Reassessing "Local": The Commodity Chains of Fruits and Vegetables Sold at the Jean Talon and Atwater Markets in Montréal, Québec

By

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LIST OF ABBREVIATIONS

AFN	Alternative Food Network
CFIC	Centre for Food in Canada
LFS	Local Food System
LFSI	Local Food System Initiative
MPM	Montréal's Public Markets
MPMMC	Montréal Public Market Management Corporation

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THESIS ABSTRACT

Given the perceived failures of the modern food system, there has been renewed interest in the role of local food system initiatives (LFSI); farmers' markets represent one of many examples of such initiatives. Central to these initiatives are short supply chains which seek to bridge the gap between producers and consumers while re-embedding trust and transparency. Despite the proliferation of farmers' markets in recent decades in North America, conceptual expectations and the material product flows of local food sometimes clash. In this thesis, I investigate what constitutes 'local' for the commodity chains of fruits and vegetables supplied to the Jean Talon and Atwater Markets in Montréal, Québec, Canada. Using a multi-methods approach, including a survey of vendors at both Markets drawing from open-ended and fixed-response questions, informal conversational interviews, and observations, I identify and weave together the actors, food provenance, supply chains, and conceptualizations of 'local' that construct the commodity chains of fruits and vegetables. Upon doing so, I examine the relationships amongst the Markets, rural and peri-urban agriculture, and urban consumption that connect the LFSIs on the Island of Montréal to farmers across southern Québec. While vendors delimited 'local' to the provincial boundaries of Québec, sourcing of fruits and vegetables sold at the Markets did not always align with this definition.

CHAPTER 1: INTRODUCTION

Farmers' markets have long served as sites of social and economic exchange between producers and consumers. Introduced to North America through the expansion of European settlement (Spitzer and Baum, 1995), markets served as a primary means of directly providing fresh local produce and other foodstuffs to consumers, bridging the gap between rural-urban geographies. Since then, the tradition and significance of markets as the "focal point of urban commerce" (Sanderson *et al*., 2005:2) has fluctuated. The rise of urbanization, industrial farming, and the development of infrastructure marked the temporary decline of farmers' markets, and other public food markets more generally, (*ibid.*) as diverse and differentiated locales, regions, and nations became increasingly interconnected in the modern global food economy (Feagan, 2007; Gordillo, 2019).

Over the past sixty years, Canada's overall food system has favoured large-scale systems of production, distribution, and retail, in turn, widening the gap between producers and consumers (Irshad, 2010). In the 1970s, the interest in and role of local food systems in North America was reinvigorated and has been sustained (Sanderson *et al.,* 2005). Research conducted by the Centre for Food in Canada (CFIC) suggests that the number of local food initiatives continues to grow within the nation. In particular, the number of farmers' markets has doubled since the 1990s (Edge, 2013). The CFIC indicates that the provinces with the greatest proportion of the value of food produced and consumed within the province are Québec (29%), Ontario (24%), and British Columbia (16%) (*ibid.*).

The rise in popularity of farmers' markets in the past few decades can be attributed to the dissatisfaction and distrust of consumers towards the global food supply chain, in which food quality and human health have become a greater concern (Garner, 2018). Efforts to 'relocalize' are grounded in the belief that local food systems are a more transparent and environmentally, economically, and socially sustainable alternative. As the demand for local food increases, "so do questions about what constitutes local food and what characterizes local food systems" (Martinez *et al*., 2010:iii).

1.1: Research Aim & Questions

Despite the revival of local food system initiatives in recent decades, farmers' markets have long existed across the landscape of North America. In 1933, the City of Montréal established the Jean Talon and Atwater Markets in Montréal, Québec, Canada (Montréal's Public Markets, 2018). The two Markets currently operate as the largest and arguably most popular of fifteen markets that comprise Montréal's Public Markets, with the goal to sustain the tradition of markets in urban centres through the provision of local food. In this thesis, I aim to investigate the commodity chains of fresh fruits and vegetables sold at the Jean Talon and Atwater Markets in Montréal, Québec. In order to fulfill this aim, my research questions are:

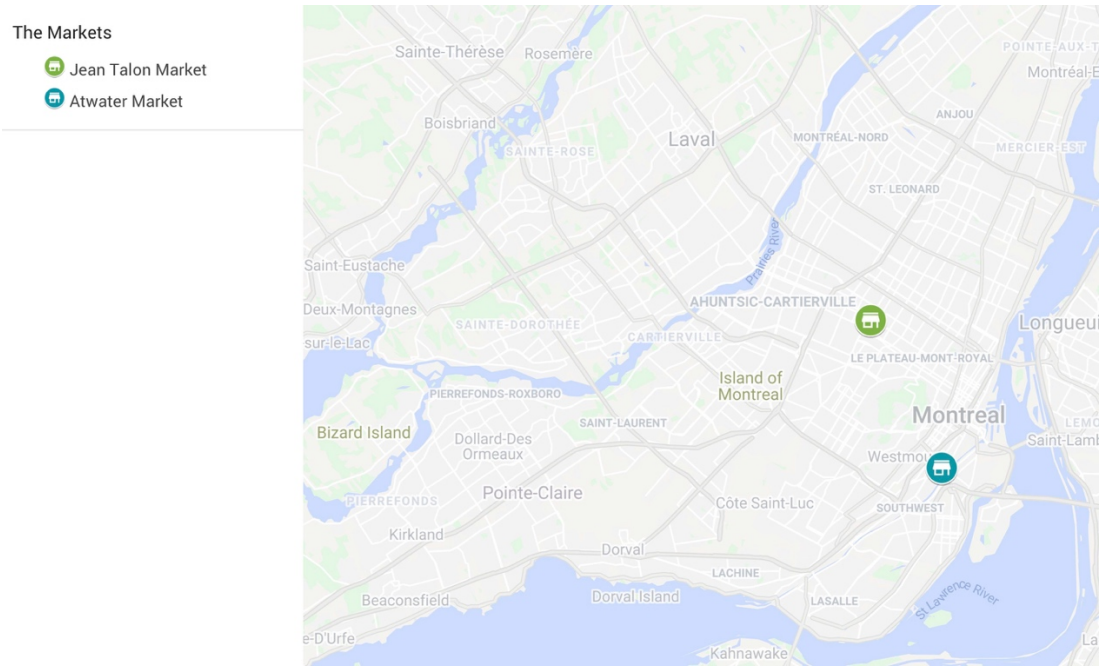
1) What are the roles of the actors, the Markets, and commodity chains involved in the production and distribution of fruits and vegetables within the local food system of Montréal?
2) What are the geographic origins of the fruits and vegetables sold at each Market and what are the characteristics of the supply chains and distribution methods contributing to the Jean Talon and Atwater Markets?
3) What constitutes 'local' for the fruits and vegetables sold at the Markets and how are these perceptions articulated and embedded along the commodity chains?

1.2: Significance of Research

As interest in, and the development of, local food initiatives continues to proliferate, there remains no universal definition of 'local food.' Prior research has addressed the ways in which local food is conceptualized in regard to geographical, political, and natural boundaries (Sanderson *et al*., 2005; Martinez *et al*., 2010). Furthermore, several studies have analyzed consumers' perceptions of local food and farmers' markets (Smithers *et al.,* 2008; Baker *et al*., 2009; Adams and Salois, 2010; Rainbolt *et al*., 2012; Feldmann and Hamm, 2015). In this study, I identify and discuss the actors, production origins, supply chains, and conceptualizations of 'local' that construct the commodity chains of fruits and vegetables supplied to the Jean Talon and Atwater Markets. Furthermore, I situate the Markets as nodes in the local food system of Montréal as connected to the southern Québec region. My research provides a better understanding of the production and distribution characteristics of fruits and vegetables supplied to the Jean Talon and Atwater Markets, as well as the relationships amongst these Markets, peri-urban and rural agriculture, and urban consumption.

1.3: Thesis Structure

In Chapter 2, I explain the conceptual framework that guides my research aim and questions. In order to understand and assess the commodity chains of local food sold at the Jean Talon and Atwater Markets in Montréal [see Map 1.1], I employ two interrelated concepts: local food and alternative food networks. I then further ground my research in the concept of commodity chains. In Chapter 3, I describe the methodology that I used to conduct my research through a multi-methods approach. Additionally, I elaborate on the context and positionality concerns of my fieldwork. The results of my fieldwork and data analysis follow in three consecutive chapters. In Chapter 4, I situate my field sites and participants, geographically across the landscape of southern Québec and with regard to the history and mission of Montréal's Public Markets, under the Montréal Public Market Management Corporation. In Chapter 5, I focus on the production origins and supply channels of the fruits and vegetables supplied to the two Markets. In particular, I focus on and map the food provenance of a subset list of eight fruit and vegetable commodities. In Chapter 6, I characterize the supply chains contributing fruits and vegetables to the Jean Talon and Atwater Markets. I further describe the commodity chains of fruits and vegetables by linking the distribution methods and perceptions of 'local' that co-constitute my conceptual model of the commodity chains. In Chapter 7, I conclude my thesis by reassessing what is meant by 'local' and considering future research directions.



Map 1.1: Locations of the Jean Talon and Atwater Markets on the Island of Montréal (Source: Google Maps, 2020)

CHAPTER 2: CONCEPTUAL FRAMEWORK

In this chapter, I construct my conceptual framework drawing on the literature of local food and local food systems (LFS), alternative food networks (AFN), and commodity chains. I develop my conceptual framework as it guides my thesis from broader abstractions to more specific and scholarly concepts and theories. In Section 2.1, I explain notions of local food and the development of local food systems. More specifically, I describe farmers' markets as a local food system initiative (LFSI). In order to gain a deeper understanding of the role of the Jean Talon and Atwater Markets in Montréal, Québec, I conceptualize farmers' markets as nodes within the broader local food system. I situate these concepts under the umbrella term of AFNs in Section 2.2 and discuss the movement to 'relocalize.' Lastly, in Section 2.3, I ground my research in a commodity chain lens as it provides insight into the relationships amongst production, distribution, and consumption that guides perceptions of a commodity, such as local food.

2.1: Local Food

The concept of local food is contested as there remains no universally accepted nor legal definition of the term. In its most literal sense, 'local' is defined by its relation to a particular geography. A report by Agriculture and Agri-Food Canada posits that local can be delimited in four ways: geographical distance, temporal distance, political and administrative boundaries, and bio-regions (Chinnakonda and Telford, 2007). Within the literature, spatial proximity continues to stand as the pillar of local. However, even these articulations differ from region to region with regard to food miles (Born and Purcell, 2006; Coley *et al*., 2009), or the distance food travels from production to the marketplace (Aucoin and Fry, 2015). Smith and MacKinnon (2007) popularized the '100-mile diet'; meanwhile in Washington D.C., 250 kilometres (Halweil, 2002) is the spatial buffer for local, and 30-40 miles is the standard in most of the United Kingdom (La Trobe, 2002).

Martinez *et al*., (2010) argues that 'local' can further be classified by marketing arrangements, such as direct-to-consumer arrangements or direct-to-retail arrangements, which involve the assemblage of marketing functions carried out by farmers. These functions include the storage, packaging, transportation, distribution, and advertising of food. Some definitions are even concerned with agricultural production methods, incorporating organic production, minimal chemical use, ethical labour practices, and animal welfare in classifications of local food (*ibid.*; Edge, 2013). Furthermore, what constitutes local food is shaped by the perceptions of both

producers and consumers and is connected to the connotation and expectations of the local movement in terms of social, economic, and environmental sustainability. Local food is thus a means for consumers to express their values within the food system, such as those concerned with health and nutrition, support for local economies, and the environmental impacts associated with agricultural production (*ibid.*; Edge, 2013).

Still, there remains a multiplicity of definitions for the ubiquitous and ambiguous 'local food.' Having said this, it is crucial to review the ways in which the notion of local is produced by various stakeholders in order to examine the implications of these perceptions along the commodity chains. As my research takes place in Canada, I turn to the definition of local food provided by the CFIC. The CFIC defines local food as "food that is grown, processed, sold, and consumed within the same local area (ranging from local community-scale to provincial-scale)" (Edge, 2013:1). Similar to alternative food networks and articulated through configurations of local food system initiatives (Hedberg and Zimmerer, 2020), local food minimizes the distance food travels, reconnects consumers to the origins of their food, and reinvigorates and sustains the local economy, placing an emphasis on small- and medium-scale production (Edge, 2013).

2.1.1: Local Food Systems

Local food, local food systems, and relocalization are terms often used interchangeably to describe the proximity of production-consumption, contrasting the modern food system (Peters *et al*., 2008). Additionally, LFS are often used synonymously with alternative food networks, discussed in the next section. However, local food systems pay greater attention to food production, distribution, and procurement, contrary to the local/global binary often imposed in AFN studies (Maye, 2011). The literature characterizes local food systems by shorter distances travelled, emphasis on seasonality, and increased social sustainability (Cummings *et al*., 1998; Feenstra and Lewis, 1999; Marsden *et al*., 2000; Barham *et al.,* 2012; Edge, 2013). Central to the local food movement is the shortening of the food supply chain which promotes the transfer of knowledge between producers and consumers and the reinvigoration of a values-based local food economy (Feagan, 2007). The importance of these claims and relations points to the role of social embeddedness, the intertwinement of economic activity with ongoing social relations (Granovetter, 1985), in local food system initiatives, "a diverse range of configurations, from food hubs, institutional sales, and local food shops, to farm stands, farmers' markets, and community supported agriculture" (Hedberg and Zimmerer, 2020:35).

