

**Motivating the Future Farmers? Understanding Farmer Attraction and Retention
Policy Interventions in Newfoundland and Labrador's Agriculture**

by

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Abstract

The declining number, and the ageing of farmers in Newfoundland and Labrador (NL) necessitate the understanding of attraction and retention of people into agriculture. This study aimed to understand the factors that influence the decision to farm, the reinforcements that keep people sustained in farming, and how those link to issues of attraction and retention of farmers in the province. The thesis draws mainly from interviews with farmers, agricultural officials, and policy document reviews. The study showed that the need for autonomy, competence, and relatedness are vital in the decision to farm. However, even when general interest and desire to farm do exist, triggering and sustaining factors, including connection to consumers, an active farmer community, and government interventions, may be needed to turn interests and motivations into action and to sustain them. The study also found that the agricultural policy setting is characterized by an emotionally driven discourse which manifest through satisfaction, discord, hope and optimism, lack of trust, suspicion, among others in relation to interventions. Thus, the interventions will not bring the required impacts unless structural issues that are embedded in the policy environment are tackled. Some of these issues include the lack of room for experimentation, excessive red tape in government support, stringent program requirements, undue focus on conventional farming, limited of partnership, and silo approach to farmer support. The study concludes that the policy actions have a role in creating, enabling, triggering, and sustaining interest in agriculture. But, conscious efforts from actors are needed to appreciate and incorporate human psychological elements, including motivations and emotions, into the policy setting to achieve intended outcomes. To that effect, policy recommendations including the support of an active farm active community, a diversity-conscious agricultural approach, sector/model specific interventions, human characteristics and values sensitive policies, and human resource capacity building are put forward to facilitate farmer attraction and retention efforts, and to advance policy practice.

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List of Abbreviations

AAFA	Agriculture and Agri-Food Canada
ADAs	Agricultural Designated Areas
AFASRD	Asian Farmers Association for Sustainable Rural Development
ASA	Agri-Food Skills Australia
CAHRC	Canadian Agricultural Human Resource Council
CAP	Canadian Agricultural Partnership
CBC	Canadian Broadcasting Cooperation
CFA	Canadian Federation of Agriculture
CFNL	Chicken Farmers of Newfoundland and Labrador
CYFF	Canadian Young Farmers Forum
DFNL	Dairy Farmers of Newfoundland and Labrador
EPNL	Egg Producers of Newfoundland and Labrador
FAC	Future Agricultures Consortium
FAO	Food and Agricultural Organisation of the United Nations
FFA	Future Farmers of America
GDP	Gross Domestic Product
GDPF	Global Development Professionals Network
GF	Growing Forward
IFAD	International Fund for Agricultural Development
LNL	Landscape Newfoundland and Labrador
NFFA	National Farmers' Federation, Australia
NL	Newfoundland and Labrador
NGO	Non-Governmental Organisations
NLFA	Newfoundland and Labrador Federation of Agriculture
RRCA	Rural and Regional Committee, Australia
UNICEF	United Nations Children's Fund
WFP	World Food Programme

WHO World Health Organization

YFF Young Farmers Forum

Chapter 1: Establishing the Research

1.1 Introduction

Farming can be very rewarding, but it's hard work and working long hours is the norm. Passion and commitment are essential. You never know what Mother Nature will throw at you in the course of a year. Operating a farm business requires perseverance and self-motivation. Having passion and commitment for the job means you can succeed where others may fail (The Young Farmers Forum, Newfoundland. [YFF], 2017: 6)

The extract above is from a policy document; it highlights some of the widely held views about agriculture: commitment, perseverance, passion, and self-motivation as noted, represent what is required to successfully be a farmer. These qualities all speak to the need for motivation in agriculture. The concept of motivation, that is, the mechanism of energising, directing and sustaining human activities (see Schunk & Usher, 2012), forcefully emerges in the many discussions about the decision to farm (see Leavy & Hossain, 2014; Morais, Borges, & Binotto, 2018), and even some of the studies that do not explicitly mention the term may still imply it (see Matheson 2017; Njeru & Mwangi, 2015). It is also widely recognized that the making of farmers is a policy issue (Leavy & Smith, 2010; Susilowati, 2014), essentially through the role of public and private actors in the governance of agricultural systems. So, if farming is an issue of human motivation and policy has a role in making farmers, how do the two subjects interplay in the process of getting people into agriculture? The question might appear simple, but linking these two subjects, from the individual side (motivation) and the governance side (policy), in the making farmers is a novel undertaking. This study links the two concepts, with the broad objective to assess the general state of policy interventions¹ to attract and retain farmers in

¹ Policy interventions is used interchangeably with policy actions, policy initiatives, and policy efforts throughout the thesis

Newfoundland and Labrador. Policy interventions in this context refers to both formal and informal strategies, projects, programs, plans, and specific decisions that are employed by both public and private actors to encourage, induce, and sustain the interest of new entrants² (Hamill, 2012; Pratley, 2008; Tongs, 2008).

Interest in agriculture has declined in Newfoundland and Labrador (Quinlan, 2012) (see Section 1.2 for statistics), just as in many other parts of the world (see Hamill, 2012; Harrison & Watts, n.d; Noorani, 2015; Susolowati, 2014). The realization and the acknowledgement of this issue has resulted, to a large extent, in deliberate policy interventions towards farmer attraction and retention. Farmer attraction and retention in this context refers to the mechanisms of getting people into farming and being able to keep them in the sector. These interventions are needed to sustain agriculture (Susolowati, 2014), and to propel its ability to meet the food production needs of all people (see Babu & Blom, 2014; Moore, 2016; Ragasa, Nkonya, Ulimwengu, & Randriamamonjy, 2016; Susolowati, 2014). Nonetheless, the success or failure of these interventions may hinge on how they are designed and implemented, and how empirical, scientific research is incorporated into the decisions that inform such policy efforts. However, as Tongs (2008: 55) argued in the case of Australia, there are a large number of reports on the issue of farmer attraction and retention, which are usually seen as ends in themselves, rather than inputs to policy actions. The few studies on this subject have also mainly focused on factors that attract people and the motivations to go into agriculture (see Hamill, 2012; Noorani, 2015). Many questions on agricultural attraction and retention however remain: 1) What

² New entrant is used interchangeably with new farmer and beginners in this thesis

kind of efforts are being employed to attract and keep people in agriculture? 2) Are there aspects that require support and/or could enhance existing interventions?

Using the experiences from Newfoundland and Labrador, the above questions are addressed to advance theory and to inform policy towards the attraction and retention of farmers. Particularly, the non-supply-managed sectors, where the province is deficient, were studied. This is because, the supply-managed³ sectors are well-developed and highly regulated with a quota system; hence, entry into them does not follow the normal free market principles. Interviews with farmers, agricultural officials, and review of policy documents were completed for this study. The study argues that policy actions have a role in creating, triggering, and sustaining interest in agriculture. The argument is based on the examination of current interventions employed by diverse stakeholders to attract and retain farmers in Newfoundland and Labrador. The emotionally driven discourse influenced by satisfaction, dissatisfaction, optimism and hope, agreements, and so on in the policy environment is also brought forth. Structural issues including the lack of room for experimentation; unequal competition and bias towards large-scale models; lack of partnerships among actors; and the use of unclear language that allows room for interpretation are also revealed. In addition, what motivates current farmers to have the general interest in farming, to turn the interest into action, and to remain in farming over time are also discussed. The study is important as it provides an evaluative account of the

³ “In Canada supply management is a way for farmers – and more specifically, those who produce milk, chickens and eggs – to control, through a marketing system, the supply or quantity of their commercial products. In order to market their products, producers must hold a permit, commonly known as “quota,” without which they would not be able to sell their products to a processing plant” (see <https://lop.parl.ca/Content/LOP/ResearchPublications/2015-138-e.html?cat=agriculture>)

policy actions necessary to attract and retain farmers and identifies areas where policy must be enriched to achieve the intended outcomes. The research also contributes to theory through findings like the differentiation of independence and freedom, and both from volition; a clear outline of the heuristic nature of motivations towards long-term human activities like farming; and the need to understand the triggers to human motivations.

1.2 The Newfoundland and Labrador Context

In Newfoundland and Labrador, issues of attracting and retaining new entrants are important, as the province faces problems with a culture of disinterest in agriculture. Statistics Canada (2017) showed that the farmer population is ageing in Newfoundland and Labrador (46.6 in 1991 to 55.8 in 2016). The number of farm operators (780 in 2001 to 500 in 2016), and farms (643 in 2001 to 407 in 2016) have been declining as well, at rates that are among the highest in the country (Statistics Canada, 2017). Concurrently, new farmers face a range of obstacles to entering the sector (Food First NL, 2015), including lack of infrastructure to promote, support labour and skill development; large-scale agriculture inclined policies which undermine small-operations⁴; and limited financial support to farmers (see NL Natural Resources, 2012; Quinlan, 2012). These are happening at a time when the province is challenged with producing more food internally; because it is relying generally on imports for commodities like vegetables, of which approximated 90% are imported (Food First NL, 2015). In light of these realities, getting people into farming is

4. An example of a government policy that speaks to the bias towards large scale farming can be found in this quote. The government stated in 2011 that it will "encourage the development, diversification, and expansion of large-scale agricultural projects in either the primary or secondary processing sectors within Newfoundland and Labrador and is intended to stimulate and attract large-scale investments in the industry (Government of Newfoundland and Labrador, 2011)."

not a question of desire, but of necessity in the province. Purposeful actions to attract and retain more farmers have therefore become imperative and have been emphasized in policies as well. For instance, in 2017, Minister Steve Crocker of Fisheries, Forestry and Agri-foods noted that the government was committed to streamlining processes to help grow future farmers (Canadian Broadcasting Corporation, CBC- NL, 2017, February). Specific actions and interventions, manifested in the form of farming skills workshops, farming practice initiatives, mentoring programs, scholarships schemes, improved land access policies, among others (Food First NL, 2015; Food First NL, Government of Newfoundland and Labrador & Newfoundland and Labrador Federation of Agriculture [NLFA], 2018; YFF, 2017) have been outlined as the possible areas of action to attract and retain farmers, and some have already been set into motion.

Considering the issues in Newfoundland and Labrador and the resultant responses, this research aims to expand on the subject area of farmer attraction and retention. It also aims to contribute to theories in ways that can help advance the arguments towards solving the demographic challenges in agriculture. The research, therefore, seeks to address the knowledge gaps on motivations and policy actions raised, and to contribute towards solving the problems associated with farmer attraction and retention in Newfoundland and Labrador. This is achieved by examining interventions, exploring alternative mechanisms, and proposing ways to effectively attract new farmers to ensure the sustainability of the sector, promote economic growth, and to eventually meet the food security vision of the province. To achieve these objectives, the study aims to address four objectives:

- 1) Examine the motivations of people entering and staying in farming and its implications for farmer attraction and retention;
- 2) Identify and discuss policy interventions used to attract and retain farmers in Newfoundland and Labrador; and
- 3) Assess the general challenges and constraints to farmer attraction and retention in Newfoundland and Labrador.

1.3 The Significance of the Study

In recent times, there has been a persistent call for attention to food security and food sovereignty around the world, championed by multi-actor efforts. This has led to increasing attention to the multi-disciplinary and multidimensional problem of food insecurity (Food and Agriculture Organization of the United Nations [FAO], the International Fund for Agricultural Development [IFAD], the United Nations Children's Fund [UNICEF], the World Food Programme [WFP] & the World Health Organization [WHO], 2017). However, the success of the world's efforts towards eradicating food insecurity may not be achieved if attention is not given to the roots of food production: the human resource needs. This can be achieved if the supply side of food, driven by labour and capital, is given the needed attention. This study assesses issues around agricultural capacity within the specific context of attracting farmers to produce more food. This is important in the effort towards food security, as it can provide important inputs into shaping decisions that influence food production. The study is likewise important in guiding relevant stakeholders in making decisions that influence attraction and retention of farmers. Outlining efforts that are made to attract people, how effective they have been, and the challenges they face, the study will help provide insights on more effective ways to attract

people into the industry. The study's findings and recommendations will be a useful tool and guide for policymakers. The findings can inform the policymakers' decisions in formulating policies to ensure the development of an agricultural workforce and eventually ensure food availability. Furthermore, the study will help in the development of the agricultural industry in Newfoundland and Labrador. In an era when the agricultural workforce is declining in many parts of the world (Pratley, 2008; Tongs, 2008), including Newfoundland and Labrador (Statistics Canada, 2017), studies of this nature may help in addressing the key challenges in attracting and retaining people into the sector. Making use of expertise in the field, the study provides important insights that could shape actions intended to get people into agriculture. These insights may help ensure that interventions to attract people into agriculture meet the expectations of the actors involved, including farmers. Finally, the study will contribute to the wide collection of literature and scholarly works in the field of agriculture, policy, psychology, and business studies. Not only does the research open-up further issues in agriculture, but it also highlights the need for research in the under-represented areas of farmer attraction and retention in agricultural research and policy. It thus sets a framework for further research in agricultural capacity building and identifies specific policy interventions to attract and retain farmers in Newfoundland and Labrador.

