agricultural consultation agencies, and not agricultural creditors. Governmental agricultural policies pertaining to food production and trade are encouraged to be re-explored. Along the crisis, the new government formed in January 2020 and tasked in rescuing Lebanon from economic crisis have been active in designing policies related to production; such as legalizing cannabis production to be used for medical and industrial purposes and provided liquidity for manufacturers to promote local production. Furthermore, the primary limiting factor faced by Lebanese producers is lack of a clear agricultural policy and framework, so it is most important to continue looking for new opportunities for farmers, as their integration in the corporate supply chain, and integrating those opportunities under a national agricultural policy and framework set by the state. Thus, the government's rejuvenated role in the

agricultural sector can transform the limitations of the past faced by horticultural providers into opportunities for the future.

5. *Limitations for Horticultural Providers in Accessing the Corporate Supply Chain:*

There are significant differences between the horticultural supply chain of supermarkets and corporate restaurant chains because they have different standards, certification requirements, and relationship structures with their suppliers. The main suppliers for supermarkets are wholesalers found at the FV wholesale markets. The supermarkets aim to provide wholesale quantities, satisfactory qualities for favorable prices, certification requirements are unnecessary, and their relationship with their suppliers is informal and non-binding. On the other hand, the main suppliers for corporate restaurant chains are specialty producers and processors. The corporate restaurant chain value a consistent supply of quality products tailored under their strict quality standards and specifications, certifications are necessary, and their relationship with their suppliers is professional, binding, and service-oriented. This means supermarkets and corporate restaurant chains have a different kind of primary producers. Private certification requirements are costly and inapplicable to small and medium farmers, so most of their production goes to the FV wholesale market or used as subsistence. Also, to be able to produce large quantities and to have a consistent supply over the year, producers with low agricultural capacity and market potential would be unable to produce for restaurants. This is mostly due to land ownership, where producers that lease land, mainly small and medium farmers, would be discouraged or unable to invest in greenhouses and other sophisticated machinery or equipment as a long-term, value-adding investment. Ultimately, large-scale and land-owning producers are likely to

supply corporate restaurant chains with a consistent supply of quality produce. These producers would more likely have agricultural certifications and have more knowledgeable and technical personnel that apply advanced agricultural techniques because large-scale producers with land ownership are more likely to have more profitable seasons. This allows them to invest in techniques, equipment, machinery, and an educated labor force (Agricultural engineers/consultants), which implies more productive higher-quality products. The farmers' relative profitability would allow them to have the purchasing power to procure or lease other farmer's lands to increase their agricultural capacity or employ farms across different agricultural areas on a contractual basis with strict requirements. This permits farmers to diversify their production and have a consistent supply of agricultural produce that is of high or favorable quality for corporate restaurant chains. These quality items would then be used in further processing to increase shelf-life while matching strict requirements set by their customers for favorable prices and a stable contract that guarantees output supply for a perishable good. Consequently, large-scale farmers that own land have significantly more favorable terms and market power than small and medium farmers that rent land. In short, large-scale, land-owning producers are capable of satisfying strict quality requirements because of their investment capability, certification eligibility, and ability to create long-term relationships with suppliers while producing a consistent supply of quality products throughout the year. Whereas, small and medium scale, land-renting producers are limited by their size, capital, and unstable longevity, which prevents these producers in investing in long-term investment projects or considering application for

recognizable certifications. Consequently, production quality for these producers would diminish market opportunities and limit their channels to wholesale markets.

Accordingly, a farmer's agricultural capacity determines market power, where higher quality products allow for better price negotiation and ensure salability. Also, the problem extends to the power of FV wholesalers over producers, which are mostly small or medium in size and have no alternative market except the neighboring FV wholesaler. However, even though the relationship between the wholesaler and the producer is informal; loyalty in this market can be a double-edged sword, where the first [loyalty] can improve terms for the producer by decreasing the wholesaler's margin while ensuring better selling prices and salability and the second [disloyalty] would punish the producer with contrasting terms. This is in parallel to the private and corrupt structure of this market, where legitimacy in sorting and accounting is found questionable by producers. Local producers supplying to this market have unfavorable chances because their products are sold on consignment, whereas regionally produced goods from Egypt, Syria, or internationally imported goods are procured by the wholesaler. This would create an unfair advantage in the right of local producers if it weren't regulated. Market information concerning the agricultural sector is weak due to the ministries' negligence of this sector. Conversely, it is insufficient to indicate the ministries' failure without highlighting the system's failure since the end of the Civil War, where a clear agricultural policy was not established, government budget directed to agriculture was significantly insufficient and lacked regulation or protection towards a sensitive sector.

6. *Opportunities for Local Horticultural Providers in Lebanon:*

There are opportunities for Lebanese producers and agro-processors concerning the horticultural supply chain. The most prevalent horticultural crop that is being imported into Lebanon is potato. For supermarkets and other retailers, the availability is insufficient so potatoes are imported from foreign markets, mostly from Egypt. For corporate restaurants, potatoes in the form of frozen French fries are imported; because local production is unable to compete with the consistent quality standards across the year. The imported potatoes are washed, clean, peeled, sliced, blanched, coated, packed, and frozen, where coating the French fries is the technological breakthrough that local production lacks and the cold storage remains undersized. In spite of the inability of the desired potato variety to grow in Lebanon, varieties used locally are also used in some restaurants and most households, but the quality of providing a crispy exterior and a soft interior that corporate restaurants demand remains unmatched. There is a developing market opportunity in Lebanon, especially after the economic crisis associated with the October Revolution, where imports became unavailable and their prices increased significantly. This naturally led to the endorsement of local production by people, companies, and government, where private and public investments are expected to increase in producing sectors like agriculture and industry, especially with the legalization of cannabis production. Technological advancements and knowledge in potato production could increase productivity and quality. Corporate restaurants are paying premium prices for imported frozen French fries, so only if local production matches quantity and quality requirements, then they can become an acceptable substitute for corporate chains and develop a profitable market for producers.