The CFIC reports that local food systems are embedded in and co-constituted by broader food systems operating on regional, national, and transnational scales (Edge, 2013). Therefore, local food can be understood ideologically as it is constructed and distributed as a commodity through many channels, even those that involve intermediaries, such as from farm to major retail chains (*ibid.*). With this in mind, systems of local food can be recognized as involving connective networks entailing various methods of distribution (Ilbery and May, 2005; Aucoin and Fry, 2015). Aucoin and Fry identify nodes within distribution methods as "places where producers interact with consumers" (2015:64), including farmers' markets and community supported agriculture baskets. Thus, delineated by a porous boundary, acknowledging the influence of food systems operating on multiple scales, Aucoin and Fry conceptualize "LFS as consisting of a network of actors and products who come to exchange at a node" (2015:71).

Despite the increasing interest in local food systems, barriers exist limiting their development. While LFS provide social and economic benefits, simultaneously reducing ecological harms, the necessity to fulfill the demands of consumers throughout the year poses a challenge to the viability of local food systems (Edge, 2013). As a net agricultural exporter but also a cold northern country, the Canadian economy and its citizens benefit from year-round products supplied by the globalized food system (*ibid.*). Namely, barriers to LFS development include insufficient financing and infrastructure (*ibid.*), while Irshad (2010) argues that the lack of information on consumer demand and the failure to disseminate the social and environmental implications of the conventional industrial food system are the greatest barriers to the success of local food systems. On the other hand, the CFIC suggests the growth of LFS across Canada is bolstered by local, government, and non-profit support as a means to differentiate themselves from competitors and reinvigorate new market opportunities (Edge, 2013).

2.1.2: Farmers' Markets

Farmers' markets, an example of a local food system initiative, are defined as "outlets where farmers bring their produce for sale directly to consumers" (Onianwa *et al.*, 2006:119) and include "farmers, growers, or producers from a defined local area [who] sell their own produce, directly to the public" (Archer *et al.,* 2003:488). Within the literature, farmers' markets and public markets are often used interchangeably as they are both grounded on the same premise: "providing fresh produce, dairy, meat, fish, and poultry to urban consumers" (Spitzer and Baum, 1995:6). Brinkley (2017) further distinguishes farmers' markets by their seasonal operations,

where farmers travel to urban or suburban locations where customers convene to purchase products. Beyond the provision of foodstuff, Gouglas argues that "the market proved a social and economic arena, a centre of urban and rural relations" (1996:3).

The popularity of farmers' markets has increased over the past few decades as consumers seek out alternative food networks and enjoy the benefits of local food system initiatives. Farmers' markets offer a short supply chain which facilitates efforts to meet a region's food demand from local sources (Renting *et al.,* 2003; Horst and Gaolach, 2014). Sanderson *et al.*, (2005) attributes the revival of markets to the benefits reaped by both producers and consumers. In regard to the former, farmers' markets provide economic and logistical benefits of direct selling (Gale, 1997; Lenchuca *et al*., 1998; Feenstra and Lewis, 1999). As for the latter, the combined benefits of fresh, quality products within an interactive atmosphere conducive to knowledge exchange attracts consumers to these markets (Kloppenburg *et al*., 1996; Govindasamy *et al*., 1998; Lenchuca *et al*., 1998; Novak, 1998). Moreover, as urbanization continues to dominate the global landscape, Sanderson *et al*., argues that: "In large cities, the farmers' market may represent the only access to fresh produce for low income, inner city residents, while for other citizens the decision to shop at the market is a lifestyle choice directly related to product quality and freshness" (2005:5).

2.2: Alternative Food Networks

Within the past two decades, alternative food networks have emerged in response to the failure and distrust of conventional food systems (Marsden *et al*., 2000). AFNs mark an attempt to respatialize producer-consumer relationships as these networks are characterized by shorter distances between production and consumption, and the literature emphasizes short food supply chains and direct marketing (*ibid.*; Venn *et al*., 2006). Moreover, AFNs are characterized by small-scale farm operations utilizing sustainable practices and an overall commitment to social, economic, and environmental sustainability in food production, distribution, and consumption. (Venn *et al*., 2006; Jarosz, 2008; Maye, 2011). By drawing on the literature of alternative food networks, their core features, which I have identified as relocalization, the quality turn, and short food supply chains, this informs my understanding of broader conceptualizations of local food and the emergence of LFS. Despite similarities within the literature, local food is a far more contested term while specific qualities, values, and characteristics of LFS are particular to unique

locales. Local food systems thus fall under alternative food networks, grounding my research in a more scholarly, theoretical concept.

2.2.1: Relocalization

Feagan (2007) elaborates on the emergence of the local movement under the umbrella term of alternative food networks. He argues that local food systems are a form of respatialization, or spatial realignment "in contradistinction to the conventional, globalizing food system" (*ibid*., 2007:24), that works to reconstruct spatial and cultural identity. While respatialization calls attention to food provenance and the general reconfiguration away from the modern food system, the discourse of relocalization revolves "around some form of geographic delimitations of space" (*ibid*., 2007:33). Therefore, varied initiatives and movements to relocalize emanate from the broader objective of alternative food networks to respatialize the food system. Moreover, relocalization stresses the disconnect between space and place and how this shapes and structures a locale (Hendrickson and Heffernan, 2002). Central to the beginnings of relocalization were decentralization, democratization, self-sufficiency, and subsidiarity (Feagan, 2007). Underlying these concepts is their embeddedness in spatiality and during the 1970s, this became evident in Western forms of small-scale participatory cultural economies (Schumacher, 1973). Additionally, the notion of community became increasingly emphasized with the rise of sustainable development in 1987 as relocalization began to integrate community-control and equitable access to resources within its framework (DuPuis and Goodman, 2005). In regard to food discourses, relocalization provides a platform for 'resistance to the agro-food distanciation' in which the physical, metaphorical, and social distance from producer to consumer are minimized and reoriented (Winter, 2003).

2.2.2: Quality Turn

The quality turn is identified by Feagan (2007) as a movement away from the industrialized world in food discourses, in which seeking out alternative food networks offers the "potential for shifting the production of food commodities out of their 'industrial mode'…to develop supply chains that can potentially 'short-circuit' the long, complex and rationally organized industrial chains" (Marsden *et al.,* 2000:424). In consideration of this, linkages between the quality turn and the general objectives of relocalization have been articulated within the literature. The concept of the quality turn is fairly recent, emerging in part from consumers' concerns in

response to the restructuring of European Union agricultural policies and programs (Feagan, 2007). With the looming uncertainty of industrialized mass commodity production, consumers have turned to idealize the value of their food in quality which is embedded in trust, tradition, and place along the food supply chain (*ibid*.). Place, as in the local, is argued to be at the forefront of these constructs as a point at which environmental, economic, and social sustainability converge within a local food system (Feenstra, 2002). For some, alternative locally oriented food supply chains ensure 'quality,' which is argued to be the antithesis of 'quantity' associated with industrialized mass food production (Marsden, 1998; Murdoch *et al.,* 2000).

2.2.3: Short Food Supply Chains

The concepts of relocalization and the quality turn intersect and manifest in short food supply chains. Marsden *et al.,* conceptualizes short food supply chains as a means of supplying food that "facilitates some form of connection between the food consumer and producer by providing clearer signals related to the origin of the food product" (2000:425). These connections are facilitated by the dissemination of 'biographies of food' that include 'geographical knowledges' (Cook and Crang, 1996), associating the assurance of food quality with information about the production and distribution of food commodities (Morris and Young, 2004). Therefore, short food supply chains are not only an attempt to relocalize relations within a food system, but an effort to resocialize the food system as well (Marsden *et al.*, 2000). Feagan (2007) attributes the rising popularity of short food supply chains to the quality turn, whereby consumers have become increasingly concerned with the origins, quality, safety, and social and ecological impacts of the food they consume. Central to short food supply chains is the embeddedness of information within the commodity when it reaches the consumer (Marsden *et al*., 2000). With regard to food, labelling or personal communication of production origins are an example of this embeddedness, facilitating transparency and producer-consumer relations. Thus, social embeddedness with regard to a sense of face-to-face connections, mutual exchange, and trust is valued as an important feature of direct agricultural marketing (Hinrichs, 2000; Sage, 2003).

Consideration towards the attribution of value and 'quality' along short food supply chains emphasizes the "symbiotic relationship between the material production of a fruit or vegetable and the symbolic production of its meanings" (Cook, 1994:232). Similar to local food, notions of 'quality' have multiple and contested meanings (Watts and Goodman, 1997) and "can be understood as part of a wider process of ascribing social, cultural, and symbolic meaning to

food commodities" (Morris and Young, 2004:89). As the literature approaches food commodities through a discursive framework, the concept of short food supply chains draws from a commodity chain lens.

2.3: Commodity Chains

Hopkins and Wallerstein conceptualize a commodity chain as the "network of labour and production processes whose end result is a finished commodity" (1986:159). This approach to studying commodities highlights the interconnectedness and value-creation of production-consumption relations along a commodity chain. In consideration of this, investigating the network of production origins and distribution methods of fruits and vegetables supplied to the Jean Talon and Atwater Markets through a commodity chain lens enhances my understanding beyond that of supply chains and marketing arrangements alone. Moreover, I gain a deeper understanding of the value of 'local' along these chains and what implications these perceptions have on the supply side. Given that my research does not delve into the consumption side, I do not utilize a particular commodity chain approach in my analysis. However, I draw from the commodity chain lens more broadly to better understand the material relations, and their underlying claims, of fruits and vegetables supplied to the Jean Talon and Atwater Markets. Therefore, it is crucial to ask how 'local' is perceived and subsequently articulated.

2.3.1: Approaches to Commodity Chain Research

Commodity chains literature is dominated by three different approaches for analysis: global commodity chains, commodity circuits, and systems of provision. As the global commodity chain approach focuses on global economic linkages, drawing from World Systems theory (*ibid.*; Marsden and Little, 1990; Appelbaum and Gereffi, 1994; Gereffi *et al*., 1994; Leslie and Reimer, 1999), it is out of the scope of my thesis. The commodity circuit approach focuses on the feedbacks between producer and consumer, analyzing the construction and evolution of meaning along a commodity chain (Crang *et al*., 2003). This approach draws on Johnson's (1996) conceptualization of nonlinear circuits of commodities. Furthermore, greater emphasis is placed on consumers' knowledge of the value, quality, and geographical origins of commodities as their circuits are constructed and reconstructed (Jackson, 1999). The systems of provision approach provides a middle-ground for commodity chain analysis between the macro-scalar focus of the global commodity chain approach and the commodity circuit approach. Proposed by Fine and

Leopold (1993), the systems of provision lens balances considerations for both production and consumption as it is "the most comprehensive elaboration of production-consumption relations" (Leslie and Reimer, 1999:405). Employing the systems of provision approach would be the most useful as in the modern food system, "globally extensive networks and flows of foods, people and culinary knowledge are being locally articulated" (Cook and Crang, 1996:132).

2.4: Conceptual Framework Conclusion

Weaving together the concepts of local food and local food systems, alternative food networks, and commodity chains, I have built a solid conceptual framework to guide my research [see Figure 2.1]. Each concept builds upon the previous, drawing the scale of analysis to more intricate nuances that constitute the commodity chains of fruits and vegetables sold at the Jean Talon and Atwater Markets. In my research, the Jean Talon and Atwater Markets act as nodes forming the network connecting place and people in the local food system of Montréal and bridging the distance between producers across the landscape of southern Québec and urban consumers. The characteristics of the networks and supply chains involved exemplify features of local food systems and are grounded in concepts within alternative food networks, particularly short food supply chains. Drawing on these two bodies of literature, I am able to deepen my understanding of the role and value of the Markets beyond merely their geospatial context. As they further guide my understanding of local food, a commodity chain lens facilitates my analysis on how perceptions of 'local' are constructed and embedded along the fruit and vegetable commodity chains.