1.4 Organization and Logic of Thesis

This thesis is structured into seven chapters. Following an introduction in Chapter 1, Chapter 2 provides the literature basis for my research. The chapter examines the literature on farmer attraction and retention and discusses the theoretical and conceptual

underpinnings to the study. In the final part of Chapter 2, a roadmap to the research, where the conceptual framework, informed by the literature, theories, and experiences, is used to explain the constituents of the research. Chapter 3 provides the contextual characteristics of the study area and the methodology. The chapter is an overview of the crop sector in Newfoundland and Labrador and provides geophysical characteristics, historical, social and institutional background. The chapter further outlines the methodology of the research, capturing themes like positionality of the researcher, research design, data collection, data processing and analysis, validity and reliability, and limitations of the research. The subsequent chapters are used for empirical data analysis. In Chapter 4, the first of the empirical chapters, picks up motivation theory, the main theoretical framework of the research to understand the incentives to farmers in Newfoundland and Labrador. In Chapter 5, the concept of motivation is further engaged to discuss challenges in agriculture and farmer experiences that frustrate interest in farming. How farmers are able to overcome and stay committed to their work in the midst of those adversities is also discussed. Chapter 6 builds on the discussions of motivation in the preceding chapters to examine interventions to attract and retain farmers. Deliberate policy efforts, manifested in programs, projects, strategies, plans, among others undertaken in the province are highlighted. The discourse in the policy environment and structural issues embedded in it are also discussed. Chapter 7, the final component of the thesis report, is used to summarize and discuss the main findings from the study and to outline the key thesis conclusions, contribution to theory, and policy recommendation aimed at improving farmer attraction and retention efforts in Newfoundland and Labrador.

Chapter 2: Review of Literature

2.1 Introduction

In Chapter 1, the research was introduced, and the context of Newfoundland and Labrador provided. The chapter argued, that despite the common knowledge of both motivation and policy being relevant to the decision to farm, there is limited literature that connects the two themes. Likewise, there is lack of a Newfoundland and Labrador — specific literature on the two issue areas, and how those connect to farmer attraction and retention. There are, however, general studies that have examined the motivations of farmers elsewhere or that have discussed agriculture policy broadly (see Tongs, 2008; Pratley, 2008). Policy documents and agency reports which have discussed the issues of farmer motivation or efforts to get people into agriculture also do exist (see Agriculture and Agri-Food Canada [AAFC], 2010; AgriFood Skills Australia [ASA], 2011; Asian Farmers Association for Sustainable Rural Development [AFASRD], 2014; Future Agriculture Consortium [FAC], 2012; National Farmers Federation, Australia [NFFA], 2013; Rural and Regional Committee, Australia [RRCA] 2012; Sutherland 2015). The limited literature on the subject still offers an opening to appreciate what already exists elsewhere, and to derive inputs towards structuring a Newfoundland specific research. Works that directly or indirectly link to farmer attraction and retention policy or motivation of people in agriculture are, therefore, synthesized in this chapter. Discussions are presented in two interconnected spheres: theoretical and contextual reviews. The theoretical review introduces the theories and concepts which underpin the research. The purpose of the theoretical review is to prepare the readers to understand the broader ideas and theoretical underpinnings of the study. The concept of motivation is introduced in this

section, and self-determination theory (Deci & Ryan, 1985) is particularly discussed. Congruent to the motive of enriching understanding of the research, engrained in the theoretical discussions are meanings, origin, description, and, above all, explicit application to the thesis context. In the second part, related works on farmer motivations, and attraction and retention are presented and discussed. The section is divided into different issue areas, based on expansive areas of interest derived from literature, as well as the researcher's curiosity, evident in the objectives of the study. The section is presented in three issue areas: 1) farmer attraction and retention; 2) motivations to enter into and remain in agriculture; and 3) interventions to achieve the first two elements. Specific themes, including the potential reasons for the need for farmer attraction and retention efforts, implemented and proposed policy interventions, and the challenges to getting people interested in farming are discussed. The section also identifies motivations into agriculture. In the final part of the chapter, the review is summarized and reflections about the literature are made. This is followed by a conceptualization of the study, where all the pieces in the earlier sections are put together to outline a conceptual framework for the study of farmer attraction and retention in Newfoundland and Labrador. Despite the researcher's appreciation of context, and how it influences research process and outcomes, the review is expanded beyond the context of the study area. The purpose of this approach is the idea that places do not exist and operate in isolation, so what happens in other locations could provide important insights at a different place — an approach informed by the viewpoints of policy mobility (see Cochrane & Ward, 2012; McCann & Ward, 2011). The approach also strengthens the research by exposing the research context to lessons in other jurisdictions.

2.2 Theoretical Framework-Motivation Theories

Motivation is a concept primarily used in explaining human behaviour. Motivation can be described as the process that determines the direction and energization of human behaviour (Elliot, 2006). Gendolla, Wrightt and Richer (2012) opined that the above definition brings forth two elements of motivation: what people do, and the amount of effort people garner to execute an instrumental behaviour. From the descriptions, motivation can be said to be what may get a person to act or behave in a particular way. There is no consensus on whether motivation has a theory on its own or not, but a scan through the literature revealed no concrete ‘theory of motivation’. However, there are many theories related to motivation that have emerged from many fields, and they are used commonly to understand human behavior. These theories identify the drivers that contribute to human capital motivation (Ramlall, 2004; Ryan, 2012) and can be applied from different conceptions of what gets an individual interested in an action, including the context of social cognition, cybernetic processes and self-regulation, the role of death, trade-off in promotion and prevention, and self-determination (see Ryan, 2012 for details). Despite the proliferation of many theories of explaining motivation, self-determination theory (Deci & Ryan, 1985; 1991) provides an excellent analytical lens to understanding human actions embedded in complex socio-cultural systems (Deci & Ryan, 2012), and this is applied to study farmer motivations in Newfoundland and Labrador.

The Self-Determination Theory is one of the most comprehensive theories of motivation; it was put forward by Edward L. Deci and Richard M. Ryan (Deci & Ryan, 1985; 1991). Over the years, researchers have applied the theory to different contexts while

refining its structural components (see Ryan & Deci, 2017). The theory provides an encompassing scheme for understanding human motivation and personality development. Self-determination brings together the two elements of intrinsic and extrinsic motivations to human action. Intrinsic motivations are generated out of one's own feelings and satisfaction in undertaking an action, and are likely to be spontaneous, and largely intuitive. Extrinsic motivated action brings into the behavioral field the inevitable embeddedness of human action in the social environment. The social environment over time influences how people develop, act and even influences the nature of satisfaction they derive from actions. It is the environment that offer explicit and implicit rewards for human actions. For self-determination theory, an action can be triggered by elements in the external systems. These external systems create an internal tendency to behave in a particular way, through internalization (Deci, Olafsen, & Ryan, 2017). In other instances, individuals "are motivated from within, by interests, curiosity, care or abiding values" (5). As Gagne and Deci (2005) opined, that the internal motivations of the individual, though not extrinsically rewarding, can still sustain passions in an act, creativity of a person, and efforts put into an action. Where the two broad explanatory forces of motivation, intrinsic and extrinsic, interact with each other is the birth space of Self-Determination Theory (Deci & Ryan, 2008). Considering the interaction between intrinsic and extrinsic motivators, the theory postulates that human actions varies based on whether it is autonomous or controlled by other factors. Autonomous behaviors are linked to intrinsic motivation, and they are triggered by internal causal factors born out of personal volition (the ability to use one's own will in choices) enforced by interest and satisfaction. For example, people engaged in recreational fishing may be motivated by the internal satisfaction of the action which gives

them internal peace. And it is for this internal generated motive that Deci and Ryan (1985) referred to an integrated sense of self. The multitude of triggers that gives people the sense of self is at the centre of self-determination theory. In contrast, controlled behaviors are influenced by external factors which may translate into generation of internal satisfaction. These are initiated through interpersonal incidents in one's environment. For instance, an individual may strive to attain higher grades in school for the purpose of landing a dream job in the future or a child being directed into becoming a doctor by the parents. Putting these together, the self-determination theory emphasizes that people are more inclined to perform an action when their needs are met. The theory suggests that three types of needs are usually sought after: competence; autonomy; and relatedness (Gagne & Deci, 2005; Ryan & Deci, 2000). People are motivated by their internal capability towards an act, the desire to be autonomous, and the need for relatedness towards elements in the socio-economic environment.

At the centre of the human action is internalization, which is influenced by both inherent satisfaction and extrinsic factors. For activities that are motivated extrinsically, people are less naturally interested in them and are unlikely to perform without any reward. Such actions are gradually modelled through interaction with other people important or related to them. Feeling belonging and connection to others, which explains relatedness, is an essential need which must be internalized to trigger an action. Internalization is also a function of competence, and this explains how an individual thought of being capable or worthwhile leads to an action. A person is likely to perform an act which is internally or socially valued once they think they are capable of doing so. The last component, autonomy, also enhances internalization which leads to an action. Autonomy explains the

desire to be free from external pressures, and the will to behave in accordance with one's own values (Deci & Ryan, 2000; Gagne & Deci, 2005; Ryan & Deci, 2016; Ryan & Deci, 2000). The three elements of autonomy, competence and relatedness which underpins self-determination theory are the foundational blocks to understanding farmer motivations in this research. Based on the principles of self-determination, farmer motivations are discussed in the context of policy interventions. The motivations of farmers are highlighted, and they are positioned within the broad context of intervening policies. Self-determination is specifically applied to understand some of the essential motives that has led people into agriculture, as well as sustained their interests in the sector. This is also examined in the context of existing interest thwarting or frustrating elements in the province. The theory is used to design the research questions to solicit how competence, autonomy and relatedness interplay, and how behaviours towards farming are either autonomous or controlled. Further, the identified motivations are discussed based on how they can be engaged to impact on farmer attraction and retention.

2.3 A Broader View of Motivations into Farming

Motivations, as discussed in this section, are an essential element that decision makers must consider incorporating into the growing discussions around farmer attraction and retention. The role of motivation in the discussion emanates from the view that people have lost interest in agriculture, as it was highlighted in chapter one. Motivation is an essential ingredient in achieving success in various ways (Goerig & Castro-Santos, 2017; Roksa & Whitley, 2017; Wlodkowski & Ginsberg, 2017), as has been shown in many fields, including agriculture (see Haller, 1959; Mishra, Mishra, & Jabbar, 2016; Rashid,

Islam, & Quamruzzaman, 2016). From what gets an individual to be productive, to what moves an entity into more significant results, the role of motivation in achieving results cannot be discounted. The ideas of self-determination imply that many environmental factors may contribute to the decision to farm. This is as a result of the embeddedness of farming in a complex web of a social and physical systems. This proposition reflects in the literature; because many contextual factors have been subtly suggested to contribute to why people farm or why farmers behave in certain ways (see Shawn & Glen, 2010; Mishra, et al., 2016; Morais, Borges, & Binotto, 2018; Moumouni & Streiffeler, 2010; Hamill, 2012). These factors range from internal satisfaction in farming; to extrinsic monetary motive of humans; to social environmental factors, including parental guidance, perceptions of farming, education, and government policies.