According to perceptions of procurement officers working for corporate restaurants, they would favor procuring potato fries locally if supply was available under their desired quality standards due to freshness and cost-benefits. Considering the import crisis, the compromise of 10-15% in quality is a favorable procurement choice considering freshness, locality, and profit.

Other opportunities in horticulture are concerned with increasing quality of the produce, if producers are capable of producing a quality level between Balade/IMP uncertified and internationally certified products. This quality grade would be designated for export since the regressive economic situation in Lebanon discourages value-added production, so there is more potential in gaining export value into the economy for more favorable prices to producers. Private certifications exclude small and medium farmers due to unfavorable short-term agricultural projects, which are limited by rental land ownership structure. To be able to produce high-quality products favorable to the local market and export, irrigation water should be uncontaminated and pesticide usage should be minimized.

The first can be achieved through government enforcement and prosecution of water-polluters, while implementing governmental, non-governmental, and academic awareness programs about the importance of preserving water resources. The second can be achieved through agricultural training programs, agricultural extension services, and extended government involvement in controlling agricultural production. So, provide more inclusive opportunities for farmers to learn about advanced agricultural techniques like organic agriculture or Integrated Pest Management (IPM). Training programs can teach farmers about favorable crop rotation schedules, utilizing compost

or green manure, installing insect traps and attractants, integrating livestock, diversifying production, mulching open spaces, and other tactics that aims to reduce pest infestations or reliance on chemical inputs. Other methods include investing in hydroponics, installing greenhouses, or managing agroforestry systems; however, these techniques are relatively expensive and unprofitable for small-scale and medium farms due to their limiting rental arrangements and capital. This can be solved through subsidization and favorable financing on hydroponic and greenhouse installments. This can be done through collaboration of farmers in one area through private investment or through a partnership program amongst the ministries of agriculture, environment, tourism, non-governmental organizations, and donors.

CHAPTER V

CONCLUSION

The research explores historic and current geopolitical and socioeconomic developments concerned in understanding food regime change in Lebanon, especially concerned with agricultural trade and production by exploring the literature. Agrarian change was apparent, especially when exploring silk production and trade that had dominated the sector, and its inevitable transformation into producing fruits, vegetables, legumes, and cereals due to the European and Ottoman embargo that ultimately caused the Famine in Lebanon. In parallel, a shift in the Feudalistic land ownership structures transformed the political economy and the additional land joint with Mount Lebanon created opportunities for agricultural expansion. Then, the green revolution and the US interference in Lebanon's affairs were then apparent, where change in the structure of the economy was realized, including import dependency on cereals and emergence of the critical role and dependence on the banking sector. Since then, the government's lack of interference and absence in constructing a clear national agricultural framework and policy was unrealized. Agricultural input companies assumed the role of creditors and maintained the sector, however eventually failed due to lack of collaboration and government's marginalization of the sector. Events leading to and after the October Revolution stirred economic deterioration and currency devaluation. Corporate expansion was prevalent in the period yet limited, where supermarkets and restaurants relied on a high level of imports in relation to exports. Transformation in food system

due to inflation and decreased purchasing power may be underway and required direct actions to be taken by the government.

The paper also examines the manifestation of the corporate food regime in Lebanon, especially in understanding the relationship of supermarkets and corporate restaurants with their horticultural suppliers, where significant differences were realized through qualitative research methods. The primary source of FFV for supermarkets is the FV wholesale markets, where the relationship is opportunistic, informal, and non-binding. Whereas for corporate restaurants, their relationship with suppliers is symbiotic, professional, and binding, so there strict quality standards, certifications, contracts, and service-oriented requirements differ from that of supermarkets. Their suppliers are corporate, large-scale, land-owning producers; also referred to as specialty producers and processors; where a better-than-market or premium, fixed price is paid. On the other hand, small and medium scale, rent owning producers supply their products to the FV wholesale market for unfavorable prices. The FV wholesale market is inefficient due to corruption, lack of liability and accountability, and relatively high commission of the trader with respect to the region. There are developing opportunities in the horticultural supply chain due to increased inaccessibility to imports caused by currency devaluation, especially in producing quality French fries, fresh or frozen, to substitute and provide a consistent supply to corporate restaurants, both locally owned or internationally franchised. Also there is opportunity in producing high-quality, certified fruits and vegetables for the export market; as well as to be used in agro-industry or other value added activities; like packaging and labeling. However, there are limitations for small and medium scale, land- renting producers due to the vulnerability of the agricultural

sector due to increasing input prices, market instability, and lack of government protection or interference. Knowledge assimilation is weak and inefficient by government and ineffective by non-governmental institutes. Sectarian-based clientelism and corruption remains prevalent and limits progression in the agricultural sector.