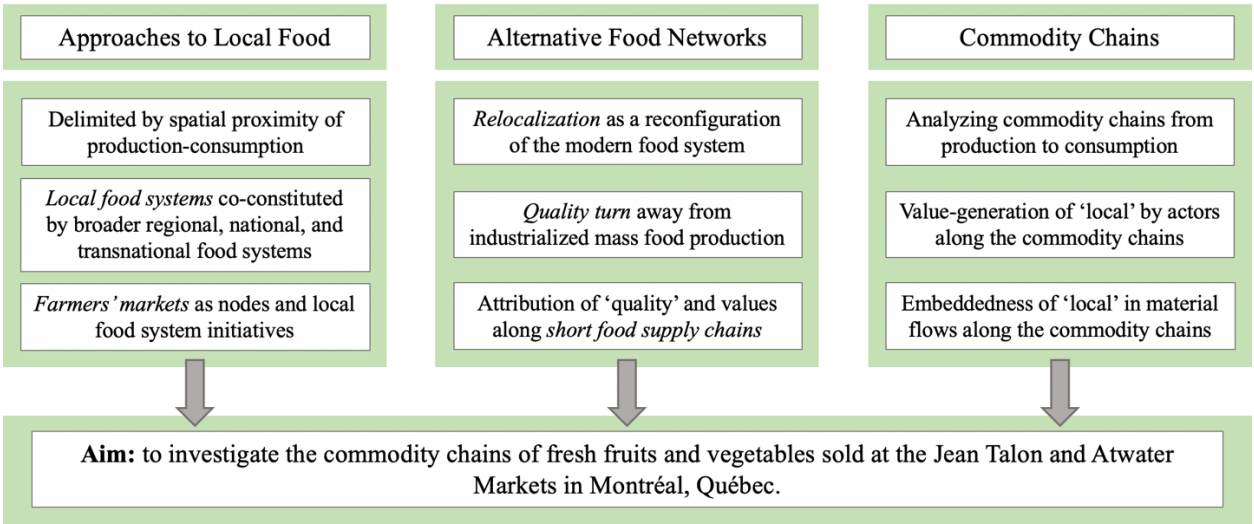


Figure 2.1: Thesis Conceptual Framework (Source: Author)

CHAPTER 3: METHODOLOGY

In this chapter, I describe the methods used in my research. I begin in Section 3.1 by outlining the context of my fieldwork, highlighting the temporal and spatial scope of my data collection. Then, in Section 3.2 I describe my participant demographics. The following sections elaborate on my data collection methods. In Section 3.3, I outline the design of my questionnaire survey and the sampling procedure I employed with this method. Next, I explain how I conducted informal conversational interviews, observations, and describe the analysis techniques I used during and upon the completion of fieldwork. In Section 3.4, I reflect upon my positionality as a researcher and the implications of this on data collection and analysis. I conclude this chapter by discussing some limitations to my methods in Section 3.5. Permission was granted by McGill University's Research Ethics Board (REB) to conduct this research [see Appendix A].

3.1: Fieldwork Context

Fieldwork was conducted over a period beginning in late July of 2019 and finishing in the end of September 2019. This timespan represents a portion of the summer growing season which, on average, constitutes 150-170 days until fall frost, or October 31st, for the greater Montréal region (Government of Canada, 2014). The two field sites, the Jean Talon and Atwater Markets, are the two largest and most popular of fifteen markets comprising Montréal's Public Markets (MPM). The significance of the Jean Talon and Atwater Markets in the food system of Montréal is further detailed in Chapter 4. While various categories of merchants are present at the Markets, including butchers, florists, egg merchants, and restaurant owners, the results of my research pertain to the fresh fruits and vegetables being sold and the vendors selling them at the Jean Talon and Atwater Markets during the summer growing season. Fieldwork only commenced upon receiving REB approval.

3.2: Participant Demographics

The target population of my study was identified from the Montréal's Public Markets website, which lists affiliated farms and vendors. In my research, I focus on vendors classified as fruit and vegetable growers as well as vendors that were not identified as such by MPM, but offered fruits and vegetables for sale. The term 'vendor' serves as an umbrella for the individuals selling foodstuffs at the Markets, including farmers and employees that are not associated with agricultural production. Vendors in my study are affiliated with the kiosk(s) at which they

conduct operations at either or both the Jean Talon and Atwater Markets. Vendors at the Markets are also associated with the farm, which I refer to as the vendor farm, on which at least a portion of the fruits and vegetables being sold were produced.

Surveys were distributed to fruit and vegetable vendors present at the two Markets, encompassing perspectives from mainly proprietors of kiosks and agricultural producers or members of the vendor farm. Occasionally, vendors hired as summer employees were surveyed. All participants were over eighteen years of age and both men and women were surveyed. I administered a total of twenty-three surveys, three of which were discarded due to inconsistent data. Thus, the sample of this study is comprised of twelve fruit and vegetable vendors at Jean Talon Market and eight fruit and vegetable vendors at Atwater Market. Three participants operated kiosks at both Markets, in my research I classify these participants by the Market at which I conducted the survey.

3.3: Methods Used

3.3.1: Questionnaire Surveys

Questionnaire surveys involving a mix of open-ended questions and fixed-response questions were used for my research. Due to the standardization and flexibility of questions that can be asked in a questionnaire survey (Clifford *et al*., 2016), this method was employed as I sought to collect data that expands on existing information published on the MPM website as well as gather responses on more complex social interactions and attitudes. The content of the survey was divided into five sections pertaining to participants' role in the commodity chains, production origins of fruits and vegetables, distribution methods used along the commodity chains, decision-making in the commodity chains, and perceptions of 'local food.' The questionnaire survey format took inspiration from a 2006 survey conducted by the United States Department of Agriculture (USDA) on farmers' markets (Ragland and Tropp, 2009). Surveys were conducted face-to-face at the Markets in both French and English. Survey responses were collected and written on questionnaire sheets [see Appendix B] and in my fieldwork journal.

3.3.2: Recruitment & Sampling Procedure

I created a database using the information available on the MPM website as a directory to recruit participants selling fruits and vegetables at the Markets. Some vendors operated at multiple kiosks, therefore I simplified my total target population count by vendor in order to avoid any

double-counting. An initial target population was determined, with the aim to survey 25 percent and 50 percent of the fruit and vegetable vendors at the Jean Talon and Atwater Markets, respectively (since Jean Talon is considerably larger). Reconnaissance of the Markets confirmed forty-five fruit and vegetable vendors at Jean Talon Market and sixteen at Atwater Market. It is important to note that these figures were identified during my fieldwork period and that the vendors present at each Market can vary seasonally or annually.

A mix of convenience and purposeful sampling was used to recruit participants. In consideration of the environment of my fieldwork, I used convenience sampling, where whoever is available is approached (Marshall, 1996). As vendors are constantly engaging with customers in a space in which they base their livelihoods, I only approached potential participants during a lull in sales. Prior to fieldwork, I used *a priori* codes to categorize my target population of vendors by Market, months of operation, length of establishment, and product specialization. In efforts to capture the diversity of fruit and vegetable vendors among my sample population, I combined convenience and purposeful sampling, where I actively selected participants based on my knowledge of the research area (*ibid.*). Surveys were conducted face-to-face at each Market with participants who gave consent. Only one participant was recruited over the phone and was subsequently surveyed at the Market. Follow-up was conducted over the phone and in-person.

At Jean Talon Market, I approached seventeen fruit and vegetable vendors, fourteen participated in the survey, and two surveys were discarded. At Atwater Market, I approached thirteen fruit and vegetable vendors, nine participated in the survey, and one survey was discarded. Therefore, the results in the following chapters revolve approximately 27 percent (n=12) of the total fruit and vegetable vendors present at Jean Talon Market and 50 percent (n=8) of the total fruit and vegetable vendors present at Atwater Market.

3.3.3: Informal Conversational Interviews

During fieldwork, for some participants (n=6), responses to survey questions evolved into informal conversational interviews where I asked further questions to gain a better understanding of their reactions. Described as an "off the top of your head" style of interview, this method is advantageous in its flexibility as the overall structure of the interview relies "entirely on the spontaneous generation of questions in a natural interaction" (Gall, Gall, and Borg, 2003:239). On several occasions, interactions with vendors who had declined to complete my survey inadvertently turned into informal conversational interviews. While these conversations, often

brief and always unplanned, contextualized my understanding of the Markets and the dynamics amongst the actors present at them, they are not explicitly mentioned in my results as they occurred without informed consent. Due to the spontaneity of this method, interviews were not audio recorded using a device nor by note-taking in the moment, "because these tools can in some instances disrupt the flow of conversation or interaction" (Kearns, 2016: 328). Detailed notes recollecting these conversations were recorded in my fieldwork journal immediately following an interview.

3.3.4: Observations

I made use of observations during my visits to the Markets as a complete observer and observer as participant (Kearns, 2016). Throughout fieldwork I gathered direct observations as a complete observer, without interacting with vendors (Gold, 1958), on fruit and vegetable provenance vis-à-vis food packaging, labelling, and signage at different kiosks. The use of observations was not limited to participants' kiosks as I shifted to observer as participant before, after, and in between surveys inquiring, as a customer might, about the fruit and vegetable commodities for sale at different kiosks throughout the Markets (*ibid.*). The use of these approaches to participant observation provided complementary evidence to my survey results, enhancing my interpretation of the overall networks of production origins and supply chains contributing fruits and vegetables to the Markets. Observations were recorded during, or immediately following, visits to the Markets in my fieldwork journal.

3.3.5: Data Analysis

Following fieldwork, data from questionnaire surveys and observations in my field notes were transferred into a spreadsheet with a code for each participant. Upon the completion of data collection, these data were aggregated falling under categories of participant demographics and characteristics, fruit and vegetable origins, supply chains logistics, and perceptions of local food. I created and analyzed summary statistics tables and graphs, found in the following three results chapters. Using ArcGIS, I then geocoded the Markets, vendor farm locations, and fruit and vegetable provenance gathered from surveys and observations by latitude and longitude. I took several precautions to protect the confidentiality of my participants. Each participant was coded in relation to the vendor kiosk, alphanumerically for each Market. Furthermore, the exact

location of vendor and producer farms in my research is concealed by aggregating this data to the municipality level.

In Chapters 4 and 5, I use these maps to trace fruit and vegetable production origins, which builds the foundation of the network of actors and distribution methods that supply the Jean Talon and Atwater Markets. Responses from open-ended questions and informal conversational interviews were coded *a posteriori* by revisiting *a priori* codes and my field notes. These results provide nuance to my statistical and geospatial findings in my analysis of the commodity chains. In Chapter 6, I combine these data to construct a conceptual model of the fruit and vegetable commodity chains supplying the Jean Talon and Atwater Markets. Since some of my research objectives seek to better understand the Markets overall, while others aim to compare them, I share my findings for both Markets together as well as individually throughout my results chapters.

3.4: Positionality Concerns

As a young, woman of colour attending an esteemed academic institution, I reflect on my positionality as "changing contextual and relational factors are crucial for defining identities and our knowledge in any given situation" (Maher and Tetreault, 1993:118). That is to say, my age, gender, race, education, and socioeconomic status constitute my positionality and must be interrogated in relational processes. These aspects of my identity intersect and compete, shaping my positionality and influencing my research agenda, presence in the field, and research findings (Kirsch, 1999; Peake, 2017). As an immigrant to Canada, visible minority, and young female researcher, I am in a position where I often feel the need to perform (or conform) to "live up to" the standards (and stereotypes) dictated by dominating white, patriarchal views. While I am positioned on the margins of Western society and within the academy, access to education and the ability to conduct research is a privilege I have that is largely an outcome of my 'comfortable' socioeconomic background.

Acknowledging that "the researcher's power is negotiated, not given" (Merriam *et al.,* 2001: 409), I reflected on my positionality in relation to the spaces I entered and the individuals that occupied them. Given that my field sites are public spaces dominated by older, white men and women, my age, race, and gender placed me in a position of subjugation. As I thought about my connections formed with younger vendors, I recognized that as the age gap between me and participants diminished, so did the asymmetry of power in our relationship. Moreover, my

affiliation with a prestigious university as a researcher grants me certain power. The dynamics of what always began as friendly interactions transformed as I revealed my intentions of conducting research. I am aware that my research took place in a setting where, for some, livelihoods are based. With this in mind, I understand that the time given to me by a vendor translates to time diverted away from a potential sale. For this reason, I often expected to be turned away. On the other hand, given the authority of education and potential for my work to reach a wider audience, some vendors became more likely to engage while others exhibited wariness in our relationship.

Only beginning to learn how to be, and what it is to be, a researcher at a young age, I am still attempting to make sense of, and situate myself within, the world around me. "Knowledge is valid when it includes an acknowledgment of the knower's specific position in any context" (Maher and Tetreault, 1993:118), thus, I recorded thoughts on my positionality in a section of my fieldwork journal in order to practice critical reflexivity throughout the research process (Dowling, 2016).