It is undoubtedly clear the role economic, monetary returns and incentives play in influencing human behaviour (Block & Landgraf, 2016; Jostein Vik & McElwee, 2011). In the age of economic demands, whatever individuals do may have a link, at least in part, to a financial incentive, and farming is no exception to the 'money craze'. Some writers have described money as a basic motivating element in agriculture. For example, Hamill (2012), citing Rural Futures Report (2007, p. 5) noted, that remuneration, among other factors, contributes to the inability to get people interested in agriculture and in retaining them in the sector. In confirmation, an Australian study which measured values among farmers showed that an economic return from the farm was the first and most important factor people considered in taking up agriculture (NFFA, 2013). The role of monetary motives could explain why non-profitability of certain agricultural activities is also fundamentally cited as a vital challenge. And is noted as an underlying element to the

limited involvement of people in the sector (see section on challenges), and in taking up certain actions, like the adoption of specific technologies in the agriculture (Vik & McElwee, 2011). In Canada, AAFC (2010:14), in their 2010 consultation sessions with youth revealed that, “farm life seems less desirable to many potential new entrants due to their expectations concerning financial compensation” (AAFC, 2010:14). The quote highlights the problem of farmer exodus, and it attributes that to the non-lucrative nature of certain agricultural activities. This issue is further confirmed by Matheson (2017:1) who argued in relation to Canada that marginal profits in certain sectors of agriculture — including small-scale models — deter people from entering the sector.

Despite the central role of financial and economic motives in influencing the decision to farm or not, a wide range of other factors also contributes to the process. These factors can be found both within an individual and within the environment in which they live. For many people, farming goes beyond money (Block & Landgraf, 2016; Hill & Hurtado, 2017; Walker, 2016) to include intrinsic and socio-cultural elements (Block & Landgraf, 2016). This implies that money may not be the only element that could be utilized to lure people into farming. Understanding the broader perspectives of other existing incentives could be vital in effectively attracting and retaining farmers.

Intrinsic satisfaction of an individual also has a role to play in influencing the decision to farm. Being internally satisfied with one’s actions (Morais, et al., 2018) and enjoying independence, are essential ingredients in nurturing entrepreneurial interest (see Botsaris & Vamvaka, 2016). Similar self-induced affirmative action towards an activity can be found in agriculture (Morais, et al., 2018). Farming is one of the ventures where

people may feel independent of their life's activities, depending little on others for survival. This view is emphatically stated by the RRCA (2012:17): "the desire to be your own boss' seems to be particularly attractive to young people in the farming sector". Among the many other factors revealed from a study of human motives in agriculture, independence, and the benefits people associate with that, stood out as a critical motivating factors to entering and staying in farming (RRCA, 2012:17). The internal satisfaction of being independent is also confirmed by Hamill (2012), who discussed how the desire to be free influenced people's desire to enter the red meat industry in Australia. Concurrently, the internal satisfaction of being a farmer has also been noted to manifest in the happiness of feeding other people; the conservation of the environment (Maybery, Crase, & Gullifer, 2005); being attached to nature and rural lifestyles (Maybery, et al., 2005; McIlveen 2015:161); and getting more time for leisure (AAFA, 2013). All these are associated with creating a positive attitude towards farming, which Morais et al. (2018) noted as most important in determining if successors take over a farm. Further, in Canada, AAFC (2010:13) pointed out that the independence associated with the life of being a farmer could be exploited as an avenue to attract the youth of this generation. Considering the role internal satisfaction plays in triggering an action, agriculture possesses excellent attributes to be utilized in its pursuit of building the general human resource capacity of the industry. Monetary or economic incentives alone are unlikely to achieve the general goal; so, exploring other motivating factors is equally important.

Empirical studies have cited the social environment as an important motivating factor in the decision to farm or not, and in staying in the sector or otherwise (Mukembo et al., 2014; RRCA, 2012). Bandura (1986), cited in Mukembo et al., (2014:156) opined that,

experiences of one's early life could shape the 'personal efficacy'. The process can ultimately influence the direction taken in life and a person's ability to achieve set goals. For instance, it is commonly acknowledged that parents and peers influence the career choices of children. This notion was confirmed by RRCA (2012:15) that "personal ties, family advice and early exposure to beliefs about certain professions can be instrumental in the career decisions young people make" (15). Agriculture is no exception to this assertion, because, people may be hesitant in entering and staying in the sector due to influences emanating from family, friends, teachers, and communities as a whole (RRCA, 2012). Hamill (2012) also showed, quantitatively, that more than half of young people believed their parents played an important role in inspiring their decisions about agriculture. The finding was ultimately internally validated when about 54 percent of parents acknowledged their roles in moulding the career choice of their children (Hamill, 2012:101). Inadvertently, influences of these groups (i.e. family, peers, community, etc.) structure perceptions about agriculture in a person (McIlveen, 2015:160). The influence exerted by the social environment can either be supportive or dismissive of agriculture as a career, and this eventually impacts the formation of the minds towards the sector (Leavy & Hossain 2014; Mukembo et al., 2014; Noorani, 2015; Tafere & Woldehanna, 2012). Since agriculture can be informed by how minds are formed at the early stages, understanding how the setting influences the motivation to farm is crucial in making inputs to get people to farm.

Regarding the formation of minds, several social processes come into play. For instance, education, training, mentorship, and other activities related to building human resource capacity are crucial in forming the mind and shaping perceptions of social

undertakings, including agriculture (Mwaura, 2012). This phenomenon is likely what may be influencing the continuous call to include agriculture in the school curriculum: to entice students into the sector (RRCA, 2012:16) at earlier ages. For this, there are growing initiations of extra-curricular activities, including agricultural clubs in many educational systems around the globe. To explain the proliferation of such initiatives, Connors (2013) attributes that to the successes of the Future Farmers of America (FFA) and 4-H clubs in America in motivating people into agricultural activities (Mukembo et al., 2014:156). Educational related activities and hands-on experiences can have an impact on the formation of farmers, getting people interested in agriculture, and taking up farming in the future. That may explain why many studies have also cited the influence of mentoring clubs in shaping student career aspirations towards agriculture (see Alfeld et al., 2007 in Mukembo et al., 2014:167; Mwaura, 2012). Many other writers have also emphasized how education, training, and related activities can serve as driving forces to motivate young people to become interested in agriculture (Dodd, 2012; Hamill, 2012; Tongs, 2008). For example, Dodd (2012); Hamill (2012); Mukembo et al. (2014); Mwaura (2012); and Tongs (2008) have all mentioned how education and training activities are necessary to sustain an industry like agriculture. For this reason, education, training, mentoring and related mind formation activities have received attention from policymakers, and this has led to many interventions carved around these elements. Notwithstanding, the essence of these programs may not be achieved if they are not well contextualized, emphasizing the need to understand specific interventions in different areas.

Discussions in the section thus far have patched the different pieces together to highlight some of the factors that motivate people to farm or otherwise. One of the focused

studies on motivations to farm is the work of Sutherland (2015). In the study that concentrated solely on *ex novo new entrants* — individuals with no prior experience or family ties to agriculture — different drivers to farm were identified. These included seeking financial opportunities, desire for self-provisioning, attempt to overcome economic duress after a job loss, attraction to new lifestyles presented by farming, ambitions to work outdoors or have one's own job, and desire to belong to a social class. These, Sutherland noted, have influenced many new entrants in Europe and are essential in understanding efforts to get people interested in agriculture. While Sutherland (2015) was able to show some of the motivating factors, which, in large part confirmed earlier discussions, the use of focus group discussions to understand motivations may well lead to overlooking certain motivators. The reason for this is that farming can be personal in some instances, and people may not be willing to speak about real motives when in a focus group.

Many dynamics also influence the decision to get involved in training and education activities related to agriculture. These dynamics combine to define the image of agriculture, which has been instrumental in putting the sector in its current state. Hence, it is only proper to understand the motivations or disincentives, as they could be equally vital in shaping interventions. Haller (1959:265) acknowledged this in the 1950s, that “predictions of who will and who will not plan to farm will be more accurate if we take into account not only the previously stressed factors supporting farming as a choice but also the factors supporting non-farming.” Inferring from the argument of Haller (1959), the final part of the section discusses the parallel to motivations. The discussion is necessary, partly because the image of agriculture and what has contributed to the negative perception of the sector could best be understood from the dimension of what makes people not interested. The

image of an entity, in this case, agriculture, is highly dependent on the elements which make it unattractive, as the literature has shown (Hamill, 2012; Tongs, 2008). Discussions on the image of agriculture have partly been along the lines of factors which influence its public view, and what demotivate people in the process. Hence, any discussion on the image of agriculture might be able to draw out de-motivators in the process, and by extension, understand motivations broadly.

Negative connotations attributed to the sector have played a key role in hindering its progress, manifested in the population exodus from agriculture. For example, ‘the dirt’ associated with farming, where it is perceived as ‘tedious and untidy’ (Liepins, 2000), impacts the desire of people to engage in the sector (Noorani, 2015; Mukembo, et al., 2014). In the world all over, including Canada, many people perceive agriculture as an occupation with limited profits and low quality of life (AAFA, 2010:14), eventually shying away from pursuing an agricultural career. There is a growing view among people that agriculture is unsustainable, with limited opportunities for a good life (AAFC, 2010:14; Cummins, 2009). Thus, people tend to discourage others from the sector. To the young population, the unpromising social environment could be instrumental in the movement away from the farm. In some domains, principally in the developing world, agriculture has the ‘old-man’ perception, where many people shy away from the sector at an early age (Noorani, 2015), considering farming as something for the old. All these factors contribute to creating a negative perception and unattractive image about agriculture, which in turn deters people from entering farming. The negative image is, however, rooted in society and many other factors embedded in our social lives, rather than just in the sector itself. Among

the cultivation paths of agriculture's negative image is also the social environment - family, friends, community - and the media.

The role that the social environment plays in entrenching a negative image of agriculture is emphasized by Hamill (2012) who argued that "one of the greatest impediments to sustaining young people in agriculture is the negative influences of others on young people who begin to show an interest in agriculture as a career" (Hamill, 2012:23). The quote explains how relation to other people can influence perceptions about farming. In support of the earlier point on the social environment, either positive or negative, perceptions about agriculture are formed as people experience their parents' engagement with farming (Noorani, 2015; Cummins, 2009). In effect, other people, either family, peers, or community members, tend to influence the formation of a negative image towards agriculture, which ultimately impacts the motivation to enter the sector. Thus, just as the social environment plays a role in motivating people into agriculture, it also, albeit occasionally, negatively influences the sector if not carefully managed. The social environment, used in this context, refers to the immediate human surroundings of the person, more or less the people around the individual. But, there is more to the social environment that impacts motivations to farm, especially in this digital age. The 'digi-social environment', as I refer to it, also has a part to play in forming an image for agriculture. The media, as noted by RRCA (2012), shows agriculture in ways that may discourage people from venturing into the sector. The detrimental role of media in agriculture has also been written about, especially with animal rights issues (see Kunkel, 2017; Lancaster & Boyd, 2015), generally in exposure to what can be described as a campaign against specific farming activities.

In sum, a broad-spectrum discussion around motivations for agriculture and farming decisions must acknowledge the full range of factors, which directly or indirectly affect enthusiasms of people for farming. Many motivational factors are underlined in the discussion, and these would be relevant to grasp further policy efforts to attract and retain farmers. Motivations to farm will vary in forms, yet it is also essential to recognize that they could also differ from place to place too. The same can be said of the de-motivators, as revealed, albeit indirectly through the image-shaping factors discussed. All these contribute, in their own ways, to influencing the decisions to farm. Additionally, the discussions have emphasized the need to carefully consider elements which affect people's motivation, because the same factors can as well de-motivate. One evident irony in the discussion is the blurring lines between motivations and demotivators. The many factors discussed as motivating to farmers, equally could serve as demotivators if not well managed by actors. This is typified by the motivational impact of the social environment, and how one's view about farming can either attract or prevent an individual from pursuing agriculture. People are motivated to farm through family and friends. In the same vein, family and friends also hold strong influence in perpetrating the farmer exodus. Discussions on farmer attraction and retention should, therefore, adequately consider the two elements together. This may be best understood from the direction of understanding the general challenges that undermine efforts to enter agriculture. Policy efforts may only be successful if they are able to tap into motivating factors, while sufficiently limiting the negatives of disincentives. On this premise, this thesis examines the context-specific motivations of people in agriculture in Newfoundland and Labrador, while also examining the general challenges which may undermine efforts to enter farming and stay in the

industry. This forms an essential component of the research, as motivation is as an important ingredient for successful farmer attraction and retention efforts. Tailored efforts may be needed to position the broader and specific context of motivation into farmer attraction and retention efforts. Discussions of motivations into agriculture, as presented in the empirical chapters, shed light on this issue area and provide a foundational ground to incorporate motivational factors into deliberate efforts to attract and retain farmers.