The results concur that corporate food expansion is prevalent in Lebanon, however with the resilience of traditional retail formats as discussed in Bahn & Abebe (2017) and the importance of the FFV market in limiting corporate food expansion as discussed in Seyfert, Chaaban & Ghattas (2014). The study unravels opportunities in the horticultural supply chain as well as limitations that have negatively affected the agricultural sector for decades. The main limiting factors that prevents the direct access of locally grown horticultural products into the corporate food regime is the lack of government intervention that should support small and medium scale farmers, political corruption and sectarian-based clientelism that creates unfair competition, and the high dependence on imported agricultural inputs. Other factors include the high inequality in arable land distribution, high real estate prices, high barriers to entry to acquire private certifications, unregulated imports, high dependence on and prevalence of conventional farming methods, lack of or ineffective use of finance and funds allocated to the agricultural sector. The research shows that private food safety and quality certifications do marginalize small-scale farmers from the corporate supply chain, which deviates with the inconclusive findings of Henson & Humphrey (2010).

Food regime analysis was used to explain food system change over time, where pivotal events in human history act as a reference point in explaining the effect of wars and conflict on food production, consumption, and its trade. The case study shows food

system transformation of Lebanon over time based on the impact of global, regional, or local historical geopolitical transformations on the agricultural sector, trade, and government reinforce the narrative of food regime theory of Philip McMichael and Harriet Friedmann developed in the late 1980s. The construction of the capitalist economy is realized through the transformation from feudalism to sectarianism , especially between the 1970s-1990s where political leaders gained selective control of trading licenses, increasing the role of and assimilation of imports into the country amidst corporate food expansion along the prevalence of capitalist ideologies. The corporate food regime is inevitable and its influence undeniable as it had a role in ascending traditional food system formats, however its natural implications on the actors involved have become foreseeable, and thus require careful control through mainly uncorrupt government intervention to mitigate impacts and people's awareness to pressure corporation into a compromised reformulation of the system to include a more socially inclusive, environmentally friendly, and healthy food system.

The first part of the study shows how Lebanon's food system is directly affected by global and regional geopolitical developments. The most recent being the corporate food regime, where supermarketization and restaurant corporatization as global phenomena's shifted the global food supply in relation to agriculture and trade. The corporate food regime in Lebanon was explored, where relationships between its agents and horticultural suppliers was better understood. The findings allow for the creation of a framework that seeks to resolve limitations and realize opportunities for practical implementation. The knowledge gained in this research is specific to Lebanon; however

the information can be assimilated to understand the impact of the corporate food regime on other developing countries, especially the MENA region.

Furthermore, based on the qualitative evidence and analysis of results, it is difficult for horticultural producers to participate in the corporate supply chain, where the costs to entry outweigh the benefits. Thus horticultural producers are encouraged to partake in value-adding operations like branding, labeling, packaging, or improving overall perceived quality and implementation of traceability or food safety procedures. In parallel, producers are encouraged to adopt smart and sustainable techniques like IPM/ traditional balade/ organic cultivation methods rather than the usual conventional , where the economic crisis and inflation on imported agricultural inputs of 2020 would be a motivating factor to cause an agrarian shift or food regime change.

Moreover, the proposed food regime shift due to the October Revolution indirectly exposes hindrances in the supply chain based on the history corporate expansion developed in Lebanon. The October Revolution is a social movement against the political system and the oligarchic ruling class, which had gained power due to the sectarian division of capital and distribution of trading licenses amongst their ranks. The subsequent economic crisis that includes currency devaluation and inflation on imported goods is a natural response of the system due to ineffective and inefficient governance.

Agricultural input suppliers, as the leading agent of agricultural development in Lebanon since the 1990s, which import most of their products from international markets is realizing a crisis that will force them to shift their strategies and that will inevitably transform the agrarian sector . The newly formed government of 2020, realizing the long marginalization of the sector is starting to take a more active role in

national agricultural production. Supermarkets and corporate restaurants are forced to delist or substitute normally imported good with local or regional substitutes. The transformations are complimentary with global transformation and are mainly catalyzed by a global pandemic, which have short-term effect on the global supply chain and an eventual long-term de-globalization impact or a shift in global power. Lebanon and possibly other developing countries may resort to shorter supply chains and an increased reliance on regional allies for securing food requirements to their populations. The global-corporate supply chain will survive, however by up taking necessary transformations and where the role of local supply chains will be more evident.

Finally, in the processes of exploring the manifestation of the corporate food regime in Lebanon, a novel food regime could be unraveling, where our understanding of the corporate food regime might transcend due to economic recession, social uprisings and class inequality, political failure, and geopolitical transformations. These occurring events throughout the research and in congruence with historic patterns suggest food regime change. Thus, food system change is inevitable while influencing the nation's food security. The research aims to provide a framework to achieve positive impact on resolving the limitations brought on horticultural producers by the FV wholesale markets, the inefficiency of the political system and policies of the past, and the reasons leading to the October Revolution and after, while building on opportunities explored throughout the research and following-up on recommendations suggested based on the analysis.

A. Comparative Analysis of Results:

A relevant case study to compare results of this paper would be Turkey, especially when considering its history and its control over Arab states before the dismantlement of the Ottoman Empire and after it had lost to the Allies at the end of World War I.