3.5: Limitations of Methods

The low response rate of surveys has proved a shortcoming in previous farmers' market survey research (Pennings *et al.*, 2002; Ragland and Tropp, 2009). I attempted to mitigate this in my questionnaire survey design, by recruiting participants in-person at the Markets, and using complementary methods. As this study is, to my knowledge, the first to characterize the commodity chains of the Jean Talon and Atwater Markets, it does not delve deeper into actor experiences, interactions, and power dynamics. Focusing on producers and vendors, I do not discuss the value-construction, distribution, and consumption of local food commodities that has been linked to the socioeconomic status of consumers and their relationships to vendors at markets that has been researched (Brown, 2001; Onianwa *et al*., 2006; Conner *et al*., 2010; Schupp, 2016). Finally, food provenance mapping and commodity chains modelling presented in my research is an underestimate of the entirety of actors, networks, and commodities involved in the provision and distribution of fruits and vegetables at the Jean Talon and Atwater Markets. However, it is important to note that my findings are not representative of the total population of vendors present at the Jean Talon and Atwater Markets, nor are they representative of the commodity chains of fruits and vegetables supplied to all of Montréal's Public Markets.

3.6: Methodology Conclusion

In this chapter, I set the stage for the results of my data analysis in the following chapters. I began by detailing my fieldwork context of the Jean Talon and Atwater Markets in Montréal, Québec and the demographics of the twenty vendors that participated in my research. Next, I described my questionnaire survey, designed to ask open-ended and fixed-response questions. Then, I explained my recruitment procedure and the mix of convenience and purposeful sampling employed. I outlined my use of informal conversational interviews, observations, and how I combined these data to perform analysis, map food provenance, and construct the fruit and vegetable commodity chains. Moreover, I reflected on my positionality in relation to the vendors and public spaces of the Markets. Finally, I discussed the limitations to my methods in structure and scope, only to focus the results that proceed. In the next three chapters, using the multi-methods approach outlined in this chapter, I unravel the commodity chains of fruits and vegetables supplied to the Jean Talon and Atwater Markets.

CHAPTER 4: THE MARKETS

In this chapter, I elaborate on my field sites of the Jean Talon and Atwater Markets in Montréal, Québec in Canada. I begin in Section 4.1 by contextualizing the two Markets with regard to the history and mission of Montréal's Public Markets (MPM) as managed by the Montréal Public Market Management Corporation (MPMMC). In Section 4.2, I situate the establishments of the Jean Talon and Atwater Markets in space and time and examine their roles in the broader food system of Montréal. In Section 4.3, I explain the characteristics of my research participants, the fruit and vegetable vendors at the Markets. Then, I analyze the roles of these actors, their vendor farms, and their kiosks, beginning to form the basis of the commodity chains of fruits and vegetables supplied to the Jean Talon and Atwater Markets.

4.1: MPM and MPMMC History & Mission

In 1980, the future of public markets owned by the City of Montréal was reimagined. Agricultural producers and merchants, in discussion with the *Union des producteurs agricoles*, proposed that a non-profit corporation oversee the management of the markets that serve urban consumers. Previously under the sole ownership of the City of Montréal, the operations of fifteen markets was delegated to the newly formed Montréal Public Market Management Corporation in June of 1993 (Montréal's Public Markets, 2018). While the City of Montréal maintained ownership of the fifteen markets distributed across the Island of Montréal, the MPMMC became the managing body of a corporation of 250 members, producers, merchants, and vendors comprising Montréal's Public Markets (*ibid.*).

The MPMMC sets out with the goal to "honour the traditions of past public markets, pay tribute to Québec's heritage, and to be a place where rural and urban cultures meet" (*ibid.*:online). Thus, the fifteen markets represent not only sites of material exchange, of locally grown and curated food commodities, but social sites of exchange as well through producer-consumer interaction. Underlying the corporation's goal is MPM's commitment to sustainable development, guiding policy that serves to enhance transparency and the status of Québec products. With concern over the markets' cumulative environmental footprint, "the MPM also adhere to the principle of short-chain marketing, distribution networks in which there is a maximum of one intermediary between the producer and the consumer" (*ibid.*:online). While maintaining emphasis on the 'local,' some of MPM's markets remain open year-round supplying food commodities from Québec and elsewhere.

4.2: The Jean Talon & Atwater Markets

Jean Talon Market is located in the heart of Montréal's Little Italy, standing as one of the oldest public markets in the city and one of the largest open-air markets in North America (Montréal's Public Markets, 2018). Inaugurated in 1933 as the Marché du Nord, the name was later changed in 1983 to what it is known as today (*ibid.*). Less than ten kilometers away, Atwater Market is situated in Montréal's southwest borough in proximity to Lachine canal. Likewise to Jean Talon Market, Atwater Market began its operations in 1933 (*ibid.*). In present day, both the Jean Talon and Atwater Markets operate under the management of MPMMC. Each Market is open year-round, seven days a week (except during the winter holidays), attracting urban consumers and tourists with locally and globally sourced foodstuffs, culinary demonstrations, and gourmet food tours and events. During the summer, customers flock to the Markets in search of fresh, locally grown fruits and vegetables sold at kiosks in an outdoor atmosphere [see Figure 4.1]. In the winter, the Jean Talon and Atwater Markets continue their operations, erecting walls to provide a comfortable, sheltered space for people to shop. While the Markets feature a wide variety of merchants, ranging from horticulturalists to delicatessens, fruit and vegetable vendors predominate the marketscapes during the summer.

Figure 4.1: A fruit and vegetable kiosk at Jean Talon Market. A delicatessen can be seen in the background. (Source: Author)

4.2.1: The Markets' Role in the Local Food System

Acknowledging Montréal's Public Markets' historical and current context, I position the Jean Talon and Atwater Markets as nodes (Aucoin and Fry, 2015) within the local food system of the Greater Montréal area, where Québec producers and urban consumers meet at a place of exchange. In consideration of MPM's commitment to minimize the intermediaries along the food supply chain, the Markets provide an opportunity for producers and consumers to relocalize (Feagan, 2007) Montréal's food system. As a result, the symbolic and material representation of Québec grown and sourced food commodities at the Jean Talon and Atwater Markets contrasts the food biographies (Cook and Crang, 1996) of products sold at grocery chains, dépanneurs, and restaurants which convolute information on the production, processing, and distribution of food available to consumers. Situated within a vast, interconnected network of food supply chains, spanning over local, regional, and global scales, that contributes to urban consumption in the Greater Montréal area, the Jean Talon and Atwater Markets are distinguished by their role in providing alternative, short food supply chains.

While the role of the Jean Talon and Atwater Markets in the local food system is made clear, designations of the Markets as either farmers' markets or public markets, the latter encompassing both farmers and non-producer vendors, seemed divided amongst my participants. Overall, the majority of participants perceived the Markets as public markets, simply due to the semantics of MPM. For many, the explanation was simple: "It's not a farmers' market. There's every kind of seller here" (August 23, 2019), suggesting that the prevalence of non-producer vendors, including grocers and ready-to-eat food vendors, constitutes the Markets as public markets.

The absence of farmers selling their own fruits and vegetables further hindered participants from identifying the Markets as farmers' markets. However, a young farmer explained that: "Not all farmers can go to markets and sell their own produce. They have to be on the farm and take care of their crops, farming is a full-time job…that's why you see so many things here for resale" (September 9, 2019). This statement clarified the presence of non-producer vendors selling fruits and vegetables that I had observed at the Markets, including high school and university students on summer break. Furthermore, it revealed that while the Jean Talon and Atwater Markets celebrate Québec grown fruits and vegetables, the farmers who produce these commodities are not always the ones selling them.

Only a few participants, all of whom were surveyed at Atwater Market, identified the place at which they operate as a farmers' market. In comparison to Jean Talon Market, Atwater Market hosts a larger proportion of fruit and vegetable vendors relative to other types of vendors. Even so, despite participants' desires for Atwater Market to be more like a farmers' market, they refrained from defining the Market as such. One producer-vendor at Atwater Market stated that:

> We want to bring a farmers' market feel to the Market, but public markets have a different principle. They provide a public service and part of that service is being open every day of the week for customers. Traditionally, farmers' markets gather on weekends…but as part of MPM we're required to be here at least three days of the week (August 16, 2019).

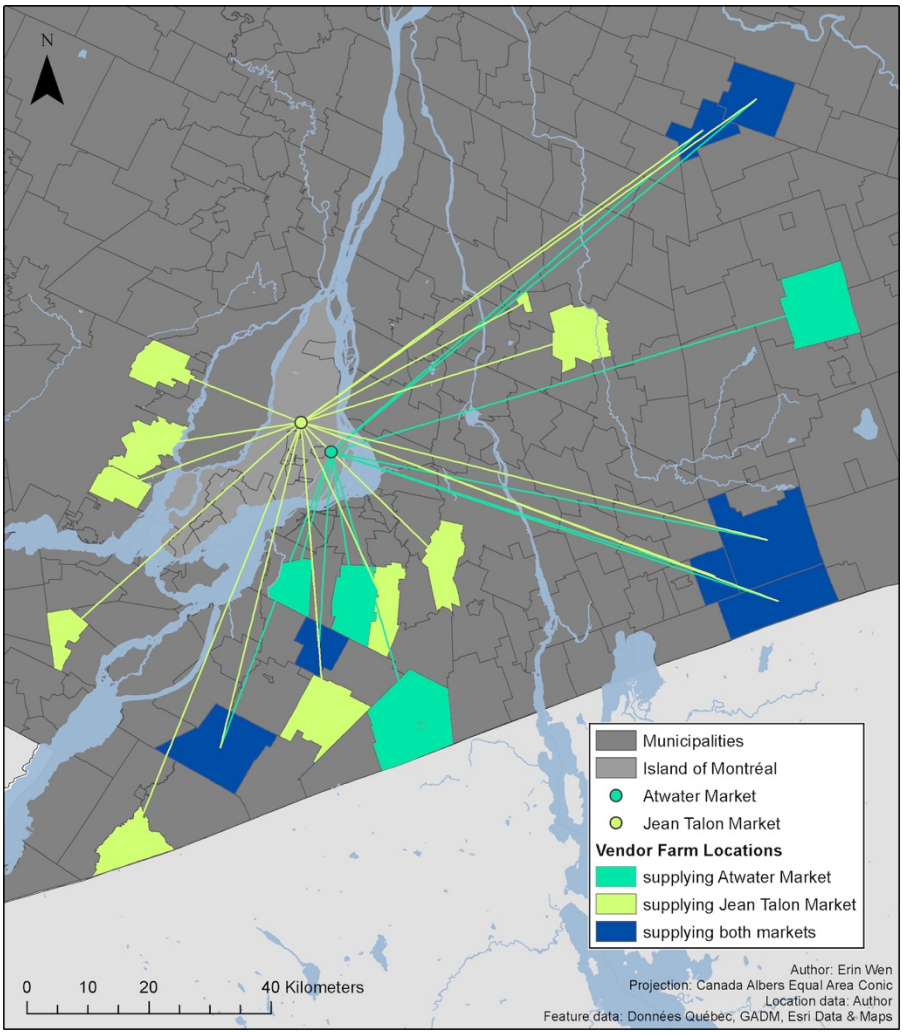
As a growing tourist destination, participants at Jean Talon Market were particularly adamant on the Market's role as a public market. Transitioning from a job at an ice cream shop at the Market to selling fruits and vegetables at one of the kiosks, one employee reflected on her experience at Jean Talon Market: "It used to be a place where producers would sell their own fruits and vegetables. Now it's more of a tourist place, not many producers are present… I even ask myself why everything isn't local" (September 19, 2019).

From the perspective of my participants, the functioning of the Jean Talon and Atwater Markets diverges from the traditional definition of farmers' markets with regard to the types of vendors present, commodities available, and operating hours. Nonetheless, both the Jean Talon and Atwater Markets continue the tradition of farmers' markets as both social and material sites of exchange linking rural-urban geographies (Spitzer and Baum, 1995; Gouglas, 1996). The general consensus amongst participants indicates that the Jean Talon and Atwater Markets cannot be labelled as farmers' markets, instead I turn to one farmer's definition of the nodes as: "public markets with great farmers" (September 9, 2019).

4.3: The Fruit & Vegetable Vendors

At the Jean Talon and Atwater Markets, each participant is associated with a unique vendor farm, with the exception of a cooperative which is linked to five farms during the summer growing season. Vendor farms are typically small- to medium-scale family operations located in municipalities across the southern Québec region. More specifically, participant vendor farms operate within the Montérégie (n=20), Laurentides (n=3), and Centre-du-Québec regions (n=1). Map 4.1 depicts the locations, at the municipality level, of the vendor farms participating in my research that directly supply and operate kiosks at the Jean Talon and Atwater Markets. Five of

the seven farms supplying both Markets comprise a cooperative, but are considered as one vendor participant in my study. Therefore, this translates to three participants operating kiosks at both Markets. While the Jean Talon and Atwater Markets serve as nodes in Montréal's local food system, the vendor farms depicted in Map 4.1 are not the only sources of fruits and vegetables sold at the two Markets.