2.4 Farmer Attraction and Retention

Existing research does not offer a well-defined meaning for farmer attraction and retention. However, the terms ‘attraction’ and ‘retention’ are extensively used in organizational management theory and practice, to describe efforts to get people into, and maintaining them in an organization (see Aruna & Anitha, 2015; Vidal-Salazar, Cordón-Pozo & de la Torre-Ruiz, 2016). It has primarily been employed to examine the ability of firms to court interest of potential employees to recruit them (Anitha & Begum, 2016; Vidal-Salazar, Cordón-Pozo, & de la Torre-Ruiz, 2016). Inferring from the widespread usage of attraction and retention in organizational management, the term is employed to describe the process and act of evoking the interest of people to enter and stay in agriculture.

Over the globe, courting interest in the agricultural sector has gained widespread attention among policymakers (Mukembo, et al., 2014). There is evidence, both in academic spheres and in policy circles, of an invigorating attention to human resource issues in the sector that employs about a third of the world’s working population (World Bank, 2017). The discussions around labour issues in general, and attracting and retaining

farmers, has become a household subject among agricultural enthusiasts. However, limited studies on the reasons behind the policy interest exist, and this leaves limited explanations on why the attention is increasing. But, there are highlights in a few academic and agency commissioned studies that may be suggestive in this regard.

The challenge of feeding the world may largely lie in the hands of agriculture (FAO, 2017). Food security is a concern to the globe. FAO (2002) defines food security as when everyone has physical, social, and economic access to adequate, safe and nutritious food that meets their dietary needs and food preferences towards ensuring sustained disease-free life. Meeting this conception is an enormous challenge in many parts of the world. There are more than 7 billion people in the world today, and that is expected to reach 9 billion by 2050 (see FAO, 2009). The food needs of the world today and the future can be addressed through efforts from agriculture (FAO, 2017). And despite the role of systemic issues like food waste and distribution contributing a part to the problem, the FAO estimates the need to increase global food production by 60% by 2050. The challenge of food insecurity, which is a current and future problem, is not only on the worldwide stage, but it is present at the doorsteps of every nation, region, and community. Canada and Newfoundland and Labrador, the setting of this research is no exception to this challenge. Almost all studies that have mentioned agriculture or food in Newfoundland and Labrador have equally highlighted issues of food insecurity (see Food First NL, 2017; 2015; Quinlin, 2012), with different statistics that are explained in Chapter 3. Considering the challenge of food insecurity, and the need to act on it for the present age and future projections, farmer attraction and retention have been continuously reflected in the long list of interventions that could boost agriculture and lead to food security. The imperative of farmer attraction

and retention, and its link to food security, is argued by Hamill (2012), who stated that attracting and retaining people, especially the youth, is central for agriculture to keep pace with rising food needs (Hamill, 2012:10). The view is also shared by many other writers who have highlighted the need to attract more people into agriculture (FAC, 2012; Susiliwati, 2014), as a step to increasing food production and working towards food security.

Many writers have also highlighted the need to attract and retain people in any field of economic activity to ensure its sustainability (see Berlin, Dederig, Jónsdóttir, & Stahre, 2013; Chand & Tung, 2014; McCollum & Findlay, 2017), and agriculture is no exception to this proclamation. For the sector to stand the test of time and remain relevant to human society, its ability to attract and retain people must be enhanced. The issue for agriculture becomes more critical when current statistics are taken into consideration. In many countries, farmer populations are declining, and the average age of farmers keeps rising: a fundamental problem area that has informed this research. For example, the average age of farmers in the world is about 60 years (Vos, 2014, February), exactly or close to the retirement age in almost all countries. Correspondingly, Statistics Canada has noted tremendous changes in the structure of Canadian agriculture: farmers getting older, coupled with a declining number of young farmers (Statistics Canada, 2015). Such evidence highlights the need for more efforts to keep the sector relevant by getting more people interested in farming. The drive to sustain the industry by ensuring it does not lose pace with the demand of the world has, therefore, further led to increasing attention on deliberate efforts to attract and retain farmers.

Relatedly, agriculture appears to be gaining attention partly due to its role in employment creation and, more broadly, economic development. Skeptics note, however, that agriculture needs innovation and diversity to facilitate economic growth, which the old generation of farmers cannot be entrusted to provide (Global Development Professionals Network [GDPN], 2014). Thus, it is on this premise that many efforts in farmer attraction and retention have placed youth at the forefront of the action. Related to the youth drive to farmer attraction and retention is unemployment, more importantly in developing countries where many young people are unable to find work (Mwaura, 2012). With many countries facing an uphill task of employing the youth, agriculture provides a potential area to capitalize upon to solve the problem of unemployment. Therefore, much of the literature on farmer attraction and retention has discussed the subject in relation to youth empowerment and development (see Farming First, 2013; Noorani, 2015; Filmer & Fox, 2014; FAC, 2012).

Also, the perceived failure of industrial agriculture to solve the food needs of the world (Clunies-Ross & Hildyard, 2013; Woodhouse, 2013), has also led to a growing movement towards human-centred production. There is a shift towards smaller scale agricultural activities which put humans at the centre of production while ensuring sustenance of the environmental health (Horrigan, Lawrence, & Walker, 2002). Manifesting in concepts like ecological agriculture, organic agriculture, food sovereignty, and so on which have been driven by different motives, the call to these models of farming (Altieri, 2009) also relate to farmer attraction and retention, albeit indirectly. Emphasis on small-scale production mirrored by these agricultural models, coupled with the need to feed a growing population, would mean more people must be committed to agriculture for the

world to achieve the food needs. This area of the discussion is further emphasized by AFA (2015) who, upon interacting with young farmers, highlighted the growing debate around organic agriculture and its impacts on attracting youth. The idea of using the alternative farming models is, however, not without problems, as Cantor and Strohlic (2009) have argued: the movement towards organic farming can also lead to entrenchment of large farms, and crowding out of small farms, and that can ultimately lead to farmer exodus.

The ensuing discussions have drawn on the literature to explain motivating forces and the growing interest in farmer attraction and retention around the globe. The very few issues noted in this section give a sense of what is at stake and could be motivating the efforts, at least in part, to intervene in the agricultural sector. Direct forces like food insecurity as well as indirect factors like changing the food producing and consuming environment and failure of industrial farming, economic development, youth unemployment, and sector sustenance, all contribute to reinforcing the need for more farmers. These factors manifest beyond social and economic borders of society. The discussions that follow in the next section expand this idea to understand the challenges in the system that undermine farmer attraction and retention.

2.5 Attracting and Retaining Farmers: A Challenging Task Awaits

With agricultural systems becoming multifaceted and interwoven in even more complex structures, farmer attraction and retention is influenced by diversity of socio-economic, cultural, political, and geographical factors. The complexity of agriculture also exerts a daunting task, at least in part, to efforts to identify specific factors which may or do challenge efforts to get people attracted to the sector. The discussion that follows

highlights some of the critical issues that are mentioned in the literature linked to farmer attraction and retention.

Njeru and Mwangi (2015) examined how access to farm market products influenced youth involvement in agriculture. In the study, they alluded to how youth participation in agriculture was challenged by, among other things, poor infrastructure in the area, limited knowledge on market opportunities, fluctuations and instability in market prices, low literacy in information technology, and weak entrepreneurship skills to manage businesses. Inferring from these challenges, the threats to farmer attraction and retention could, therefore, emanate directly from individuals' limited capacity in various forms to deficiencies in external environmental support like infrastructural facilities. Relatedly, Leavy and Hossain (2014) examined the aspirations of young people in the developing world. Employing interviews and focus group discussions, they derived four themes to highlight some of the challenges in getting people interested in agriculture. First, most young people aspired to go through formal education systems to gain access to well-paying jobs outside agriculture. Secondly, young people were deterred by the physical and mental requirements of being farmers, which were too demanding from their perspectives. Thirdly, there were crucial constraints in the general environment, including lack of access to land and other farm inputs needed to support a career in agriculture. And finally, new opportunities that were being opened for education and employment, and other social changes, hindered youth engagement in farming (see Leavy & Hossain 2014:18). These broader challenges have also been cited and discussed in different contexts, like in the case of developing countries, by Brooks, Zorya, Gautam, and Goyal, (2013); Noorani (2015); Proctor and Lucchesi (2012); Tafere, and Woldehanna (2012); and Tadele and Gella (2012)

as critical barriers to people, especially the youth, taking up agriculture. All these authors have highlighted how some of the specific challenges inherent in the current agriculture systems or in their external environments negatively impact people's desire to get involved in the sector. Thus, an understanding of how people are motivated to participate in agriculture must examine factors both within the individual and the environment, as emphasized earlier in the section on motivations.

The role of these challenges in determining interest and influencing engagement of young people is also discussed by the AFASR (2015). A scoping study by AFASRD (2015) outlined many challenges which hinder youth participation in agriculture in general, and in the Asian region. The study highlighted that low regard for agriculture in communities, unprofitability of the sector, land insecurity, inadequate support infrastructure, insufficient agricultural curriculum, and lack of proper government supportive policies are key barriers to farmer attraction and retention. Other factors, including lack of access and control of resources by the youth, uncertainties in the agricultural industry, inadequate knowledge of farming operations, and weak participation of young people in agrarian governance were also cited as challenges which existing youth in the industry face and for which retention is negatively impacted. These challenges do not only pose a threat to perseverance among existing farmers, but they also deter others interested in the sector from entering farming. Furthermore, Susilowati (2014), in his paper *Attracting the Young Generation to Engage in Agriculture*, emphasized parallel issues which further accentuates how these challenges go a long way to impact farmer attraction and retention. The problems do not only affect attraction and retention of farmers but also negatively influence the basic functioning of agriculture. And this could partly explain why agriculture is in decline in many areas— a

slump which has impacted on the interest and motivation of people, especially the youth, to take up farming.

The aspirations of young people as revealed by Leavy and Hossain (2014), and other challenges outlined (see Leavy & Smith, 2010), are not just common to the developing world, as evidence from the developed world shows a movement away from the farm; influenced by some of this broad range of issues. For example, Matheson (2017:1) opined that in Canada, the current population is about a “generation or two removed from the farm” (1). This he related on the premise of the statistics: agriculture employed about 1 million people, relatively more than a third of the population in 1921 and this reduced dramatically to about 327,000 people by 2008, representing just 1.8% of labour (Matheson 2017:1). Relatedly, a 2014 AAFC consultation session for young farmers discovered many challenges accounting for the drift away from the farm: increasing uncertainty in farming and the limited returns and unprofitability of the sector, especially for specific categories in agriculture including small-scale farming. Moreover, the uncompetitive nature of the industry, challenges in accessing land and capital, difficulties in obtaining adequate and needed training to be successful farmers, and exhaustive start-up requirements were also mentioned as key barriers inhibiting Canadian youth from taking up farming (AAFC, 2010:15). The Canadian Agricultural Human Resource Council [CAHRC], (2016) described the impending labour shortages in the sector, and they attributed seasonality of agriculture, rurality of agricultural activities, growing competition from other sectors, and unfavourable working conditions in the industry as challenges that hinder the attraction and retention of labour, and which may also manifest broadly in people entering the sector. Related challenges to people in general, and the youth in particular, getting into farming

have been cited by Hamill (2012), Tongs (2008), and RRCA (2012:43) in the case of Australia, where the agriculture industry is under threat due to demographic instabilities, including aging, and a declining, farmer population.

The diversity of challenges the agricultural sector faces, as noted in the preceding discussion, have an impact on attraction and retention of farmers. How these challenges are managed within specific contexts could play a key role in encouraging farming. The problems range from the existing adverse conditions within agricultural industries and their external environment to the internal motives and aspirations of people, influenced wholly or partially by the former. To describe the complexities of the challenges, Leavy and Hossain (2014:3) opined that the material realities, social norms, and the desires of young people (3) all point to growing detachment of the younger generation from agriculture and farming:

[..]along with the recognition of these "unprecedented, intersecting challenges", or perhaps as a direct result of these, a widespread and powerful narrative and a rapidly growing body of evidence of labour withdrawing from the agriculture sector and on youth aspirations suggest food farming - particularly the smallholder food production widely believed most likely to contribute to increased food production and rural poverty reduction - is less likely to draw in young people as a preferred or first choice of work." (Leavy & Hossain 2014:11).