Incorporation of TNCs and integration of global agribusinesses in Turkey began in the 1980s a decade before Lebanon realized such corporate expansion. The government's abandonment of national agricultural projects and reliance on international trade had transformed the agrarian sector leading to a wave of depeasantization and reformulation in the 1980s. Turkey had taken a more aggressive neo-liberal approach, especially considering its strategic location with the help of supranational institutions like the EU, World Bank, and the WTO. Also as a NATO ally since 1952, Turkey's political alliances shifted as well as its system that was criticized for adopting corrupt and inefficient state-led interventionist policies, a result of Cold War interferences (Aydin, 2010). And by 1999, Turkey has realized massive fundamental transformations that complement the agents of the corporate food regime along with its socio-economic, ecological, and health implications on the people involved. Farmers were marginalized from the corporate supply chain and replaced by mechanization and international trade (Karakaya & Ayalp, 2017). Thus, the patterns of historic geopolitical transformations are similar to that of Lebanon; however Lebanon realizes a higher level of resilience due to its diverse sectarian division and their conflicting international allegiances.

CHAPTER VI

RECOMMENDATIONS:

Agenda Setting	Current outcomes	Adoption/Formulation	Implementation Body	Proposed Outcomes
1. Lack of a national agricultural framework and policies	<ul style="list-style-type: none"> • Incoordination among actors • Weak sector • Lack of support 	<ul style="list-style-type: none"> • Design a clear national agricultural framework and policies 	<ul style="list-style-type: none"> • Government 	<ul style="list-style-type: none"> • Improve coordination • Strengthen the sector • Increased support
2. Marginalization of the agricultural sector	<ul style="list-style-type: none"> • Lack of funding • Displace producers • Increased reliance on imports 	<ul style="list-style-type: none"> • Execute and finance new agricultural projects to revitalize the sector 	<ul style="list-style-type: none"> • Government • Banks • Private • NGOs 	<ul style="list-style-type: none"> • Increase funding • Protect producers • Improve Sovereignty
3. Limitations for small- land renting producers	<ul style="list-style-type: none"> • Quality stagnation • Marginalize producers from the corporate food supply chain 	<ul style="list-style-type: none"> • Develop Joint-venture projects among small- land renting producers 	<ul style="list-style-type: none"> • Producers • Government 	<ul style="list-style-type: none"> • Improve quality • Improve market power • Improve access to markets
4. Limitations of the FV Wholesale Market	<ul style="list-style-type: none"> • Inefficiency • Lack of accountability • Outdated Facilities 	<ul style="list-style-type: none"> • Develop the market through public-private collaboration 	<ul style="list-style-type: none"> • Traders • Government 	<ul style="list-style-type: none"> • Reduce inefficiency • Traceable accountability • Improve facilities and value of products
5. Limitation of the Political System on the horticultural	<ul style="list-style-type: none"> • Corruption • Sectarian-based clientelism 	<ul style="list-style-type: none"> • Penalizing clientele-based sectarianism and corruption • Reformation of the political 	<ul style="list-style-type: none"> • Government • Citizens 	<ul style="list-style-type: none"> • Reduce corruption and sectarian-based

supply chain	<ul style="list-style-type: none"> • Unfair market pricing due to lack of protection from smuggled goods 	system		<p>clientelism</p> <ul style="list-style-type: none"> • Price protection from imported goods
6. Limitations of the Food Supply Chain Revealed through the October Revolution	<ul style="list-style-type: none"> • Currency devaluation • Inflation on imports • Inflation on agricultural inputs • Inflation on locally produced goods 	<ul style="list-style-type: none"> • Limiting import dependency on non-essential goods and encouraging local production • Restructuring the role of local agricultural input supplier companies into agricultural input producers or consultants 	<ul style="list-style-type: none"> • Government • Local Agricultural Input suppliers 	<ul style="list-style-type: none"> • Reduce reliance on imports • Promote local Production • Economic stability
7. Limited access into the corporate supply Chain	<ul style="list-style-type: none"> • Unequal access among providers due to unequal means of production 	<ul style="list-style-type: none"> • Create an alternative supply route through value creation by public certifications and branding • Provide inclusive agricultural trainings and workshops on smart agricultural techniques 	<ul style="list-style-type: none"> • Government • IDAL • NGOs • Customs • Producers 	<ul style="list-style-type: none"> • Improve value • Improve market power and access
8. Limited direct access in to the supermarket supply chain	<ul style="list-style-type: none"> • Value leakage of producer's supply • Lack of traceability • Logistical costs 	<ul style="list-style-type: none"> • Implement Blockchain technology to connect producers and retailers, while improving transparency and traceability. • Adoption of value adding procedures as packaging, labeling, and branding. • Adoption of publically supported food safety and quality certifications. 	<ul style="list-style-type: none"> • Producers • Supermarkets • Government • Private-led entrepreneurship 	<ul style="list-style-type: none"> • Improve value • Improve market power and access

<p>9. Opportunities in potatoes production in accessing the corporate supply chain</p>	<ul style="list-style-type: none"> • Insufficient quantity and inconsistency of supply • Unsatisfactory local quality with respect to imported fries 	<ul style="list-style-type: none"> • Improve the yield and quality of potato production through investment and training 	<ul style="list-style-type: none"> • Producers • NGOs • Government • Corporate Restaurants 	<ul style="list-style-type: none"> • Improve value chain of potatoes • Improved access into the corporate supply chain
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APPENDIX I

ORAL CONSENT FORM (ENGLISH)

Consent Form for Participation in an Interview (including recording)

Participants must be 18 years of age and older.