Map 4.1: Municipalities in which vendor farms supplying the Jean Talon and Atwater Markets are located. Light green and teal polygons represent municipalities of vendor farms supplying the Jean Talon and Atwater Markets, respectively. Dark blue identifies locations of vendor farms that operate kiosks at both Markets. The number of farms in each municipality is not depicted. (Source: Author)

Within my study, 75 percent of participants operated for only the summer growing season [see Figure 4.2]. For the 25 percent present at the Markets year-round, they sustain operations through the provision of imported goods, increasing the geographical extent in which they source

fruits and vegetables. In comparison to participants' months of operation, I found greater diversity in the length of a given participant kiosk's establishment at each Market [see Figure 4.3]. The majority of participants were sustaining the operations of a family business and could not specify the reasoning behind their family's initial establishment at the Jean Talon or Atwater Market.

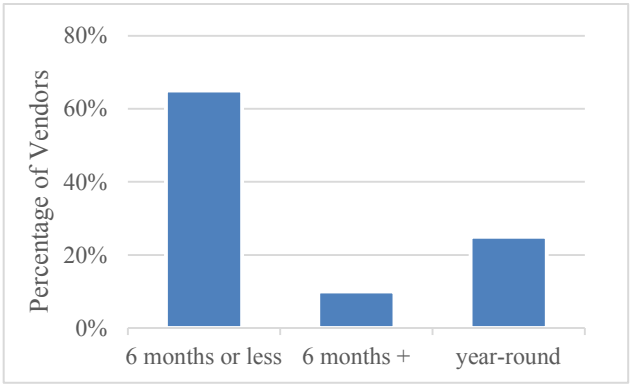


Figure 4.2: Months of operation for participant kiosks (n=20) at the Markets during the year

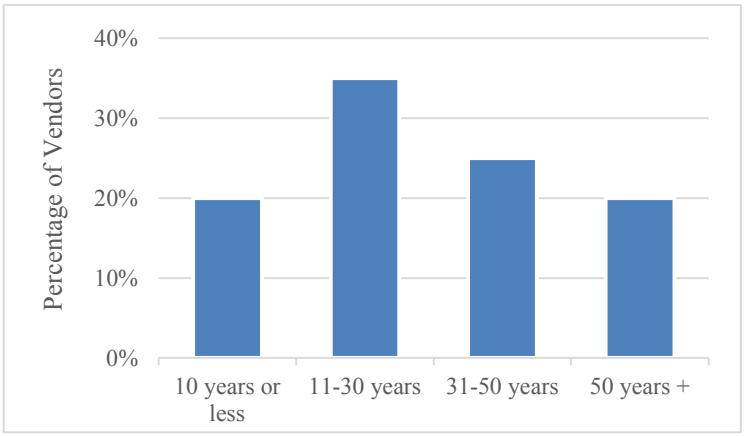


Figure 4.3: Length of establishment for kiosks associated with participants (n=20) at the Markets

More recent arrivals, those established at the Markets for ten years or less, described various motivations for joining Montréal's Public Markets. One farmer explained that:

> We started with baskets and wanted to diversify our channels of distribution. Farmer's markets in Québec are long-established and the same farmers continue to operate there. The market is 'tapped out' and you don't want to step on other producers' toes…it's a tight community and word gets around (August 16, 2019).

Another producer-vendor, whose family farm had established operations at MPM's smaller locations for over fifty years, informed me that she had been called by MPMMC to vend at Jean Talon Market. When I asked if she anticipated expanding her operations to another market in the

foreseeable future, she declined, expressing that "at least one member of the family needs to be present at each market. We want to provide the best product directly to the hands of the consumer" (September 19, 2019). Thus, the Jean Talon and Atwater Markets present a fruitful opportunity for farmers to directly reach urban consumers. For some, this entailed an application process as a prospective vendor while for others, the establishment of a kiosk depended on longstanding history and previous success.

Overall, 75 percent of participants served a role in both the production and selling of fruits and vegetables at the Markets, while only 70 percent participated in the transportation of these commodities. For the vendors who did not participate in the production of the fruits and vegetables they were selling, they identified as employees hired by the kiosk proprietor. Moreover, the degree to which participants did contribute to farm production varied. While one vendor described the role of her boss: "He stays on the farm but drops off all the fruits and vegetables at the Market at 2AM" (August 23, 2019), a younger vendor at Atwater Market reflected on her position: "Sometimes I help out on the farm, but I don't really like it…so I'm usually here selling the fruits and vegetables" (August 23, 2019).

4.4: Chapter Conclusion

In this chapter, I situated the Jean Talon and Atwater Markets in relation to MPM and the MPMMC, as well as in their individual establishments. While I recognized the Markets as nodes within the local food system of Montréal, I assessed their roles as farmers' markets or public markets based on participants' perceptions. I defined the Jean Talon and Atwater Markets as public markets, largely justified by the presence of non-producer vendors. I further examined the details of vendors participating in my research. In doing so, I provided geospatial representations linking the locations of vendor farms, at the municipality level, to the Jean Talon and Atwater Markets. Lastly, I elaborated the characteristics of participants, their kiosks, and their varied roles as actors in the commodity chains of fruits and vegetables supplied to the Jean Talon and Atwater Markets. In the next chapter, I analyze the supply side of the fruit and vegetable commodity chains, tracing food provenance from farm to the Markets.

CHAPTER 5: FROM FARM TO MARKET

In this chapter, I detail the distribution of the fruits and vegetables supplied to the Jean Talon and Atwater Markets. In Section 5.1, I analyze the logistics of supply chains utilized by vendors at the Markets. In particular I examine the actors, variables, and processes of decision-making that characterize the supply chains. Next, in Section 5.2 I trace food provenance, focusing my analysis on a subset list of fruits and vegetables comprising eight commodities, identifying their production origins across the landscape of southern Québec. Then, I compare these results to the overall supply channels utilized by participants, irrespective to a particular fruit or vegetable. Finally, I map the origins of agricultural commodities supplied to the Jean Talon and Atwater Markets that are sourced from global geographies and examine vendors' motivations to outsource fruits and vegetables.

5.1: Supply Chain Logistics & Decision-making

Over half of my participants procured almost all of the fruits and vegetables they were selling at the Markets from their own farm [see Table 5.1]. Only three participants within the total sample population sourced all of the fruits and vegetables directly from the vendor farm, while the remaining seventeen sold a mix of fruits and vegetables produced on the vendor farm and on other farms in Québec. The majority of fruits and vegetables being sold by participants at the Jean Talon and Atwater Markets remained locally sourced, at the provincial level [see Table 5.2]. Overall, 55 percent of vendors surveyed switch suppliers with each growing season or depending on product availability [see Table 5.3], while 30 percent of vendors had established ongoing partnerships with select suppliers which continued on an annual basis. As for the cooperative, procurement of fruits and vegetables took a mixed approach. Five farms within the cooperative were depended on during the summer, increasing to twenty-one farms in the winter.

Percentage sourced from vendor farm	Count
less than 25%	3
25 – 50%	2
50 – 75%	4
75 – 100%	11

Table 5.1: Percentage of overall fruits and vegetables sold by participants at the kiosk that was sourced from the vendor farm based on participants' estimates

Percentage grown in Québec	Count
less than 25%	0
25 – 50%	0
50 – 75%	2
75 – 100%	18

Table 5.2: Percentage of overall fruits and vegetables sold by participants at the kiosk that was grown in Québec

Description of Supply Channels	Count
only sourced from own (vendor) farm	3
ongoing partnership with same supplier(s)	6
changing suppliers with each season/product availability	11
farmer cooperative	1

Table 5.3: Supply channels used by participants

Participants indicated that they often rely on community relations to supplement the fruits and vegetables offered at their kiosk at the Markets. These relations were often determined by spatial proximity to the vendor farm as participants turned to neighbouring farms and family. At Atwater Market, the neighbours that participants relied on included those in proximity to the vendor farm and those at the Market itself. A young farmer described sharing amongst Atwater Market which, for her, involved her father who also operated a kiosk at the Market. She demonstrated the ease of supplementing her sales, explaining that: "My father's farm is right beside mine and sometimes we sell some items from each other's stands. If I'm out of something, I can just walk over" (September 9, 2019). Correspondingly, another vendor at Atwater Market stated that, "here you go to your neighbour and ask to sell their stuff," drawing a comparison with Jean Talon Market where, "…there's no community feel. You don't see vendors sharing their fruits and vegetables" (September 24, 2019). While I found no evidence of sharing amongst vendors at Jean Talon Market, vendors did procure some of their fruits and vegetables from neighbouring farms and family members to sell at their kiosk.

Participants made use of auxiliary supply channels by selecting producers also based on trust-based orientations. One farmer selling a mix of Québec grown fruits and vegetables sourced from multiple farms, including his own, made explicit that: "I try to keep it as local as possible, I pick the producers myself. I go to the same guys every time – these are farmers I respect" (September 24, 2019). Elaborating on the ties between Québec producers and vendors at the Markets, one kiosk proprietor at Jean Talon Market expressed her opinion that: "Québec

wholesalers work in harmony with MPM. Some farmers in Québec produce so much surplus that they cannot sell all their fruits and vegetables to clients directly. They sell to resellers who sell to customers" (September 24, 2019).

Moreover, ecological and economic considerations caused vendors to depend on webs of supply channels rather than relying solely on the vendor farm. One producer-vendor considered increasing her farm's agricultural production before turning to her neighbour, explaining that:

> There's a limit to how much more you can take on producing. We grow around sixty fruit and vegetable varieties, but potatoes are resource intensive in Québec and our neighbours specialize in them. We did a cost-benefit analysis and logically, it doesn't make sense for us to take on trying to grow potatoes (August 16, 2019).

Furthermore, the motivation to attract customers through the diversification of fruits and vegetables available at a kiosk underscored participants' use of multiple supply lines. At Atwater Market, a proprietor blatantly stated: "I'm running a business, I have costs to manage – my farm, renting kiosk space, employees…and competition exists. If you can't provide the customer with what they want at your kiosk, they will just move on to the next one at the Market" (September 24, 2019).

In determining which specific commodities to produce on the vendor farm, the majority of participants described these decisions as experience based. For the most part, farm practices had followed the same routine over the years – one farmer simply stated, "that's just how we've done it for years" (August 16, 2019). As alluded to by one producer-vendor's cost-benefit analysis of beginning potato production, shifting agricultural practices requires an evaluation of the farm's resource availability, ecological conditions, and consideration of alternative procurement methods.

5.1.1: Considering the Consumer

While my research focuses on the producers and vendors at the Jean Talon and Atwater Markets, employing a commodity chain approach I draw attention to the role of consumer influence in decision-making along the fruit and vegetable commodity chains. More specifically, I sought to understand if and how producer-vendors take into account consumer characteristics and demand. While vendors highlighted the significance of their clients, with one participant emphasizing that: "Customers are our number one concern!" (August 19, 2019), evidence of supply chain decisions made to reflect consumer demographics and demand varied amongst participants.

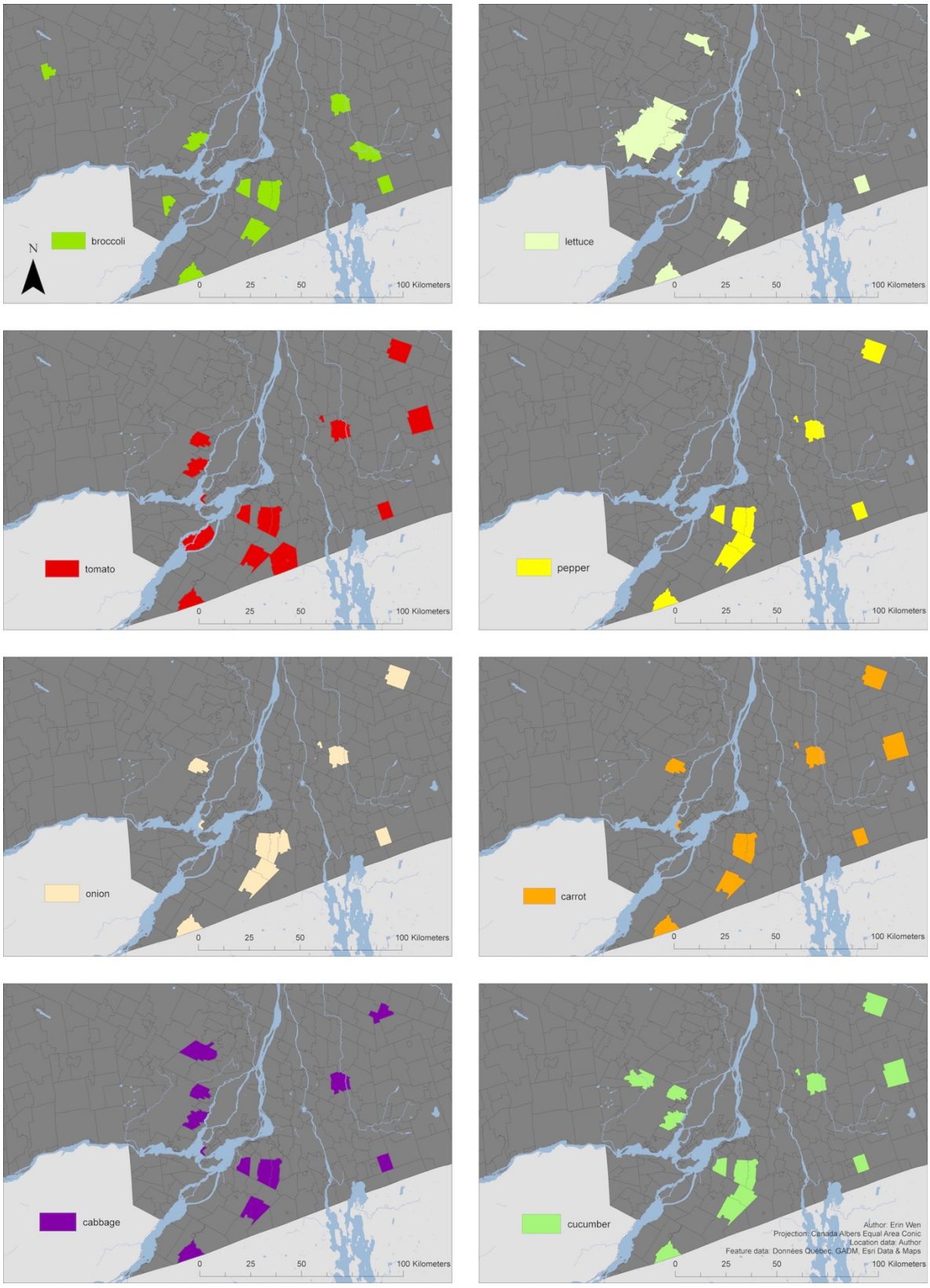
My findings indicate that only 20 percent of participants (n=4) used consumer data or marketing information. For one farmer, this involved electronically tracking the productivity of sales at the Markets. Additionally, as an organic farmer, she accesses a larger, organic research network in which "research by other organic producers in Canada and Vermont informs our pricing model" (August 16, 2019). Technology provides another means of gauging consumer demand as two other participants used data from their online sales to determine what fruits and vegetables to grow, and how much. For one kiosk proprietor, he holds a degree in marketing and hired an independent agronomist to assist on his business plan.