The extract highlights the exodus from agriculture. Though phrased contextually for the developing world, it is still vital in highlighting how the complex challenges interact to hinder and obstruct development in agriculture. The complex web of issues, as revealed in the discussions, have direct and indirect impacts, and must be carefully examined in an attempt to understand the motives for people choosing to farm or not. This idea is expanded forward because challenges may play a key role in the likelihood of success for any

organizational entity, agriculture being no exception. The challenges are also important in understanding how interventions can be designed and implemented to adequately court interest in the sector, and to do so without same factors undermining the efforts. Thus, the discussion in the section and the issues highlighted form an integral element in understanding the broader picture of farmer attraction and retention in any context, and this is incorporated in this study through questions that address context-specific challenges in Newfoundland and Labrador.

2.6 Attraction and Retention: Policy Efforts and Proposed Directions

Farmer attraction and retention have received profuse policy attention in recent years. Both private and public actors contribute to the cause through diverse strategies. Strategies have varied from investment in agricultural education to incentivizing the sector to motivate people. In this section, some interventions that have either been adopted in other areas or are proposed as ways to attract and keep people in agriculture will be discussed. Due to the limited academic literature on the subject matter, as earlier noted, a review of available works that have mentioned issues that directly or indirectly highlight efforts to make farming attractive to people is provided. This includes issues mentioned in journal articles, agency reports, as well as news articles.

Overall, favourable government policies have been cited as an important factor for enhancing agriculture in general (Bates, 2005), and attracting and retaining farmers (Susilowati, 2014; Hamill, 2012). Policy directions, including subsidization of agricultural inputs, promotion of agricultural education and training (Hamill, 2012; Mwaura, 2012; Noorani, 2015), the institution of favourable land policies, creating a favourable business

environment, and supporting young agricultural entrepreneurs (NFFA, 2013:5) are mainly the focus. Others include developing strategies that take care of different agricultural models, including large and small scale; organic and conventional, among others (AAFC, 2010; Barbieri & Mahoney 2009), and providing financial incentives to people interested in agriculture (see AFA, 2015; Susilowati, 2014). Among all, the demand for financial incentivizing of agriculture appears more highlighted in the literature. What is not clear is what kind of financial incentivizing can be considered appropriate, or what can work in each context. It is important to understand the context to inform specific initiatives that could work within each place.

Though these measures are broad, studies from across the globe have also highlighted associated interventions with specific needs in different forms. One such area is the aspect of building capacities to enhance understanding (Pratley, 2008). Dodd (2011), in the case of Australia noted, that for agriculture to rally the efforts of producing enough food for a growing global population, there is the need to acknowledge its position as a knowledge industry, one that requires people to be highly skilled in basic knowledge, the technologies, “the agro-ecological environment, the sociology and economics of their business” (Dodd 2011:47). The assertion highlights the need for education in agriculture. Appreciating the important role of education, ASA (2011), in their recommendations to enhance agriculture, noted the need for efforts including vocational training that invests in building capacities of people interested in agriculture, and policy changes that “enable delivery of incremental 'building blocks' of skills [...]” (ASA, 2011:9) Mwaura (2012), in the case of Africa, also emphasized the need to adopt mentorship, education, and training to build capacities of people in agriculture, and related activities to entice them into the

sector. The central position of education, training, and mentorship in attracting and retaining farmers is therefore evident in the literature. However, what is not clear is how these can be effectively executed to achieve maximum returns within a specific context. Thus, any study that seeks to understand this aspect of attracting and retaining farmers must incorporate specific questions that trigger conversations on context-specific capacity building needs to understand how to design education for agriculture.

Associated to capacity building is also the theme of the type of farming models that a place must pursue. Arguing from the position of young farmers from across Canada, AAFC (2010:15) noted that how young people want to farm must be given attention to get them interested in the sector. The assertion was informed by concerns raised by young farmers in a 2010 consultation to understand the barriers to agriculture in the country. Farmers lamented the fact that, government policies at that time did not treat all farming models equally and discriminated against small-scale agriculture. In response, AAFC noted that more diverse farming models are being developed, and for which young people may be interested and need to be courted with necessary mechanisms to sell the diversity. This view is also supported by Barbieri and Mahoney (2009:58), who reported, in the case of Texas, that “diversification can be employed to help farmers and ranchers to survive and increase farm income” (Barbieri & Mahoney 2009:58), and as a way to keep the sector active.

From a more practical program implementation perspective, the literature has mentioned some strategies applied in other places, particularly in Asian countries. A scoping study by the AFASRD in 2015 highlighted many the challenges that have hindered

attraction and retention of people, especially youth, in agricultural ventures (see AFASRD, 2015). In response to these challenges, the study outlined measures that have been implemented in recent years to make agriculture attractive to people. These measures included building the capacities of young people to provide the needed leadership for agriculture; encouraging of sustainable agricultural practices, facilitating agro-ecological agriculture to take advantage of the growing demand in that area; establishing young farmers' organizations to champion the youth cause in agriculture, and promoting women's participation in agriculture. The organization claims these measures have yielded great potentials for youth engagement in agriculture in the Asia region, and they could provide essential motivation to people seeking to enter farming, and also contribute to retaining existing farmers (AFASRD, 2015; 2014).

Also, ASA has championed deliberate attempts to attract foreigners interested in farming to increase the number of people in agriculture in the country (ASA, 2011). In Canada, like in other parts of the world, provinces have also taken up the direct interventions through planning, where deliberate attempts are made to prepare new entrants' plans (see Department of Agriculture, Aquaculture, & Fisheries, New Brunswick, 2016). In some instances, farmer attraction and retention are incorporated into broader agricultural plans (see Regional District of East Kootenay, 2013; Regional District of Bulkley-Nechako, 2012). Planning of agricultural succession (NFFA, 2013:5) and rebranding of agriculture through different mechanisms have also been employed, where possible to attract and retain farmers. The proposed or implemented interventions discussed in this section have been applied in different contexts, and diverse ways, to a varied degree of success (see Susilowati, 2014). However, insofar as the quest to get people attracted to

agriculture continues to receive attention, the necessity to explore more context-specific needs should be pursued. The idea of ‘one cap fits all’ may no longer be a path to go if prosperity is to be attained in attracting and retaining farmers. But working with successes elsewhere could be useful. The idea of policy mobility will provide inputs to addressing the issue of declining interest in agriculture. Policy mobilities are described as the strategies beyond boundaries, where interventions are not seen as only applicable within bounded regions or confined hierarchies (Cochrane, 2012; Gulson, et al., 2017). The concept is built on the notion of circulating policies, where an intervention can be applied in diverse contexts. The revelation of similar policies for attraction and retention of farmers suggest the concept could be operational in the context, even if not explicitly discussed in that context. How these interventions are applied could determine the kind, and extent of impact they create. Thus, the study further explores this area to understand the subject matter in the context of Newfoundland and Labrador.

2.7 Farmer Attraction and Retention Policy Interventions in Canada

In the earlier sections of this review, a comprehensive appreciation of the literature around farmer attraction and retention and the motivations to farm was provided. Some policy efforts being made, and others being proposed around the world including Canada were highlighted. More specific interventions being implemented in Canada are highlighted in this section. In Canada, there are different techniques, directly or indirectly employed to attract and retain farmers. These are manifested through interventions by both government and non-government actors. Due to some level of autonomy among the provinces, specific programs tailored to provincial needs are usually adopted in different

places. Given that there are ten provinces and territories, and each having unique programs, a snapshot of each province is identified. This is done by outlining present national programs, which are also in turn adopted by each province in the country, and in some instances, adapted to their specific needs. This approach of highlighting what exists across the country is needed to understand better how Newfoundland compares with other areas in the country when the province is discussed in the empirical sections. In Appendix A-Table 1-, programs controlled by the federal agricultural agency and other national entities but decentralized in each province/territory are highlighted. That is complemented with an overview of programs in each province/territory in the country including Newfoundland and Labrador. To achieve this, a search through the AAFC website was done, specifically the program database, AgPal: The database for agricultural programs across Canada. Only initiatives that had motives related to attracting farmers or keeping those in the sector were selected and highlighted.

In a more general outlook, the Growing Forward Program (GF), a Federal-Provincial Agri-food strategy, implemented in the country for the last ten years epitomizes deliberate interventions. GF 2 (2013-2018), the just-ended national agricultural development strategy, replaced GF 1 in 2013, and provided a framework to enhance agricultural development, including efforts to attract and retain farmers. GF 2 is being replaced by Canada Agricultural Partnership (CAP), which started in April 2018. All these broad strategies have had specific programming that has supported efforts to attract and retain farmers. For example, under GF 2, programs like AgriInnovation, AgriCompetitiveness, and AgriMarketing, the three-federal government funded programs (AAFC, 2017), further explained in Appendix A, can be cited as deliberate interventions

to attract and retain farmers. These were complemented by many other cost-shared programs adapted to the needs of each province. Like GF 2, CAP provides a broad policy framework with specific programming to support the development of the agricultural industry in different aspects. Under the new policy framework, specific federal funded programs, including AgriMarketing, AgriCompetitiveness, AgriScience, AgriInnovate, AgriDiversity, and AgriAssurance are set out to enhance growth in agriculture, incorporating efforts to attract and retain farmers (AAFC, 2018). These specific programs contribute to farmer attraction and retention by providing financial support for new and existing farmers in ways that encourage them. Organisational support is also made available to help institutions to provide services to farmers. All these broad policy frameworks and their specific programs support farmers to sustain their operations to enhance the growth of Canada's agri-food sector, while also serving as the centre of attraction for new farmers. Hence, in almost all provinces/territories, there are specific programs dedicated to supporting new and beginner farmers, and the Future Farms Initiative under GF 2 in Newfoundland and Labrador was an example of that.

There are also specific programs across the country that are unique to one province or territory and are generally implemented through various agencies (see Appendix A). For example, the FarmNEXT Program is used in Nova Scotia to attract people from outside the province to establish farms in the area. The Youth Leadership and Mentorship Program is used in Saskatchewan to connect young people to existing producers, and Agriculture Awareness Initiative Program employed to shape public perceptions about farming. Agriculture by Choice Program and New Entrant Farmer Loan Program are employed in

New Brunswick to provide information and financial support respectively to entice new entrants.

Throughout Canada, diverse programs tailored to individual farmers or organizations are employed. These programs cut across different intervention areas, and they can have a variety of impacts on the attraction and retention of farmers. Similar to the earlier discussions around the globe, programs in Canada have focused mainly on financial support and education and training, as well as youth empowerment. The programs, however, lack specificity as most of them are broad-based, targeting both existing and incoming farmers. This could disadvantage new farmers who may not have enough capacity to meet program requirements. Furthermore, there appears to be a concentration of efforts in supporting retention rather than the attraction of new entrants.

The efforts to attract and retain farmers, especially young people in Canada, are not limited to the government. There are other organizations at the national level that contribute their energies to the efforts. For instance, the Canadian Young Farmers Forum (CYFF), plays important and diverse roles in supporting efforts to attract and retain farmers. CYFF serves as an umbrella body for eleven other young farmers organizations spread around Canada. The organisation provides education and training for beginner farmers; facilitates the transition and succession planning for old farms; provides a voice to young farmers in various initiatives; and create awareness of various issues relating to young farmers through different media. Comparable roles are also played by the Canadian Federation of Agriculture (CFA), which works closely with other entities to champion the interest of farmers in the country. Farm Credit Canada also support farmers in areas including

financing and capacity building. There are numerous other private or non-governmental entities that operate independently or closely with other organizations to implement specific strategies aimed at attracting and retaining farmers in Canada.

Going forward, the existence of these organizations, and acknowledgment of the diverse efforts to support farmer attraction and retention would be vital in providing a comprehensive view of policy interventions in Newfoundland and Labrador. Understanding efforts being made by both public and private actors will be important in designing appropriate context-specific interventions. The diversity of interventions will also reflect on the nature of policy efforts likely to impact farmer attraction and retention in the study area.

2.8 Summary, Reflections, and Arguments for the Thesis

Agriculture is under crisis, and one issue area is the challenge to sustain the industry demographically as a result of the ageing and declining number of farmers. This challenge may result in loss of economic opportunities and difficulties in meeting the food needs, locally and globally (Hamill, 2012). Recognizing the role of agriculture in supporting societal progress and recent appreciation of declining interest, there has been continuous effort to arrest the situation (Susolowati, 2014) through deliberate policy interventions. There have been direct and indirect efforts to promote farming through investments in technology, capital, human resources, and other essential components needed to build the capacity of the sector. In the aspect of the human-based development of the industry, attraction and retention of farmers have gained policy attention in recent years (Noorani, 2015; Tongs, 2008).