Your refusal to participate does not lead to punishment and this will not affect your relationship with the American University of Beirut in any way.

Note: The participant will be provided with a copy of this consent form

Hello, my name is Walid Mukahhal from the Food Security Department at the American University of Beirut. I am asking you to participate in a research study titled “Exploring the Manifestation of the Corporate Food Regime in Lebanon: Case of the Horticultural Supply Chain”. The study aims to explore the historical manifestation of the corporate food regime in Lebanon. The second part of the research will require your knowledge in the field to identify on what basis procurement decisions and contractual agreements between horticultural producers and supermarkets/fast-food chains are made in Lebanon. This will also help analyze the advantages and barriers of the Lebanese horticultural producers when participating in the supply chain. So, I would like to invite you to participate in this study.

The study involves interviewing at least thirty horticultural producers and half a dozen horticultural-related procurement officers for both supermarkets and fast-food chains in Lebanon. I will ask you a series of questions as part of the semi-structured part of the research related to your professional relationships. Also, during the interview process you will be asked to rate your honest perception of a situation based on a modified 9-point hedonic scale. The interview process is expected to be done once for a period of 25 minutes. To respect the privacy of your identity and the information you share, the conducted interview will be confined in a private setting of your convenience between you the participant and the investigator only.

I will keep your personal identity anonymous outside the research team to protect you from any potential economic risks. There are no direct benefits or compensation to participate in the research other than providing information for the sake of the research. The information will be used to understand the professional relationship between horticultural producers and supermarkets or fast- food chains. The purpose is to improve the current food system, where this will conclude with proposing recommendations to interested parties of the supply chain.

For the purpose of the study, the interviewee will be recorded by a recording device, where the content of the information will be transcribed and analyzed in order to meet the objectives of the study. The recordings will be destroyed after completion of the study, however the transcriptions will remain archived to defend the position of the paper or used for future studies related to the topic addressed. Please let me know if you are willing to have the audio of the interview recorded .You may still participate in this study if you are not willing to have the interview recorded.

To respect confidentiality of the participants, no identifying information will be utilized in the publishing of the research study to remove any of the above mentioned risks involved in participating in the research. The data will only be accessible to the researcher and in case of future research the data will only include the information provided by the participant without any form of identifier. During the research progress, the researchers will use de-identified data that would be coded to protect any personal information that could identify you before files are shared with other researchers to ensure that by current scientific standards and known methods, no one will be able to identify you from the information we share. Voice recordings will be stored on a phone device that is code secured. Also, the data will be transferred on a personal laptop device that is password protected, to ease the analyzation process and also to secure a secondary backup. The transcription will also be within the possession of the private investigator. Upon completion of the thesis, the de-identifiable data will be sent to the archives to be stored for a period of 3 years. Also, any remaining data will be removed permanently from the private investigator and co-investigators after sending the data to be archived. Despite these measures, we cannot guarantee anonymity of your personal data. In case of future research, any identifiable information that might be used for future research will require the research team to obtain your consent.

If at any time and for any reason you prefer not to answer any questions, please feel free to skip these questions. For example, if you prefer not to answer a question during the interview, say "Skip this question." If you ever want to stop participating, please let me know. We can take a break, stop, continue late, or stop for good. You will not be penalized for the decision to stop sharing at any time.

If you have any questions, you are free to ask them now. If you have questions later, you may contact my Advisor or me on the following:

Name of investigator	Phone number	Email address
Gumataw Kifle Abebe (PI)	01-374374 Ext: 4511	ga81@aub.edu.lb
Walid Mukahhal	70-447457	Wim03@mail.aub.edu

If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Institutional Review Board (IRB) for Human Participants at if you have any questions about your rights as a participant in this research, you can contact the following office at Research University:

Social & Behavioral Sciences Institutional Review Board; American University of Beirut; P.O.Box 11-0236 / (Department); Riad El-Solh / Beirut 1107 2020; Lebanon; Telephone: 01-350000 – 5445; Email: irb@aub.edu.lb.

By continuing to take part of the interview you consent to take part in the study.

APPENDIX II

ORAL CONSENT FORM (ARABIC)

نموذج الموافقة على المشاركة في مقابلة (بما في ذلك التسجيل)

يجب أن يكون عمر المشاركين 18 عامًا فما فوق.

رفضك للمشاركة لا يؤدي إلى عقوبة وهذا لن يؤثر على علاقتك بالجامعة الأمريكية في بيروت أو علاقاتك المهنية.

ملاحظة: سيتم تزويد المشارك بنسخة من نموذج الموافقة هذا

مرحباً ، اسمي وليد مكحل من قسم الأمن الغذائي في الجامعة الأمريكية في بيروت. أنا أطلب منك المشاركة في دراسة بحثية بعنوان "استكشاف مظهر من مظاهر نظام الأغذية للشركات في لبنان: حالة سلسلة التوريد البستانية". تهدف الدراسة إلى استكشاف المظهر التاريخي للنظام الغذائي للشركات في لبنان. سيتطلب الجزء الثاني من البحث معرفتك في هذا المجال لتحديد أي قرارات الشراء والاتفاقيات التعاقدية بين المنتجين البستانيين ومحلات السوبر ماركت / سلاسل الوجبات السريعة في لبنان. سيساعد ذلك أيضاً في تحليل مزايا وحواجز المنتجين البستانيين اللبنانيين عند المشاركة في سلسلة التوريد. لذلك ، أود مشاركتكم الطوعية في هذه الدراسة.