Efforts to cater to consumer demand are not limited to technological and research-based solutions. The economic life of the Markets is stimulated by connections drawn between fruit and vegetable vendors and their customers through personal interaction and mutual recognition. On at least five occasions, the attention of a vendor during a survey turned to a customer whom they greeted by name. I observed as conversation ensued with the exchange of pleasantries, inquiries into the use of the consumer's freshly purchased produce, and ending with a "see you next week." These face-to-face interactions exemplify the types of social relations that are embedded within alternative, direct-to-consumer short food supply chains that retain customer loyalty. While not an explicit attempt by producers and vendors to satisfy customers, the social embeddedness of the Jean Talon and Atwater Markets, referring to the entanglement of economic and social activity (Granovetter, 1985), attracts urban consumers.

5.2: Tracing Food Provenance

5.2.1: Mapping the Production Origins of a Subset List of Fruits & Vegetables

In my research, I focus on a subset list of fruits and vegetables comprising eight commodities. Amongst these fruits and vegetables are seasonal items grown during the summer in Québec, including broccoli, lettuce, tomato, pepper, and cucumber. I include agricultural commodities that can be produced in Québec throughout the year, consisting of onion, carrot, and cabbage. By limiting the number of commodities under investigation, acknowledging the spatial and temporal availability of these select fruits and vegetables during the fieldwork period, I trace their provenance to municipalities in Québec, and locations elsewhere, facilitating my analysis of the supply chains. Map 5.1 identifies the origins of production for each commodity, at the municipality level, for both Markets.

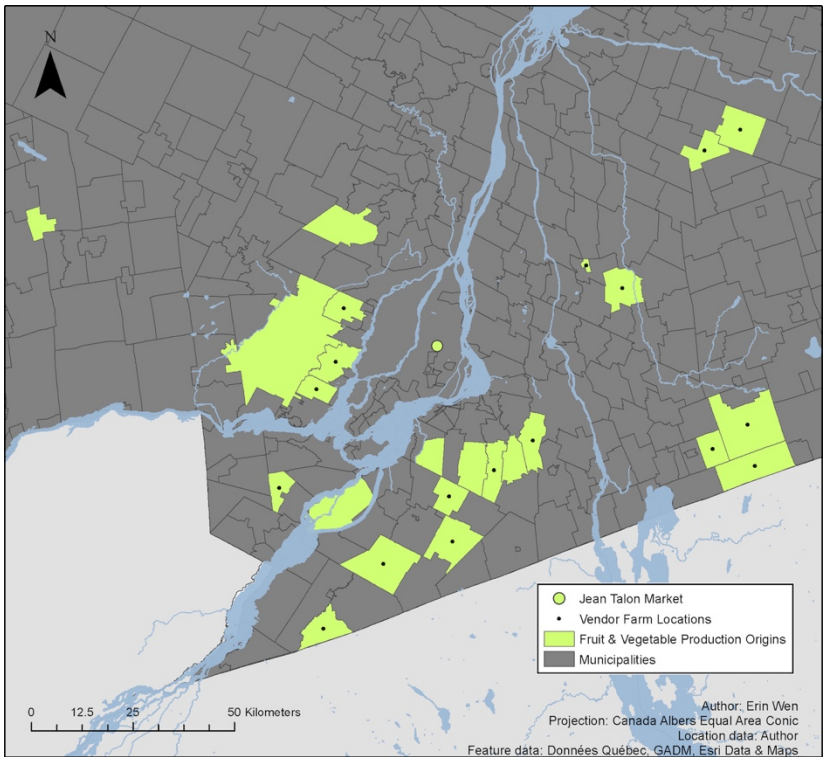


Map 5.1: Food provenance of a subset list of fruits and vegetables sold by participants at the Markets (Source: Author)

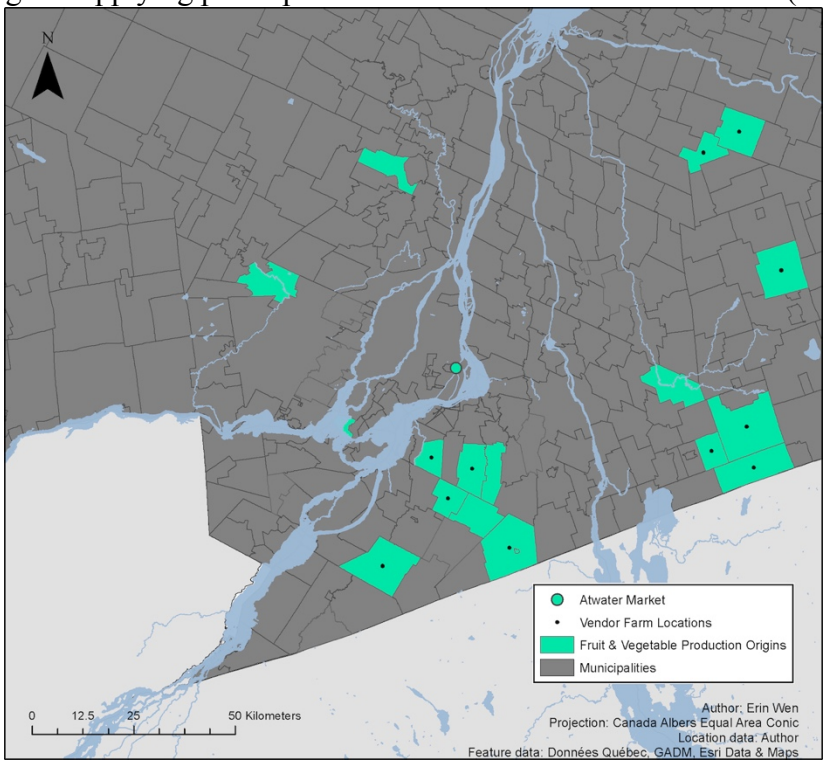
These visualizations represent survey responses as well as commodity origins gathered from observations at participants' kiosks. It is important to note that not all participants sold every commodity on this list. Two participants did not sell any fruits or vegetables on my list, rather they specialized in one or a few agricultural commodities. Food provenance was traced to the same municipality for four commodities between both Markets: broccoli, pepper, carrot, and cucumber. However, my findings do not pinpoint these commodities to the exact farm. Therefore, I cannot conclude that participants between the Markets shared the same suppliers for these particular commodities. Six participants at Jean Talon Market outsourced commodities from the subset list of fruits and vegetables, relying on other Québec farms apart from their own. Meanwhile, three participants at Atwater Market diversified their supply channels from the vendor farm. Only one of these three participants sourced fruits and vegetables from multiple production origins, including farms distributed across southern Québec, as well as those beyond provincial and national boundaries. Food provenance for the subset list of fruits and vegetables was traced to international origins for only two participants at Jean Talon Market.

5.2.2: Diversifying the Supply Channels

Maps 5.2 and 5.3 visualize overall food provenance, at the municipality level, specific to each Market. Cross-referencing data on the subset list of fruits and vegetables and vendor farm locations, these maps illustrate participants' use of additional supply channels in comparison to the direct lines from the vendor farm to the Jean Talon or Atwater Market. This demonstrates that the fruits and vegetables found at the Jean Talon and Atwater Markets at a single kiosk do not always have a single origin, the vendor farm. Overall, participants at Jean Talon Market sourced fruits and vegetables from twenty-four Québec municipalities, inclusive of the vendor farms. My sample of participants at Atwater Market sourced fruits and vegetables from a total of seventeen municipalities, inclusive of the vendor farms. By tracing food provenance, I discovered that the prevalence of outsourcing fruits and vegetables was higher at Jean Talon Market while the longest distance a commodity travelled was also slightly greater than that of Atwater Market.



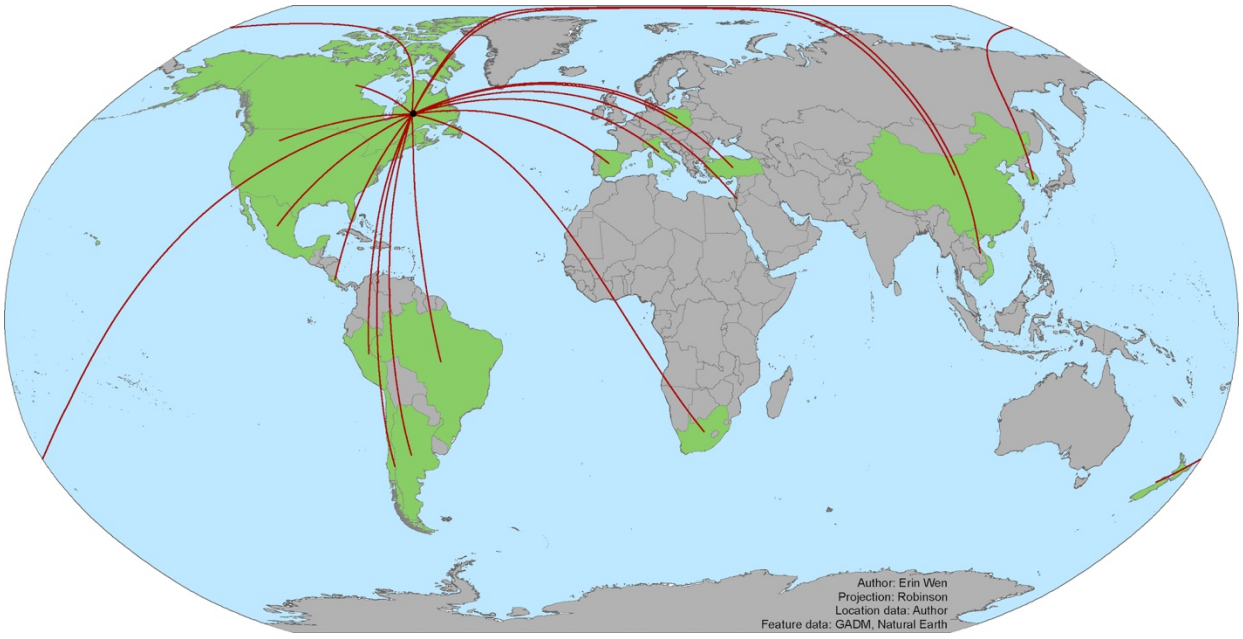
Map 5.2: Production origins supplying fruits and vegetables to participants' kiosks at Jean Talon Market. Vendor farm locations and production origins depicted at the municipality level. Production origins supplying participants at the Market are not exhaustive. (Source: Author)



Map 5.3: Production origins supplying fruits and vegetables to participants' kiosks at Atwater Market. Vendor farm locations and production origins depicted at the municipality level. Production origins supplying participants at the Market are not exhaustive. (Source: Author)

5.2.3: Global Flows of International Agricultural Commodities

While Montréal's Public Markets set out with the mission to supply Québec grown and sourced food products through short-chain marketing, Québec's climatic conditions limit the provision of local food year-round. At a fruit and vegetable kiosk at Jean Talon Market, one participant commented on his reality as a farmer in Québec: "I *have* to say 100 percent of what I'm selling is grown in Québec. Realistically, I import what I need, when I need…during the winter" (September 24, 2019). Another vendor at the Market operating only during the summer growing season mentioned that: "For the first two to four weeks of operations, we get our vegetables from the United States. We want to provide customers with the same products, but our vegetables from the farm just aren't ready for those first weeks of the season" (September 19, 2019). Despite the abundance of the summer growing season, I gathered data on fruits and vegetables for sale that were produced outside of the province of Québec. Map 5.4 identifies the global fruit and vegetable production origins that supply the Jean Talon and Atwater Markets.