Farmer attraction and retention has been on the development agenda in many places, including developed and developing countries. Besides the main challenge of farmer exodus, the need to ensure food security, desire to create employment for youth, motivation to sustain the agriculture as an industry to continue to support economic growth, have all brought farmer attraction and retention into the development agenda. There is a growing body of discussion and research in this area in recent times. However, the literature on the subject can be described as academically lean. This means that little exists in terms of peer reviewed publications on this subject matter. The available literature on farmer attraction is largely organizational-commissioned inquiry reports (e.g. AAFC, 2010; FAC, 2012; NFFA, 2013; RRCA, 2012) and media articles. Despite limited peer review articles on this subject matter in the domain, there exist student theses that have discussed farmer attraction and retention, with attention to youth and agriculture, motivation and capacity building (see Hamill, 2011; Noorani, 2015). This review has synthesized the available literature and discussed it under broad themes relevant to this research. This provides an important step to filling the research gaps while moving the field forward by interconnecting the literature on motivations and farmer attraction and retention policies.

Overall, farmer attraction and retention is discussed in literature around four broader themes, including food security promotion (FAC, 2012; Susiliwati, 2014), youth development and economic/business enhancement (Filmer & Fox, 2014; FAC, 2012; GDPN, 2014; Mwauru, 2012; Noorani, 2015), sector sustenance, and industrial agricultural failures (Horrigan, et al., 2002; Matheson, 2017). Embedded in almost all the works on farmer attraction and retention is the crosscutting theme of youth development or building capacity of young people in the world by directing them into agriculture. These broad

themes could as well explain the motives and driving forces behind the growing interest in the issue area. Going forward, research that links farmer attraction and retention to these themes may be needed to further highlight the forces igniting academic and policy interest on the subject.

The disaggregated mentions of farmer attraction and retention interventions in the literature reveal some focal points of action. Some of the actions include promoting agricultural education of different forms and the creation of favourable policies including educational, land tenure, and favourable business environment (AFFC 2014; ASA, 2011; Noorani, 2015; Tongs, 2008). Policies that support young entrepreneurs and different agricultural models while providing financial incentives to court interest are mentioned (Mwauru, 2012; Noorani, 2015). All these are suggested, but the focus of these has been on what governments can do, to the neglect of what the society or specific elements within each context could provide to support farmer attraction and retention. Further research would, therefore, be needed to open discussions on holistic approaches that build on partnerships to support farmer attraction and retention efforts. The examination of motivation of farmers in the empirical chapters and the embedded factors that influence the decision to farm will help address this gap.

Besides the proposed efforts, the literature has also highlighted the adopted strategies in different parts of the world, most of which have been positioned around the highlighted interventions. Practical interventions, as seen in Asia, Africa, Australia and even in Canada, reveal an extensive focus on financial incentives of varied forms (AAFC, 2017; AFA, 2015; Mwaura, 2012; Tongs, 2008). There is also operationalization of

education, training, and mentorship programs (Mwauru, 2012), as well as encouragement of diverse agricultural models and establishment of organizations to propel the undertaking of farmer attraction and retention (AFA, 2015). Planning, through the adoption of plans for new entrants or incorporation into larger agricultural plans, is also evident in many places. Building on these areas, the research will examine how these compare to what is done in Newfoundland and Labrador.

Though many interventions have been proposed, and others equally implemented, farmer attraction and retention efforts are largely challenged by two spheres of factors. The literature suggests efforts are hampered by both specific problems within the agricultural system and broader social-environmental issues, including contrary advice from family, media portrayal of agriculture, and personal perceptions, all of which negatively affect the image of the sector (Leavy & Hossain, 2014; RRCA, 2012). While highlighting those issues are important, which are further emphasized in the empirical chapters, the neglect, albeit unintentionally, of challenges to existing efforts could undermine the quest to fully understand the hindrances to farmer attraction and retention. As highlighted in the conceptual approach, an integral part of this thesis examines the effectiveness of existing interventions, emphasizing stakeholder views and challenges of implemented policies.

Also, even with the sporadic mentions of interventions to attract and retain farmers, one missing cue in the discussions is motivation, and how that reflects in policy action. Though motivation is relatively applied in the context of agricultural research, its relation to people entering and staying in the sector appear limited. Going forward, the role of motivation in the broader picture of people entering and leaving farming need to be

explored. For this, my review highlighted some of the motivations to people farming, revealing both intrinsic and extrinsic motivators (Sutherland, 2015).

Discussions in the chapter have also revealed that there are many interventions employed in different places, and the challenges to attracting and retaining farmers also vary. As well, many factors motivate people into farming and could play a role in the success of interventions, even if not clearly linked by the literature. In addition, there are mentions of motivations and other elements associated with people getting involved in farming in the literature. This is done within a limited scope and intermittent mentions of deliberate efforts to attract and retain farmers. The literature has been unable to provide a more synthesized direction on what is being done, as well as how effective these may be within specific context. Similarly, the literature barely mentions interventions within the context of how they can motivate people to agriculture. Understanding these issues further through deliberate linkage of motivations and policy will help create the needed interventions that can get people into farming.

Within the background and the gaps in the literature, I explore in the context of Newfoundland and Labrador, among other things, how farmer attraction and retention interventions manifest in the province; how policies may link up with motivations of farmers; and how the interventions contribute to enhancing the general capacity of agriculture in the province. These and many other gaps in the literature are explored to move forward the academic literature in motivations and agricultural policy, and to contribute to policy practice. I introduce this relationship to position motivations within policy interventions in a way that shed light on how efforts may contribute to getting people

into farming. This approach is used to advance the field of motivation and policy, and to create a connection area where further research can be conducted.

2.9 Conceptual Approach and Framework

This research is positioned within the concepts of motivation and policy actions (see Figure 2.1). Central to the study is the core idea of farmer attraction and retention, which the review has shown, is influenced by human behaviour towards an act, which can be explained by motivation. Motivation is affected by factors within and beyond the spheres of the agriculture industry. The propositions of self-determination theory can explain those many factors that impact motivation, and on farmer attraction and retention broadly. The theory explains human motivations from the perspective that actions are either controlled or autonomous, depending on their provision of three psychological needs: autonomy, competence, and relatedness (Dei & Ryan, 2012). The idea that the motivation can be influenced by external factors links it to how policy can interplay in the process.

Policy efforts to attract and retain farmers are conceived as deliberate attempts to help agriculture reach its maximum potential in a step to achieve long-term food security. And while the two concepts (capacity building and food security) provide a subtle lens to the whole idea of farmer attraction and retention, specific variables within the concepts may be occasionally applied in explaining and discussing findings in the thesis. The policy interventions, aimed at attracting and retaining farmers, are largely incorporated into broader agricultural policies. However, there are specific interventions-programs, policies, plans, strategies, legislation and other instruments- which reflect the aims of enticing

farmers. These instruments are not operationalized without challenges, both within their own set-up and outside in their operating environments.

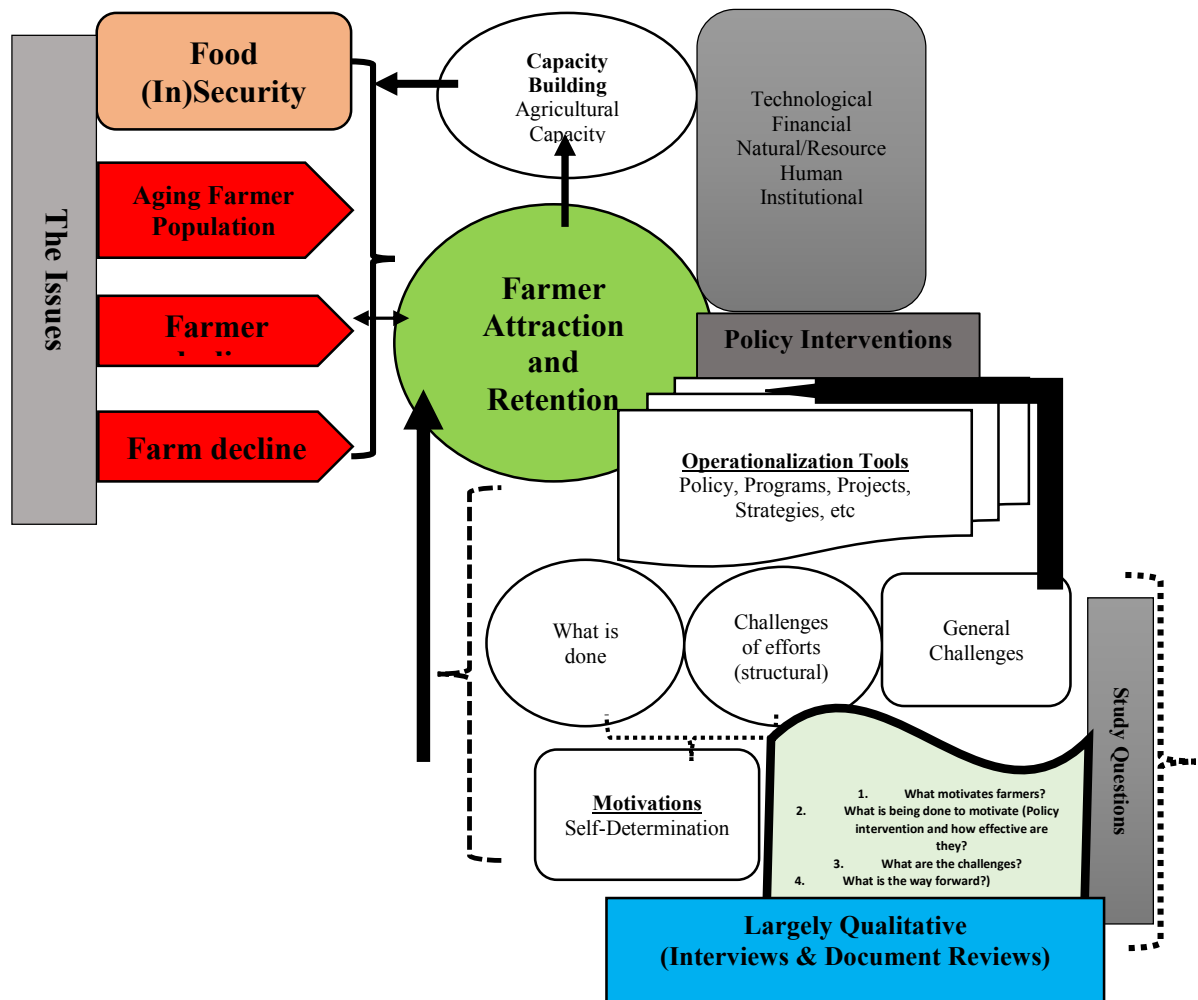


Figure 2. 1 Conceptual Framework for Farmer Attraction and Retention Policy Efforts

Source: Abdul-Rahim Abdulai (2018)

Understanding the attraction and retention efforts, the challenges, both internal and external, is needed as well. Understanding the challenges to these interventions, alongside motivations, is necessary to gauge the effectiveness of such efforts. Whether policy interventions are effective now or in the future could also be influenced by their ability to

motivate the targets. An important component of the study is to understand the motivations of existing farmers. This is important in determining if policy efforts consider the motivators of farmers before they are being designed.

The literature has shown that motivations are influenced by both intrinsic and extrinsic factors and understanding them within a specific context may be helpful in making policy recommendations that inform future interventions in Newfoundland and Labrador and beyond. Also, interventions that are meant to attract and retain farmers may have more spiral effects than just bringing people into the industry. The literature has also revealed how interventions are designed around different elements including financial incentives, technological advancement and resource capabilities (see Appendix A). All these may mean that they could contribute far beyond their immediate aims, and it is important to understand their potential impacts. How the research objectives are to be achieved or how the questions will be answered is largely derived from the literature in the subject area, and the researcher's experiences in the study context. Thus, a more pragmatist approach, where focus is placed on the outputs, rather than the methods, is employed. A largely qualitative approach using interviews and policy documents review is adopted (see Chapter 3 for details).

Chapter 3: Research Setting and Methods

3.1 Introducing Newfoundland and Labrador

Newfoundland and Labrador is the easternmost province in Canada; it is situated between latitudes 46°36'N and 51°38'N (Government of Newfoundland and Labrador, 2017). The province covers the island of Newfoundland and mainland Labrador to the northwest, which is separated by the Strait of Belle Isle. The two combined lands have a total area of about 405,212 Km² (156,500 sq. mi), which encompasses more than seven thousand small islands (Natural Resources Canada, 2013) (see Figure 3.1).