تتضمن الدراسة إجراء مقابلات مع ما لا يقل عن ثلاثون من منتجي البستنة ونصف دزينة من موظفي المشتريات المعنيين بالبستنة لكل من محلات السوبر ماركت وسلاسل الوجبات السريعة في لبنان. سوف أترح عليك سلسلة من الأسئلة كجزء من الجزء شبه المنظم من البحث المتعلق

بعلاقاتك المهنية. أيضًا ، أثناء عملية المقابلة ، سيُطلب منك تقييم إدراكك الصادق للموقف بناءً على مقياس هيدوني من 9 نقاط. من المتوقع أن تتم عملية المقابلة مرة واحدة لمدة 25 دقيقة. لاحترام خصوصية هويتك والمعلومات التي تشاركها ، سيتم تقييد المقابلة التي تتم في إعداد خاص لراحتك بين المشارك والمحقق فقط.

سأبقي هويتك الشخصية مجهولة الهوية خارج فريق البحث لحمايتك من أي مخاطر أو إزعاجات اقتصادية محتملة قد تهدد علاقاتك المهنية مع صاحب العمل أو الموردين / المشترين. لا توجد فوائد أو تعويضات مباشرة للمشاركة في البحث بخلاف توفير المعلومات من أجل البحث. سيتم استخدام المعلومات لفهم العلاقة المهنية بين المنتجين البستانيين ومحلات السوبر ماركت أو سلاسل الوجبات السريعة. والغرض من ذلك هو تحسين النظام الغذائي الحالي ، حيث سينتهي ذلك باقتراح توصيات للأطراف المعنية في سلسلة التوريد.

لغرض الدراسة ، سيتم تسجيل المستجوب بواسطة جهاز تسجيل ، حيث سيتم نقل محتوى المعلومات وتحليله من أجل تحقيق أهداف الدراسة. سيتم إتلاف التسجيلات بعد الانتهاء من الدراسة ، لكن تبقى النسخ محفوظة في الأرشيف للدفاع عن موقف الورقة أو استخدامها للدراسات المستقبلية المتعلقة بالموضوع الذي تم تناوله. ولكن لا يزال بإمكانك المشاركة في هذه الدراسة إذا لم تكن ترغب في تسجيل المقابلة، حيث سيتم تدوين الملاحظات المكتوبة بخط اليد بدلاً من ذلك . يرجى العلم بأنه قد يتم سحب المشاركين المتطوعين من البحث إذا أظهر المشاركون عدم وجود جدية أو قلة خبرة مهنية أو خيانة الأمانة أو عدم النضج (يجب أن يكون عمر المشارك أكبر من 18 عامًا) أو خداعًا لمصلحة شخصية أو ملاحظة أي نشاط غير قانوني تم ذكره خلال عملية المقابلة.

لا احترام سرية المشاركين ، لن يتم استخدام أي معلومات تعريفية في نشر الدراسة البحثية لإزالة أي من المخاطر المذكورة أعلاه والمشاركة في البحث. لن تكون البيانات متاحة للباحث فقط وفي حالة البحث المستقبلي ، ستشمل البيانات فقط المعلومات التي قدمها المشارك دون أي شكل من أشكال المعرفة. أثناء تقدم البحث ، سيستخدم الباحثون البيانات غير المحددة التي سيتم ترميزها لحماية أي معلومات شخصية يمكن أن تحدد هويتك قبل مشاركة الملفات مع باحثين آخرين للتأكد من أنه وفقاً للمعايير العلمية الحالية والأساليب المعروفة ، لن يتمكن أي شخص من التعرف عليك من المعلومات التي نشاركها. سيتم تخزين التسجيلات الصوتية على جهاز هاتف محمي برمز. أيضاً ، سيتم نقل البيانات على جهاز كمبيوتر محمول شخصي محمي بكلمة مرور ، لتيسير عملية التحليل وكذلك لتأمين نسخة احتياطية ثانوية. سيكون النسخ أيضاً في حوزة المحقق الخاص. عند الانتهاء من الأطروحة ، سيتم إرسال البيانات غير القابلة للتحديد إلى الأرشيف لتخزينها لمدة 3 سنوات. وأيضاً ، ستتم إزالة أي بيانات متبقية نهائياً من المحقق الخاص والمحققين المشاركين بعد إرسال البيانات إلى الأرشيف. على الرغم من هذه التدابير ، لا يمكننا ضمان عدم الكشف عن هويتك لبياناتك الشخصية. في حالة البحث في المستقبل ، فإن أي معلومات محددة يمكن استخدامها للبحث في المستقبل ستتطلب من فريق البحث الحصول على موافقتك

إذا كنت تفضل في أي وقت ولأي سبب عدم الإجابة عن أي أسئلة ، فلا تتردد في تخطي هذه الأسئلة. على سبيل المثال ، إذا كنت تفضل عدم الإجابة عن سؤال أثناء المقابلة ، فقل "تخطي هذا السؤال". إذا أردت في أي وقت التوقف عن المشاركة ، فيرجى إخباري بذلك. يمكننا أن نأخذ استراحة أو نتوقف أو نستمر في وقت متأخر أو نتوقف نهائياً. لن تتم معاقتك لقرار إيقاف المشاركة في أي وقت.