Map 5.4: Global fruit and vegetable flows supplying the Jean Talon and Atwater Markets. Commodities from Canada are sourced outside Québec. This representation is not specific to any vendor present at either Market. Lines crossing the International Date Line connect to South Korea and New Zealand. Supply origins are not exhaustive. (Source: Author)

During fieldwork, I identified three large kiosks that sold nearly all imported fruits and vegetables at Jean Talon Market. Amongst their offerings, and some other more locally based

kiosks at Jean Talon Market, were prunes from Spain, bananas from Costa Rica, apples from Italy, mushrooms from South Korea and Poland, ginger from China, and figs from Turkey. At Atwater Market, international commodities included kiwifruit from New Zealand, asparagus from Peru, dragon fruit from Vietnam, mangoes from Brazil and Israel, clementines from South Africa, and pineapple from the United States. Between the Markets, from the subset list of fruits and vegetables (Section 5.2.1), I identified tomatoes, lettuce, peppers, and onions sourced from the United States, tomatoes procured from Mexico, and cucumber supplied from Spain.

While imported fruits and vegetables were sold at Atwater Market as well, there were no individual kiosks entirely dedicated to the sale of international agricultural commodities. As participants conveyed that imported and processed food commodities were made available to diversify offerings to consumers, the focal point of the kiosk remained Québec grown produce. While outside the scope of my research, the question of why kiosk space was dedicated to solely imported fruits and vegetables, in an establishment committed to short-chain marketing and Québec products, remains unanswered.

5.3: Chapter Conclusion

In this chapter, I began to set the foundation of the commodity chains of fruits and vegetables sold at the Jean Talon and Atwater Markets, particularly focusing on the supply side. First, I outlined the logistics of the networks of supply chains contributing agricultural commodities to the Markets. I explained participants use of differing supply lines, including the motivation to satisfy customer demand and considerations towards ecological limitations and economic risk. Then, I analyzed explicit and implicit methods in which vendors appeal to consumer demand. I identified technological, research-based approaches and considered the role of social embeddedness at the Jean Talon and Atwater Markets. Next, I mapped the food provenance of a subset list of eight fruits and vegetables and compared these findings to the locations of vendor farms, concluding that agricultural commodities sold at a single kiosk at the Jean Talon or Atwater Market are not always uniquely sourced from the vendor farm. I closed this chapter by tracing the production origins of fruits and vegetables sourced from international geographies, demonstrating that food provenance extends beyond Québec's provincial boundaries. These findings inform my results in Chapter 6 in which I elaborate the supply chains involved along the commodity chains of fruits and vegetables sold at the Markets.

CHAPTER 6: CONCEPTUALIZING THE COMMODITY CHAINS

In this chapter, I evaluate the commodity chains of fruits and vegetables supplied to the Jean Talon and Atwater Markets, building from my results in Chapter 5. In Section 6.1, I focus on the material product flows that characterize the supply chains that contribute to the overall provision of fruits and vegetables at the Markets. In particular, I examine the distribution methods used by participants and the intermediaries involved that connect production origins to the points of sale and consumption. In Section 6.2, I tease out and weave together the fruit and vegetable supply chains and participants' perceptions of local food. In doing so, I conceptualize the commodity chains and analyze what constitutes 'local' for the producers and vendors.

6.1: Characterizing the Supply Chains

During the summer growing season, in compliance with Montréal's Public Markets' mission statement, all participants in my study used short-chain marketing, "distribution networks in which there is a maximum of one intermediary between the producer and the consumer" (2018: online). However, I am limited in my analysis of marketing arrangements, "in which farmers also perform marketing functions, including storage, packaging, transportation, distribution, and advertising" (Martinez *et al.,* 2010:iv). Rather, I characterize the fruit and vegetable supply chains, focusing on the production origins and methods of distribution that supply the Jean Talon and Atwater Markets. Borrowing from definitions that classify marketing arrangements, I define the local supply chains by the number of, or lack thereof, intermediaries involved between the farm and the Markets.

Direct supply chains entail the flow of fruits and vegetables directly from the vendor farm to the Jean Talon or Atwater Market. Short supply chains align with MPM's definition of short-chain marketing, involving a maximum of one intermediary between the farm and the Market. These include the regional networks of producers distributed across southern Québec that contribute fruits and vegetables to participants' kiosks at the Markets. Additionally, I consider the sale of imported agricultural commodities by participants, supplemented by the global supply chain. The global supply chain is simply defined by the procurement of fruits and vegetables from production origins exogenous to the province of Québec, in which the networks of intermediaries involved are outside the scope of my analysis.

Based on my findings, I categorize the short supply chains used by participants in two modalities, where the vendor is positioned as the single intermediary. Short supply chains trace

the origins of fruits and vegetables to Québec farms in which the commodities are a) dropped off at the Market(s) or b) picked up by the vendor from the production origin, or in the city centre from a Québec wholesaler. The precise total number of Québec producers supplying each kiosk is not captured within my research. For only three participants, no alternative supply channels were used other than direct supply chains [see Table 6.1]. While distinction can be made between direct and short supply chains, Brinkley states that "local values-based supply chains are not limited to direct-marketing" (2017:315). Therefore, distribution methods including direct and short supply chains represent local fruit and vegetable supply channels contributing to the Jean Talon and Atwater Markets.

	Direct	**Direct + Short**	**Direct + Short + Global**	**Short + Global**
Jean Talon	3	7	2	0
Atwater	0	5	2	1
Total Count	**3**	**12**	**4**	**1**

Table 6.1: Use of supply chains by fruit and vegetable vendors (n=20) at the Jean Talon and Atwater Markets. Numbers indicate the count of participants using supply chains.

Assessing 'local' via supply chains, all participants provided some degree of local fruits and vegetables, sourcing commodities within the provincial boundaries of Québec through direct and short supply chains. According to Table 6.1, the use of global supply chains was more frequently used amongst participants at Atwater Market. However, my findings do not encompass all participants present at both Markets, such as the three vendors at Jean Talon Market selling nearly all internationally sourced fruits and vegetables. Furthermore, during the summer growing season, participants at both Markets offered berries and stone fruits from Ontario. In my research, I am unable to identify the intermediaries from the production origins to the Markets for these commodities, as well as those of other imported agricultural products sold by participants. Therefore, while the argument can be made that Ontario grown fruits and vegetables sold by participants are local commodities, on the basis of spatial proximity, I classify them as being supplied through the global supply chain.

6.1.1: Sales Beyond the Jean Talon & Atwater Markets

The Jean Talon and Atwater Markets are not the only points of sale for the fruits and vegetables produced on vendor farms. Only thirteen participants contributed nearly all of the fruits and vegetables produced on the vendor farm to the Jean Talon and Atwater Markets [see Table 6.2].

This suggests that the remaining 35 percent of participants sold at least a portion of their fruit and vegetable production at other distribution points, including other markets, through online retail, food baskets, restaurants, and other grocers. These differentiated points of sale represent additional nodes (Aucoin and Fry, 2015) expanding the networks of ways in which local Québec fruits and vegetables reach consumers. As vendor farms are distributed across southern Québec, they participate in broader regional networks of trade. However, the geographical extent of these additional points of sale are not identified in my findings. Given that some vendor farms operate in municipalities sitting on the US-Canada border, they may also potentially participate in trade crossing the national border.

Percentage of overall vendor farm production sold at the Jean Talon & Atwater Markets	**Count**
less than 25%	2
25 – 50%	1
50 – 75%	4
75 – 100%	13

Table 6.2: Percentage of overall fruit and vegetable production from the vendor farm sold by participants at the Jean Talon and Atwater Markets versus other distribution channels (other markets, online retail, food baskets, restaurants, etc.)

6.2: The Fruit & Vegetable Commodity Chains

Weaving together my findings on food provenance, supply chains, and participants' perceptions of what constitutes local food, I construct a conceptual model of the fruit and vegetable commodity chains supplying the Jean Talon and Atwater Markets [see Figure 6.1]. As the Jean Talon and Atwater Markets serve as the focal nodes within my conceptualization of Montréal's local food system, I delineate the 'local' with a porous boundary to encompass flows of fruits and vegetables that are distributed through direct and short supply chains. Moreover, other points of sale from the vendor farm lie within these boundaries and potentially extend beyond them to a broader regional scale.

While the spatiality of the local food system is not captured in this model, the link between producers across the landscape of southern Québec and consumers across the Island of Montréal is drawn out, bridging the gap between rural-urban geographies. Additionally, I acknowledge the global supply chain that contributes to the Markets and permeates the boundaries of the local food system, considering the imported agricultural commodities available

at both Markets and the three kiosks dedicated to solely imported fruits and vegetables. Further investigation is required into the nodes and actors along the global supply chain and those along other points of sale to elaborate additional and exogenous factors that form the networks that co-constitute the local food system.

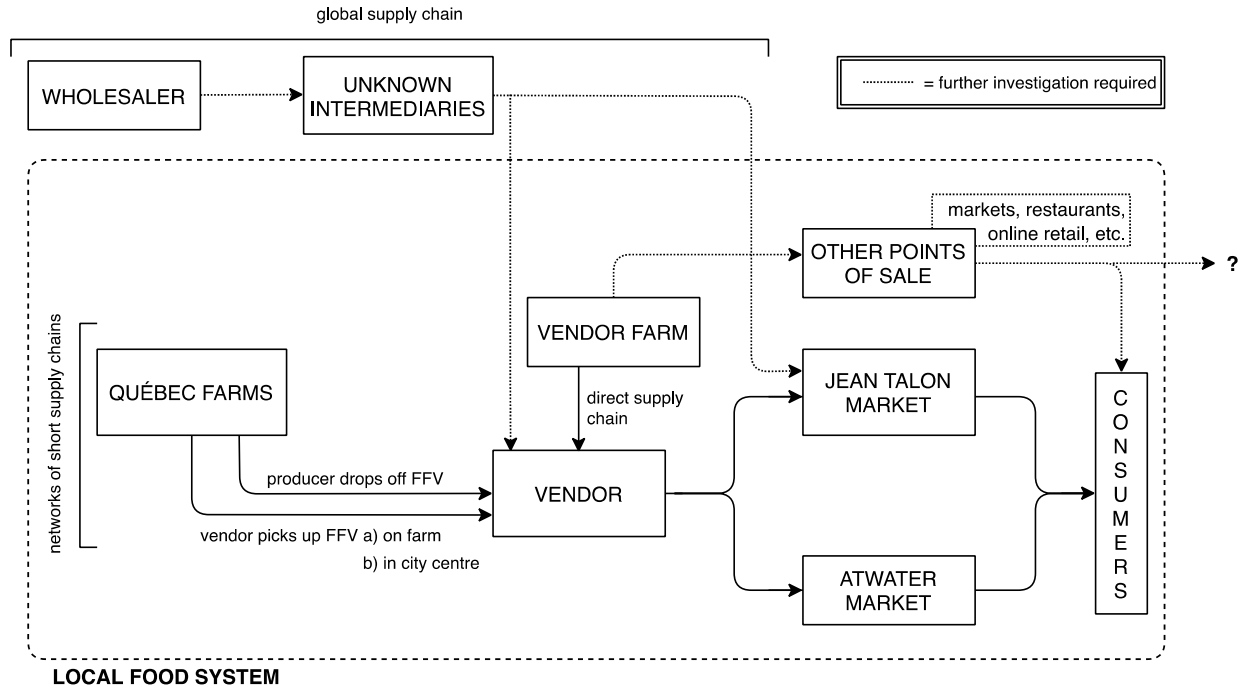


Figure 6.1: Conceptual model of the fresh fruit and vegetable (FFV) commodity chains supplying the Jean Talon and Atwater Markets (Source: Author)

6.2.1: Defining 'Local'

Despite the diverse and geographically extensive networks of fruit and vegetable supply chains that converge at the Jean Talon and Atwater Markets, I sought to define 'local' in my research from the perspectives of producers and vendors at the Markets. In my attempt to do so, I asked participants to rank, on a descending scale of importance, what characteristics constitute 'local.' Summarized from my review of the literature on local food, these defining characteristics included: 'distance travelled,' 'social and community relations,' 'organic,' 'contributes to local economy,' and 'quality, value, and freshness.'