Figure 3. 1 Map of Newfoundland and Labrador

Source:

<http://www.keyword-suggestions.com/bmV3Zm91bmRsYW5kIG9uIHdvcmxkIG1hcA/> Copywrite@ Atlases of the World

The location of the province has had some share of influence on agriculture and food in the area. As Newfoundland is an island, life and activities are influenced by many island characteristics, especially around the movement of food into and across the region. In terms of climatic conditions; an essential element for agricultural development, Newfoundland and Labrador experiences varied climates in distinctive areas. Northern Labrador has a polar tundra climate, with the southern part experiencing subarctic climate. The island of Newfoundland is considered to be a cool summer subtype of a humid continental climate, influenced generally by its proximity to the sea and broadly considered maritime. Like many other Canadian regions, the province, as noted by Government of Newfoundland and Labrador (2013) and Catto, (2010), also experiences four distinct seasons: the mild to hot mixed with rainfall summers, cool to cold mixed with rain and snow autumns, cold to very cold with light and heavy snow winter, and cool to warm with rainfall spring. The summer period, the favourable agricultural time, spans from July to August and usually marks the main growing season (Environment Canada, 2013). As summer climates are the most suitable for many agricultural activities, especially with crop production, the briefness makes it difficult to cultivate certain crops which have long growing periods. The fact that sunshine, which is an important natural source of heat for plant growth is typically low, food production is more than likely to be negatively affected (Catto, 2010). This may explain why heat conditions have largely been cited as an inhibiting factor to agriculture in Newfoundland and Labrador (Dolter, 2018; Dolter & Abdulai, 2017).

In all, weather and climatic conditions in Newfoundland and Labrador impact agricultural production in general, particularly crop farming, by creating conditions which negatively or positively influence input conditions and outputs levels. Also, soils, geology, and drainage conditions are important elements for agricultural development and must be treated as such when seeking to understand existing crop production tenants. There are pockets of soils which contain good mineral deposits to support crop production, especially in the Burin and Avalon Peninsulas (Summers, 2010), the Codroy Valley, and the Humber Valley regions. The good mineral deposits in pocketed areas in the province may explain why agricultural activities are concentrated in few areas, as against an ideal spread across all regions. The availability of good soils in some parts may be exploited to enhance food production if it is appropriately targeted through deliberate policy actions. The general geological make-up of the area, however, makes it difficult for crop production, except for those limited pockets with good soils. Nonetheless, these challenges should not be a reason to thwart agricultural efforts in the advent of emerging technologies.

3.2 Agriculture in Newfoundland and Labrador: The Historical, Socio-Economic and Political Context

Newfoundland and Labrador has a long history of farming which dates back to the activities of the first settlers in the province. But, the Department of Natural Resources, NL. (2004) has noted, that despite reports of early agricultural activities by first settlers of Newfoundland, documentation of these only began in the early 19th century. Omohundro (1994) confirms this when he stated that Newfoundlanders only began to put together fragmented memories of gardening activities of the elders in the 19th century. However,

there has been a strong tradition of self-provisioning through gardening in the province for centuries. For a large part of the province history, households' gardening was a source of food for the residents.

The 1874 census in Newfoundland reported about 159000 people cultivating an average of 6.3 bushels of potatoes each (see Omohundro, 1994 for more). By the early 20th century, there was more than 100,000 acres of land being cultivated by about 2,900 farmers (Cadigan, 1998) and a host of subsistence gardening by households. During those periods, agriculture served an important role in the province, as people kept gardens to ensure food self-sufficiency to complement the limited returns from fishing and logging (Omohundro, 1994). As time elapsed, the situation was hampered by the poor weather and a soil disease which left the then colonial government to embrace commercial farming: as a solution (Cadigan, 1998). As government embraced commercial farming, there were enormous efforts to develop the sector through government-led initiatives: for instance, there were land grants for clearing of new agricultural lands in the 1860s. Up until after the great depression, the government of Newfoundland and Labrador also saw commercial farming as an avenue to create employment and to salvage the loss of jobs in the mining and fisheries. In support of such a vision, between 1935 and 1936, the government worked to improve agricultural human resource capacity by establishing a demonstration farm and adjunct agricultural school.

The government also created agricultural clusters in areas including Markland, Haricot, Lourdes, Midland, Brown's Arm, Sandringham, Winterland, and Point Au Mal which served as farming hubs. Then efforts also led to opening areas in the Codroy Valley

and Musgravetown upon exhaustion of all available arable lands in support of commercial farming. The commercialization policies yielded some results, as specialization in milk, egg, and meat production was introduced to support the existing vegetables, hay, and livestock at the household level. Specialization in these areas at that time may explain why current farming trends in the province reflect similar patterns; a dominant dairy and egg sectors (Government of Newfoundland and Labrador, 2013). The outpouring of effort and evidence of results did not solve everything, and commercial agriculture in the province was not to be, as many factors impeded the government's commitment to the cause. Among many other reasons were a low market base, limited employment by the farming sector, the thriving fisheries which took people from farms, discontentment among farmers, unsuitable farming conditions in rural areas, improved marine transport for food imports, and a general sense of lack of returns on government investment in the sector saw a shift from commercial back to supplementary agriculture in many sectors (Cadigan, 1998).

For many Newfoundlanders, supplementary agriculture was cultural, economically, and socially significant to their lives, complementing fisheries and logging activities (Omohundro, 1994). As Cadigan (1998) puts it, women were the mainstay of farm activities, planting and weeding to keep the farms going, and the men worked in fisheries and supported on the farms. There was the cultivation of vegetables and hay, supplemented by flowers, herbs and fruits in areas where there was extra land to spare. Most households kept gardens during the period after the world war and great depression, and Newfoundland was back to its roots of self-provisioning agriculture that had become a part of the rural life even in times when government efforts were not forthcoming (Omohundro, 1994). The early 1940s saw a short-lived effort by government to support subsistence farming after

several years of discouraging that model (Omohundro, 1994). The efforts to go back to the past yielded results but not as it used to because only about 48 percent of household in 1945 compared 89 percent in 1911 who grew their own crops (Evans, 1975).



Plate 3. 1 Unidentified Women Hay-Making, n.d.

Courtesy of The Rooms Provincial Archives Division (A 12-122), St. John's, NL.

<http://www.heritage.nf.ca/articles/economy/agriculture.php>

As noted, government support for subsistence farming was short-lived because there was a shift in policy by the late 1940s to the 1950s (Cadigan, 1998). The shift was led by a promise of prosperity in commercial farming. This came at the time of Confederation when Newfoundland joined Canada in 1949 (Omohundro, 1994), and they hoped to industrialize and modernize like their counterparts in the mainland. Upon recommendation by a 1953 Newfoundland Royal Commission on Agriculture (Cadigan, 1998), industrialization swept through many sectors in the province, including agriculture, fishing, mining, and even the formation of communities. The Commission recommended the government tailor efforts to commercial agriculture while support for small scale producers be limited to advise (Shaw et al. 1995 in Omohundro, 1994). The agglomeration of activities and people were the promise of success, and the province could only progress and modernize once they embrace large-scale industrialized activities (Omohundro, 1994) in sectors, including agriculture and fisheries. There was resettlement of many previously

fishing and farming communities between 1960 to 1970 to build the foundations of large markets and labour needed for industrial-type activities. To actualize their vision, social security schemes were introduced to compensate for the loss of supplementary activities. But again, just as in the case of the first government-led commercial agricultural pursuits, the promise of prosperity from industrial farming never materialize and people continued to thrive on supplementary agriculture, albeit in reduced forms. That, however, did not stop the government from concentrating its support for commercial industrial clusters, and it continued to focus on pork, poultry, dairy and mink production (Omohundro, 1994).

In the late 1990s, there was yet another reinforced shift in the system, which changed the structural view of the province again, including how agriculture was received by decision makers and the society. In this period of change, there was a gradual fade out of the existing subsistence-based food production and re-concentration of large-scale commercial farms. The dominance of large-scale farms over the years, especially from the 1950 till now, is attributed to deliberate efforts by both government and other actors to get the industry to compete with imports from different areas (Espie, 1986). The removal of subsidies which encouraged full-time agricultural activities and supported people to sectors which were not well-developed, including large-scale dairly, eggs, and so on, was the pinnacle of how policies shaped agriculture and interest in the sector, especially at the time of Confederation (Department of Natural Resources, NL., 2004; Omohundro, 1994). The discovery of offshore oil in in Newfoundland in the 1990s also partly contributed to the structural shifts in agriculture, even from the personal level, to occupations and prospects brought by the oil discovery and led to a further downward trend. Describing the gradual shifts in agriculture, Espie (1986) opined, that commercial agriculture in Newfoundland

and Labrador can be described as underdeveloped throughout the major periods in the province's history. This is further explained as being so because even during times of peak periods in agriculture in the region, the farmer-to-population ratios was still low in comparison with other parts of Canada (Scott, 2011 in Carter & Temple, 2012).

For specifics, agricultural activities including dairy, sheep farming, crop production (corn, vegetable, berries/orchard crops), horticulture, greenhouse productions, poultry and egg production, fur farming, among others are common in the province (Dolter & Abdulai, 2017; Statistics Canada, 2017; Department of Natural Resources, NL., 2004; 2012). Of all the sectors, dairy, poultry, and egg production, being managed with a supply management approach, have been dominant over the years. The province is virtually self-sufficient in these areas. Except for these areas, agriculture in the area has been dwarfed compared to other provinces. For instance, of all the farmland in Canada, less than one percent is found in Newfoundland and Labrador (Summers, 2010). According to Department of Natural Resources, NL. (2004), "the limited number of farming operations are generally first-generation enterprises that are well-managed" (1). These first-generation enterprises are still shaped by the lack of good growing soil, a small internal market base, and the short growing season (Harris & Hiller, 1999). This has resulted in an insignificant contribution of the sector to the economic development of the province; in 2015, agriculture, forestry and logging contributed only about 1% of GDP (Government of Newfoundland and Labrador, 2017) compared to only agriculture's contribution of about 6% to Canada's GDP in 2014 (Statistics Canada, 2016, May). Despite struggles in agriculture, the sector is still vital to the province in many ways. For example, when the whole value chain is added, agriculture contributed about 2.9% to NL 2013 GDP (Statistics Canada, 2013 in Statistics

Canada, 2017), and in 2015, the visible agricultural operations employed 1,228 people (approximately 0.5%⁵ of total employment) in the province (Statistics Canada, 2017). In its current state and structure, there exists prospects for development of the industry which can be tapped by policy.

Currently, the agricultural industry in Newfoundland and Labrador is organized as it is in many parts of Canada. Agriculture is a collective responsibility, shared between the federal and provincial governments. Oversight role of the industry is undertaken by both federally managed Agriculture and Agri-food Canada and provincially established Fisheries and Land Resources Department for Newfoundland and Labrador. The two organizations play an important role in formulating, directing, implementing, as well as monitoring and evaluating of agricultural policies, plans, and projects in the province. These organizations work closely with other provincial government departments to achieve common and strategic goals. There are other national agencies including Farm Management Canada, Canadian Food Inspection Agency, Farm Credit Canada and others, who work closely with the province to support the agricultural industry in specialized aspects. Another central component of the agricultural industry is organizations formed on production lines or other features.

⁵ This percentage is self-calculated. It was derived by cross-calculating two figures from sources. Statistics Canada (2017) noted visible employment as 1,228 and from their labour market bulletin for 2015 (https://www.jobbank.gc.ca/content_pieces-eng.do?cid=9230&lang=eng&wbdisable=true), they estimated total employment in 2015 for the province as 236,200. The percentage is thus derived using the two figures. However, it may differ if the timeframes for the data (months of data collection) were different. It must also be noted that statistics Canada (https://www.jobbank.gc.ca/content_pieces-eng.do?cid=9230&lang=eng&wbdisable=true) pegged agricultural employment in NL for 2015 at 1.3%. Differences may be due to agricultural sectors incorporated in each of the calculations.