إذا كان لديك أي أسئلة ، فأنت حر في طرحها الآن. إذا كانت لديك أسئلة لاحقًا ، فيمكنك الاتصال بالمستشار أو أنا على ما يلي:

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إذا كانت لديك أي أسئلة أو مخاوف بشأن حقوقك كموضوع في هذه الدراسة ، فيمكنك الاتصال للمشاركين من البشر إذا كان لديك أي أسئلة حول حقوقك كمشارك في مجلس المراجعة المؤسسية هذا البحث ، يمكنك الاتصال بـ المكتب التالي في جامعة الأبحاث:

IRB- مجلس المراجعة المؤسسية للعلوم الاجتماعية والسلوكية. الجامعة الأمريكية في بيروت:

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Lebanon; Telephone: 01-350000 – 5445; Email: irb@aub.edu.lb.*

من خلال الاستمرار في المشاركة في المقابلة ، فإنك توافق على المشاركة في الدراسة

APPENDIX III

SAMPLE OF SEMI-STRUCTURED INTERVIEW WITH CORPORATIONS

Supermarket and Corporate Fast-Food Chain Survey

Who to interview: Personnel employed in a supermarket or corporate restaurant, especially concerned with the procurement of horticultural products

COM: Company Profile

1. What type of company are you interviewing?
Supermarket [] Fast-Food Chain []
2. Is the company originally considered local or foreign?
Local [] Foreign []
3. What type of ownership structure does the company have?
Sole Proprietorship [] Partnership [] LLC [] Corporation []
4. What is your role in this company?
5. How many outlets do you have in Lebanon?
6. On what basis are these stores leased? (Own/Rent)

PRO: Procurement Information

1. What are the top three most sold (if supermarket)/utilized (if fast-food) horticultural products in your enterprise, in terms of quantity?

2. How many horticultural suppliers (of Top three) do you have?
3. How often do you change your (a) local suppliers_____ (b) foreign suppliers_____?
4. For what reasons would you change your suppliers?
5. What portion (%) of the your agricultural production come from:
 - (a) Local food system:
 - Small-farmers ___%
 - Cooperatives _____%
 - Commercial farms, traders/wholesalers, etc. _____ %.)
 - (b) Foreign suppliers/producers ____%.
6. How regularly do you procure your top three horticultural products from your (a) local suppliers_____ (b) foreign suppliers_____?
7. Do you have any preferred suppliers?
8. On what basis would you prefer a horticultural supplier over the other?
9. Do you take your supplier's operational assets into consideration when binding them to a contractual agreement?
 - If so, what are these assets that guide your procurement decisions? (Own land/ storage facility/ transportation/ specialized equipment/certification...)
 - If not, then on what basis do you decide your procurement decisions?
10. From your horticultural suppliers, do you also procure some horticulturally-processed goods (like mounch)?
 - If so what motivates you to buy these products directly from your horticultural supplier?
 - If not then from where would you rather procure horticulturally-processed goods (like mounch) from?

MAR: Market Information

1. Do you request from your suppliers a predetermined quantity? On what basis?

2. Do you request from your suppliers a set quality standard/ certification grade to buy their production? What are they?
3. Do you require from your suppliers to have a packaging, labeling, or branding for their horticultural products?
4. When did you know of the buying price and on what basis do you set the price with your supplier? (Pre-determined, Market Price, After-sale price...)
5. What are your payment terms with your suppliers? What happens in case of delays?
6. In your perception, are you satisfied with the payment terms and quality procured from your suppliers? Why or why not?
7. What happens to the horticultural products procured if they were damaged on delivery? Do you or your supplier cover the loss?
8. What happens to the horticultural products procured if they spoiled after time? Do you or your supplier cover the loss?

ASS: Assistance Information

- Do you assist any of your suppliers with their agricultural production? (Assets, Trainings, Certifications...) If so, on what basis?
- Do you assist any of your suppliers with transportation? If so, on what basis?
- Do you assist any of your suppliers with storage operation? If so, on what basis?
- Do you assist any of your suppliers with processing their horticultural production? If so, on what basis?
- Would you consider assisting your suppliers with on-farm or off-farm operations if you would be obtaining the desired quality for your horticultural products?
 - If so, how would you assist them and how would that affect pre-existing or future contractual agreements?
 - If quality is not a motivator, then what would be your driving force to assist your suppliers with on-farm or off-farm operations
- Are there any Lebanese governmental laws or foreign regulations that guide your procurement or operational decisions?
 - If so, what are they?

- If not, what kind of regulations would you expect from the government? And from other entities? (NGO, participants of the supply chain)

CON: Contractual Information

1. Do you have contractual agreements with local producers?
 - What elements would you look for in order to set a contractual agreement with a local producer?
2. How would you feel about having contractual agreements directly with local producers?
 - a. In your perception, what are the advantages involved in having contractual agreements with local producers?
 - b. In your perception, what are the disadvantages involved in having contractual agreements with local producers?
3. Do you have contractual agreements with foreign horticultural suppliers?
 - If so, with whom and what differentiates them from local horticultural suppliers?
 - If not, for what reasons would you (not) consider procuring your products from foreign horticultural suppliers?
4. How would you feel about having contractual agreements with foreign suppliers over local suppliers?
 - a. In your perception, what are the advantages involved in having contractual agreements with foreign horticultural suppliers?
 - b. In your perception, what are the disadvantages involved in having contractual agreements with foreign horticultural suppliers?