Quality, value, and freshness ranked highest as the defining characteristics of local food. On average, the majority of participants also associated the concept of local food with its contribution to the local economy. Surprisingly, social and community relations were, at large, not perceived as an important aspect of local food. As a result, how vendors defined 'local'

seemingly dilutes the role of social embeddedness associated with short food supply chains, such as those offered by fruit and vegetable vendors at the Jean Talon and Atwater Markets. However, that is not to say that vendors do not ascribe value to the connections formed at the Markets. One farmer stated that, "the direct contact we have with our customers here is why we continue to sell our produce at the Market" (September 2, 2019). Another vendor divulged that: "I've been regularly shopping here for thirty years before I became a vendor. I've gotten to know the producers… and customers now too. That's why I prefer shopping here over grocery stores during the summer, I know the people here" (August 19, 2019). While vendors communicated their appreciation of producer-consumer relations, they do not define 'local' by these attributes.

Amongst participants' rankings, distance travelled ranked fairly low in its significance. Vendors conveyed that a particular metric distance does not define food as 'local.' Rather, what constitutes local food is its provenance in Québec. One participant exclaimed that 'local' means "products that are 100 percent Québécois" (September 19, 2019), while another farmer elaborated that production "takes into consideration Québec ecology, economy, and heritage" (September 24, 2019). Thus, vendors delimited 'local' to the province of Québec.

My findings show that in defining local food, producers and vendors conceptualize the term largely in regard to its material attributes, specifically 'quality, value, and freshness.' However, the ascription of 'quality' is associated with a fruit or vegetable's production origins in Québec, rather than its method of production. Despite some definitions of local food including organic agricultural production (Martinez *et al.,* 2000), most vendors did not identify 'organic' as a defining feature of local food. For the few vendors specializing in organic fruits and vegetables, they ranked organic high on the list of items they consider as constituting 'local.' On the other hand, one organic farmer commented that: "I think organic is important, but it has nothing to do with being local" (August 16, 2019).

6.3: Chapter Conclusion

In this chapter, I analyzed the commodity chains of fruits and vegetables supplied to the Jean Talon and Atwater Markets. I characterized the supply chains contributing to the Markets, defining the direct supply chains, two modalities of short supply chains, in addition to the global supply chain of fruits and vegetables. Then, I considered other points of sale, apart from the two Markets, at which participants distribute agricultural commodities produced on the vendor farm.

To illustrate the connectivity of actors and material flows of fruits and vegetables, I constructed a conceptual model of the commodity chains supplying the Jean Talon and Atwater Markets. Next, I described participants' perceptions of local food, defining 'local' by Québec provenance. Examining the material flows of fruits and vegetables and conceptualizations of 'local,' the Jean Talon and Atwater Markets are embedded within the local food system of Montréal that comprises global and regional wholesalers, local actors, and networks of distribution methods. As vendors most heavily rely on direct and short supply chains during the summer, the local fruit and vegetable commodity chains link production origins distributed across southern Québec to urban consumption on the Island of Montréal.

CHAPTER 7: DISCUSSION & CONCLUSION

In the previous chapters, I shared the results of my research from face-to-face questionnaire surveys, informal conversational interviews, observations, and geospatial analysis. In this chapter, I synthesize my findings and reflect on the actors, material product flows, and values that construct the commodity chains of fruits and vegetables supplied to the Jean Talon and Atwater Markets. In Section 7.1, I revisit concepts from my conceptual framework and the MPMMC mission statement to reassess 'local.' In Section 7.2, I consider future research avenues.

7.1: Reassessing "Local"

Embarking on my research, it has become clear as to why the term 'local' remains such a contested and ambiguous term. From the perspective of producers and vendors at the Jean Talon and Atwater Markets, of utmost importance was that produce remain grown and sourced within the province of Québec. While studies have bounded local through a specific spatial distance (Halweil, 2002; La Trobe, 2002; Smith and MacKinnon, 2007), conceptualizations of 'local' along the fruit and vegetable commodity chains most closely align with the CFIC definition, delimiting the local area of production and consumption at the provincial scale (Edge, 2013). According to the Montréal Public Market Management Corporation, 'local' is based on marketing arrangements (Martinez *et al.,* 2010), specifically short supply chains which limit the number of intermediaries between production and consumption.

However, Québec's climatic conditions present limitations to the provision of local food year-round, forcing producers and vendors at the Markets to diversify their supply channels. Yet, despite the abundance of the summer growing season for Québec farmers, vendors at the Markets procured fruits and vegetables from differentiated and geographically extensive production origins during the summer too. Namely, diversification entailed reliance on networks of direct and short supply chains involving farms distributed across the southern Québec region. With livelihoods based at the Jean Talon and Atwater Markets, additional ecological and economic considerations led some producer-vendors to source agricultural commodities from globally expansive production origins. Thus, definitions of 'local' and the material product flows of fruits and vegetables along the commodity chains converge and clash. In consideration of the short duration of Québec's growing season, the reality of vending at the Markets, and consumer demand, what constitutes 'local' is conceptualized on an ideological basis.

7.2: Future Research Directions

Upon completing my thesis, I consider future research directions that can build on my findings. Employing a commodity chain approach to study the fruits and vegetables supplied to the Jean Talon and Atwater Markets, further investigation into consumers along the chains would balance my analysis of the commodity chains. A full scope assessment of the assemblage of fruit and vegetable supply chains contributing to the Markets would provide a deeper understanding of the networks of commodity chains involved. This could entail inquiry into production methods on the farms, intermediaries facilitating distribution, and geographically extensive production origins from which agricultural commodities are procured. Evaluating the role of the Montréal Public Market Management Corporation, the governing body of the Jean Talon and Atwater Markets, would also provide greater insight into how definitions of 'local' are conceptualized, disseminated, and embedded along the commodity chains.

Beyond commodity chains research and beyond the Markets, future projects can map the production origins, distribution, and consumption points of fruits and vegetables grown by farmers in the Greater Montréal area and southern Québec region. By tracing the material flows of agricultural commodities, geospatial analysis can provide a framework for investigating local and regional networks of trade. Such an approach can be useful in delimiting the provision of fruits and vegetables grown on small- and medium-scale farms in the southern Québec region.

7.3: Thesis Conclusion

Over the past decades, concern over the modern food system has been reflected in the rising popularity of farmers' markets in North America (Sanderson *et al.,* 2005). As one of many examples of local food system initiatives (Hedberg and Zimmerer, 2020), farmers' markets provide short food supply chains (Marsden *et al.,* 2000), diminishing the gap between producers and consumers while promoting the exchange of place-based culture, knowledge, and local commodities. Similarly, public markets, encompassing farmers and non-producer vendors, offer a greater variety of food commodities to urban consumers through short food supply chains. While the interest in local food has increased in recent decades (Edge, 2013), configurations of short food supply chains have proliferated, as have questions of what constitutes local. Additionally, claims on the values and benefits of local food, as systems and initiatives, are often disputed. By applying a commodity chain approach to local food, the definitions and claims of 'local' can be assessed from production to consumption.

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APPENDIX A: Research Ethics Approval

McGill

Research Ethics Board Office
James Administration Bldg.
845 Sherbrooke Street West. Rm 325
Montreal, QC H3A 0G4

Tel: (514) 398-6831

Website: www.mcgill.ca/research/research/compliance/human/

Research Ethics Board 1
Certificate of Ethical Acceptability of Research Involving Humans

REB File #: 26-0619

Project Title: Reassessing 'Local': The Commodity Chains of Fruits & Vegetables in Jean-Talon and Atwater Markets in Montreal, Quebec

Principal Investigator: Prof. Graham MacDonald

Department: Geography

Co-Investigators/Other Researchers: Erin Wen

Funding: McGill Sustainability Systems Initiative (MSSI) Sustaining Landscapes for the Future theme, "Analyzing the social-ecological implications of Montreal's foodshed".

Approval Period: **18 July 2019 to 17 July 2020**

The REB-1 reviewed and approved this project by delegated review in accordance with the requirements of the McGill University Policy on the Ethical Conduct of Research Involving Human Participants and the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans.

Deanna Collin, Senior Ethics Review Administrator

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* Approval is granted only for the research and purposes described.
* Modifications to the approved research must be reviewed and approved by the REB before they can be implemented.
* A Request for Renewal form must be submitted before the above expiry date. Research cannot be conducted without a current ethics approval. Submit 2-3 weeks ahead of the expiry date.
* When a project has been completed or terminated, a Study Closure form must be submitted.
* Unanticipated issues that may increase the risk level to participants or that may have other ethical implications must be promptly reported to the REB. Serious adverse events experienced by a participant in conjunction with the research must be reported to the REB without delay.
* The REB must be promptly notified of any new information that may affect the welfare or consent of participants.
* The REB must be notified of any suspension or cancellation imposed by a funding agency or regulatory body that is related to this study.
* The REB must be notified of any findings that may have ethical implications or may affect the decision of the REB.

APPENDIX B: Questionnaire Survey

PART 1 - Role in the Commodity Chain

1) What is your role at Jean Talon/Atwater Market?
   - Vendor
   - Farmer
   - Multiple roles - specify: _____
   - Other: specify _____
2) Do you participate in growing the fresh fruits and vegetables (FFV) you are selling?
   - Yes / No
     - If yes, approximately what fraction of the FFV being sold at your kiosk over the course of the year do you participate in growing?
       - less than 25%
       - 25% - 50%
       - 50% - 75%
       - 75% - 100%
3) Do you participate in transporting the FFV you are selling from the farm or from another location?
   - Yes / No
4) When did this kiosk begin operations at Jean Talon/Atwater* Market? _____
5) Does this stand operate at Jean Talon/Atwater Market outside of the summer growing season?
   - Yes / No
     - If yes, what are your months of operation?
       - From _____ To _____
     - If yes, does the sourcing of FFV change to different farms in the off-season?
       - Yes / No

PART 2 - Origins of Select Vegetables

6) On average, approximately how much of all the FFV you are selling are sourced/grown within Québec?
   - less than 25%
   - 25% - 50%
   - 50% - 75%
   - 75% - 100%
7) Of the following list of FFV, which are you selling that are grown in Québec?
   a) Which municipality/municipalities are they produced in?
   b) How are they grown?

FFV (A: available year-round; S: seasonal)	**Municipality**	**Outdoor Field/Greenhouse/Other**
Cabbage [A]: Y/N/Not selling		
Carrot [A]: Y/N/Not selling		
Onion [A]: Y/N/Not selling		
Broccoli [S]: Y/N/Not selling		
Lettuce [S]: Y/N/Not selling		
Pepper [S]: Y/N/Not selling		

Tomato [S]: Y/N/Not selling		
Cucumber [S]: Y/N/Not selling		

8) For the vegetables that are grown in Québec, are they all sourced from your farm?
   - Yes / No
     - If no, do your suppliers change with each growing season? (e.g., spring, summer, fall)
       - Yes / No
9) How much of **all** the FFV you are selling is sourced from your farm's production?
   - less than 25%
   - 25% - 50%
   - 50% - 75%
   - 75% - 100%
10) What is the approximate size of your farm (in hectares or acres)? _____

PART 3 - Distribution Networks

11) Of the vegetables that you are selling that are grown in Québec, how are they distributed to Jean Talon/Atwater Market?
   - direct marketing
   - through a marketing agency or agencies (i.e., intermediaries)
   - Other(s): specify _____
12) For the FFV you are selling that are not produced on your farm, where are they sourced from?
   - Direct channel from another producer
   - Wholesale
   - Other(s): specify _____
13) If you are a farmer, what share of your overall annual production do you sell to Jean Talon/Atwater Market?
   - less than 25%
   - 25% - 50%
   - 50% - 75%
   - 75% - 100%
14) To your knowledge, are the FFV from your farm sold or distributed to any other market or seller than Jean Talon/Atwater Market?
   - Yes / No
     - If yes, who or where are they distributed to? (i.e., food baskets, online retail, restaurants, other retailers (grocers), regional distributors)

       _____

PART 4 - Decision-making in the Commodity Chain

15) Do you use consumer data or other marketing information to make decisions?
   - Yes / No
     - If yes, what are 1-3 examples of types of decisions that are made using these data? (e.g., what to grow, labelling, and advertisements)

_____

_____

_____

16) What are the key determining factors (1-3 examples) in deciding which fruits and vegetables to grow and sell? (e.g., seasonality, consumer demand, market prices)

_____

_____

_____

17) If you are selling foodstuff from other suppliers, why do you choose to sell products supplied by other farms or sources?
    - Product diversification
    - Customer demand
    - Other(s): specify _____

18) If you are a farmer, why did you choose to sell your fruits and vegetables at Jean Talon/Atwater Market?
    - You knew another vendor who has sold here
    - Market popularity or potential customer base
    - Market location and access
    - Other(s): specify _____

PART 5 - Perceptions of Local Food

19) On a scale from 1 to 5, how would you rank from most to least important which of the following constitutes food as 'local'?
    - Distance travelled
    - Social and community relations
    - Organic
    - Contributes to local economy
    - Quality, value, and freshness

20) In 1-2 sentences, how would you define the term local food in the context of Montréal and southern Québec?

_____

_____

_____

21) Do you consider Jean Talon/Atwater Market a farmers' market or a public market? Why?

_____

_____

_____