THANK YOU FOR YOUR TIME.

Comment

Do you have any comments?

END OF INTERVIEW

APPENDIX IV

SAMPLE OF SEMI-STRUCTURED INTERVIEW WITH HORTICULTURAL PRODUCERS:

Horticultural Producer Survey

Who to interview: Producers engaged in the production of horticultural products

PAR: Participant Profile

1. What is the participant's gender (Assume)?
2. How old are you and how many years have you been working in agriculture?
3. What is your educational background?
4. Have you ever received any agricultural-related trainings/workshops?
5. What is your current family size?
6. What economic activities is your family members employed in?
7. Do you consider yourself as the head of the household?
8. Are you employed in other income generating activities other than agriculture?

PRO: Production

1. Where is your production located?
2. What is the current size of your agricultural land?
3. How do you lease this agricultural land? (Own/ Rent)
4. Who else other than you is responsible for this land? (Ownership/ Capital Structure)
5. What agricultural products do you produce? How much do you yield in an average production season in total? (Top Three Horticultural Products)
6. On what basis did you decide to produce these products?
7. What farming methods do you utilize in your production? (Irrigated, Integrated Pest Management, Organic, conventional, a combination, Etc.)
8. Are you part of a cooperative?

- If so, what are the collective assets you utilize for your operations and how are its operations managed?
 - If not, would you consider being part of a cooperative? Why or Why not?
9. What other non-land assets do you own? (Machinery, equipment, labor...)
10. How many laborers work on your land?
- If they have employees:
 - a. On what contractual basis are your laborers employed (Seasonal/permanent)?
 - b. Are their families involved in the production process?
 - c. What is your laborer's average wage for this season?
 - d. On average, how many hours do they work per day?
11. How would you best describe your financial or livelihood situation?

SUP: Supply Chain Information

1. Do you store your production after harvest?
 - If so, what storage methods/facilities do you employ to preserve your production?
Why?
 - If not, do you directly send your production to the market? Why?
2. How do you transport your production to your procurer? Why do you use this transportation method?
3. How far are your procurers/buyers located?
4. How would you describe the quality of the road from your location to your procurer?
5. How do you communicate with your procurers? (Do you have a cellphone with service/do you have internet?)

6. Are you involved in any post-harvest processing of your agricultural production (include packaging and labeling, minimal/highly process goods e.g. Mounch)
 - If so, what motivates you to undergo post-harvest processing?
 - If not, would you consider undergoing post-harvest processing? Why?

MAR: Market Information

1. Who is your main buyer for your horticulture crops? (middlemen, wholesalers, supermarkets, small retail shops)
2. What are the reasons behind selling your products to this procurer?
3. Do you have a substitute in case your procurer was not interested in your production for the season?
4. Does your procurer require a specified quantity per order?
5. How often do you supply your products to this procurer?
6. Do your procurers set a certain quality standard/recognized certification to buy your production? If so, what are these standards?
7. What would happen to your production if it didn't meet the required quality standards set by your procurer? Has this happened before?
8. When did you know of the selling price?
9. On what basis do you set the price with your procurers? (Pre-determined, Market Price, After-sale price...)
10. What are your payment terms with your procurers?
11. Do you trust your procurer to respect their payment terms?
12. What happens in case payment terms were not met by your procurer?

13. In your perception, are you getting a fair price for your production considering the payment terms and quality of your product? Why or why not?

ASS: Assistance Information

1. Are there any government or non-government organizations that are currently assisting in your production or marketing?
 - If yes, who are they and what is their role?
 - If not, what kind of support would you expect to receive?
2. What are the government policies or international regulations that influence your decisions (not) to participate in the supply chain? (Production, Processing, Selling, Exporting...)
3. Where do you get your information concerning production and marketing of your horticultural products?
4. Do any of your procurers assist you in providing on-farm assets to meet their required production quality?
5. Does your procurer assist in providing training or cover certification costs to meet their required production quality?
6. Does your procurer assist in your off-farm operations? (Storage, Transportation, Communication, Marketing...)
7. Did your procurer ask you about your on-farm and off-farm operations prior to accepting your production/formulating a contract?

CON: Contractual Information

1. Do you have a contractual arrangement with a fast food chain or supermarket (McDonalds, Spinneys, etc.)?
Yes [] No []
2. How would you feel/do you feel about being a contractual supplier of a fast food chain or supermarket?
 - a. In your perception, what are the advantages of being a contractual supplier of a fast food chain or supermarket?
 - b. In your perception, what are the disadvantages of being a contractual supplier of a fast food chain or supermarket?
3. Do you sell your products to a foreign market?
 - If so, where and what differentiates them from local procurers?
 - If not, for what reasons would you consider selling your products to foreign procurers?
4. How would you feel about having a contractual agreement with foreign procurers over local procurers?
 - a. In your perception, what are the advantages involved in having contractual agreements with foreign procurers over local procurers?
 - b. In your perception, what are the disadvantages involved in having contractual agreements with foreign procurers over local procurers?

THANK YOU FOR YOUR TIME.

Comment

Do you have any comments?

END OF INTERVIEW

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