The Newfoundland and Labrador Federation of Agriculture (NLFA), Chicken Farmers of NL (CFNL), Dairy Farmers of NL (DFNL), Egg Producers of NL (EPNL), Landscape Newfoundland and Labrador (LNL), Young Farmers Forum (YFF) and many others are examples of such entities. These organizations champion the cause and represent producers – entire community or specific commodity or demographic-in the province. There are also a host of the private sector and Non-Governmental Organizations (NGOs) in the province whose work is directly or indirectly linked to agriculture, placing them at the heart of the industry. These organizations work independently or partner with other private entities or government departments to facilitate implementation of agricultural interventions in the province. For example, Food First NL, a non-profit organization, which champions the cause of community-based food security initiatives in the province, and they work closely with the agricultural industry in areas concerning community-level food initiatives. There are also many other community-based organizations who work with farmers, either province-wide or those in some specific geographical regions, to achieve aims, related to agriculture. The diversity of actors in the Newfoundland and Labrador agricultural industry is important in the development of the sector, and this research as well. The diversity, if adequately explored, could facilitate implementation of a wide-range of interventions, and offer a wide range of audience from whom information could be sought to achieve the research objectives.

Overall, the history and the current state of agriculture in the province has been impacted by factors including unsuitable soil conditions, poor climate, market forces, and government policy (Food First NL, 2015; 2017; Harris & Hiller, 1999; Summers, 2010) and these are important in understanding current interventions. This is because these factors

are influencing different aspects and organization of the current agricultural industry in the province and have contributed to its bite-sized nature. These factors may also explain why the sector has received limited attention from governments until recently.

3.3 An Overview of the Newfoundland and Labrador Crop Production Sector

In the previous section, agriculture in Newfoundland and Labrador is described as limited; it contributes a small amount to employment, Gross Domestic Product (GDP), and food security. However, the industry has been expanding steadily, with emphasis on poultry, eggs and dairy products. Vegetables, fruits, crop production and other non-supply managed sectors are, however, still underdeveloped. This is evidenced by the province being able to produce less than 10 percent of its vegetable needs (Food First NL, 2015). As of 2016, there were about 19,619 acres of cropland in the province, which was a 4.8% decrease from the 2011 figures, further lending credence to the declining situation of the crop, vegetables, and fruit production (Statistics Canada, 2017). Despite the limited state of crop production, farmers produce different crops including vegetables, berries, forage, grains, turf grass, and Christmas trees (see Table 3.1).

Table 3.1 Percentage of Cropland in Newfoundland and Labrador, 2011-2016

Component of cropland	2011	2016
	Percentage of cropland	
Field crops	7.9	8.4
Hay	76.2	79.2
Vegetables	4.3	4.1
Fruits, berries, and nuts	6.9	4.4
Sod and nursery	4.6	3.8
Total cropland	100.0	100.0
Note: Totals may not equal 100% due to rounding		

Source: Census of Agriculture (3438) in *Statistics Canada (2017)*

The main vegetable crops in the province in the last decade have been potatoes, carrots, rutabagas and turnips, and cabbages (Doyle, 2014; Statistics Canada, 2017; Summers, 2010). Of importance is also fruit farming, and the concentration has been on blueberries, strawberries, and cranberries. Baker, Mcisaac, and James-Abr, (2017) have noted that cultivation of these fruits has grown sharply over the years, growing exponentially to about 850 percent in the period between 2006 to 2011, and the trend has continued since, with increasing government attention to the area. Despite this assertion by Baker, et al., (2017), recent statistics show the land area for general food crops has declined in recent times, with a 39.5% reduction recorded from 2011 to 2016, leaving it at about 863 acres. The decline may be attributed to structural issues which undermine sustainability of businesses in the sector. There is, however, the growth of hay and pasture crops, accounting for large part of the cropland (see Table 3.1), a move which supports the dominant dairy industry in the province. Notwithstanding, the increased diversity in the crop sector is important in giving this research wider inputs that could be useful in informing comprehensive policies to attract and retain farmers.

Unlike the broad perspective of agriculture in the province, crop production is negatively affected by many factors, chiefly by lack of suitable soils in the province. The pockets of fertile soils confined to areas like the Northern Avalon and Burin Peninsulas (Baker, et al., 2017), and Humber and Codroy Valleys have provided a hub for crop production. These areas provide the best suitable location for crop production and have been at the centre of government agricultural interventions in recent years (see Abdulai & Dolter 2017). The clustering of agricultural activities in general and crop production particularly in these areas could undermine farmer attraction and retention efforts if not

well managed. This is because people who are far away from these areas but host interest in farming may see that as a disincentive to move and may as well not be motivated to commute. Such a concentration could, however, be tapped to promote farming, and to attract people into the sector if packaged to use the existing infrastructure in these areas as a leverage. This may be achieved through making use not just of the fertile soil effectively but also the social, economic, and technical benefits associated with farming in clusters (Dolter, 2018).

3.4 The Researcher in the Research: Positionality and Reflexivity

The environmental context of researchers, and how they are positioned within the research setting, could impact the methods, interpretation, and final outcomes of a study (Bourke, 2014; Whitley, 2015). My social and geographical context and the research community makes it important to highlight my position as a researcher and reflect on how that impacted on the research process and potential outcomes. As a black male investigating farmer motivation in a white society, my position as a distinct outsider (see Fisher, 2015) was never in doubt. My status as an outsider was firmly confirmed as almost everyone I had spoken to before and after the interview inquired: *where do you come from?* The outsider status presented both barriers and opportunities that might have shaped how the research unfolded. I was confronted by barriers embedded in an industry that showed different structure from the agriculture I knew from my home country, Ghana, and most parts of sub-Saharan Africa. These barriers were social (e.g., different accents, farming more of a business rather than a livelihood) in nature, and they influenced how the entire research unfolded. My upbringing from a peasant agricultural home in Sub-Saharan Africa has had

impacts on this research, including the decision to engage in an agriculturally related study. The background triggered my desire to understand the aging agricultural industry, and exodus of farmers (one issue area within my broader interest in agriculture and food studies). The interest was reinforced upon my arrival in Newfoundland, where I quickly realized that the agricultural industry was faced with similar issues as Ghana: diminishing interest in farming as a career. This was learnt principally from preliminary readings.

In Newfoundland, I quickly settled into the industry through engagement activities that had brought me closer to the farming community. My six-month internship program, working with a consultant to prepare an agricultural development plan for the farm community was the highlight of my embeddedness into the research community (see Dolter & Abdulai, 2017). The internship brought me closer to the farmers, and the agricultural officials, in attempts to solicit their opinions into the desired direction of the industry. My internship and the many informal conversations that happened prior, during and after that were at the forefront of my understanding of actors in the industry, government interventions, and other elements that later became integral to the research. The social capital developed in over a year engagement prior to the actual fieldwork was vital in my participant recruitment process and helped to sustain interactions during interviews. The engagement also helped to underscore the local accent difference, and how I understood participants' views on certain issues. It was also important in breaking through the social barriers to study a community which I knew little about, and which also saw me as an outsider.

My role as an outsider might have also contributed to freeness and excitement to which interviewees spoke to me. I figured out that my participants saw my interest in studying agriculture in the province as surprising, and they wondered why I choose to do so— always querying, *what made you decide to study farming here?* This position further opened up opportunities to interact with participants who felt comfortable speaking to me, probably with the mindset that I cannot be doing the work of the government since I am not from the province. Furthermore, the policy environment in the province at the time of the research had its role in the outcome of the study, and how I may have been viewed and accepted. The study happened at a time when many engagement activities were organized by the government and other actors in the industry. My involvement in these activities through attendance made me a ‘household stranger’ among some of the farmers, and that gave me an opportunity to integrate into the research setting. The position may have also contributed to the kind of information respondents shared with me, and, as well, explain why some refused to participate. With all these, I still acknowledged my role as an outsider whose main intention was to generate knowledge to inform policy and practice. Thus, I acknowledged by "responsibility and indebtedness" to participants (Foley, 2002) for accepting to speak to me, and share their motivations and experiences.

3.5 Research Design and Justification

Research designs are important in establishing a methodology (Bergman, 2008; Sale, Lohfeld, & Brazil, 2002; Creswell & Plano-Clark, 2007: 2011; Murray & Beglar, 2009; Tashakkori & Teddlie, 2003). The design of a research defines and influences various components, including the methods adopted. Blaxter et al., (2006) have argued,

that researcher's control over study subjects, the research questions and purpose, time available, and other factors influences the design of a research. For this reason, a largely qualitative based approach (Flick, 2014; Marshall & Rossman, 2014) was adopted for this study. Qualitative viewpoints, data collection, and analysis techniques were used (Bergman, 2008; Sale et al, 2002). In the aspect of data collection, interviews and policy document reviews were used. The use of qualitative approach was informed by the notion that policy efforts can be understood through readings that brings out the intricacies in language to enhance understanding. Interaction with policy actors (study subjects), as an element of qualitative study also allows the researcher to appreciate the processes (Flick, 2014) which are important in assessing policies. Likewise, motivations are emotional charged in most cases, and qualitative understanding of such social variables (Taylor, Bogdan, & DeVault, 2015) are important in appreciating how they are embedded with systems. The expansion in the field of qualitative psychology (see Ashworth, 2015) also highlights the merit of this approach in today's research environment.

3.6 Description of Research Elements

Every research makes use of specific subjects which are termed as the study population (Bryman and Bell, 2015; Ritchie, 2003). Understanding the study population is important in drawing out specific units from which data can be collected and analysis made. Study populations could be a defined group, either being the entirety of the members of a defined class of people, objects, places, or events selected because they are relevant to the research question(s) (Creswell & Plano-Clark, 2011). The study population included all relevant actors of agriculture in Newfoundland. After a critical review of literature and

interactions with some actors in the province, I settled on farmers, and agricultural officials (managers, program officers, development officers), both in the public and private sectors. The main unit of inquiry in this study was the farmers. This included specifically people engaged in farming, with a special interest in people in the non-supply managed sectors. Concentrating on these sectors was informed by two reasons: 1) crop production is heavily challenged, with people not interested in venturing into the sector and 2) other sectors like dairy, and eggs are well established and supply managed and that gives a different dynamic of how a person can venture into the sector, and how rigorous processes based on expensive quota system is employed.

Apart from the farmers, public and private agricultural related institutions with oversight responsibilities over farmers in the province were also used as units of inquiry. These included: Growing Forward (GF) 2, Food First NL, Young Farmers Forum (YFF), Newfoundland and Labrador Federation of Agriculture (NLFA); and Provincial Agri-Food Departments. Linked to these institutions are policy and program documents about interventions to attract and retain farmers. Information collected from these units included existing programs and projects aiming to attract and retain farmers, views on such interventions, and challenges in implementation.

3.7 Data Collection

There are varied opinions in determining the number of people to participate in a scientific research. The number chosen is always crucial, especially in quantitative studies where mathematical analyses are used. However, that is not the case for qualitative studies where emphasis is laid on saturation and information power (see Malterud, Siersma, &

Guassora, 2016). Sample size considerations are normally dichotomized, with small samples being associated with qualitative research and quantitative studies noted for large samples (Creswell, 2003; 2009; Fowler, 2008; Onwuegbuzie & Collins, 2007). Inferring from the available literature on sample size determination, and its applicability in qualitative research (see Marshall, & Rossman, 2014), I emphasized on understanding farmer attraction and retention, and the practicability in terms of time and resources. Convenience sampling built on tenets of giving every member a chance to participate was used. A list of all farms was obtained from 2016 Newfoundland and Labrador Farm Guide and all crop farmers were invited through email to participate in the research (see section on data collection). Though this technique disadvantaged farmers who are not captured in the farm guide, the decision to use the database was informed by prior knowledge of the scope of the document and complementarity with other techniques. Additionally, the snowballing technique was employed to source farmers who were not part of the farm guide. Complementing with snowballing allowed for the inclusion of the otherwise invisible small-scale farmers in the province and added important elements to my discussions.

Apart from the farmers, officials working in the agricultural industry were engaged in the study. Employing purposive sampling technique, officials were selected and interviewed. These officials were purposely selected due to their involvement in the agricultural industry. Some were specifically selected due to their roles in administering interventions which were of relevance to the research. Use of purposive sampling to select key informants was primed by its extensive use in the literature (see Marshall, 1996; McAlearney, Walker, Moss, & Bickell, 2016) and its adoption by Hamill (2012) and

Noorani (2015) who both examined issues of attraction and retention of people into agriculture. Though officials were purposively selected, a snowballing technique was also used by asking respondents to name other potential respondents who may be of importance to this study (as used by Noorani, 2015).

Empirical data was collected for about three months following an ethical clearance granted in November 2017. Primary data collection was done from Corner Brook and St John's, and respondents located outside these areas arranged to meet or were interviewed via phone. First, emails were sent out to potential participants throughout the three months period. Emails of farmers were derived from Farm Guide 2016 and from personal experiences interacting with farmers. Officials were also contacted via email (see Appendix G) after obtaining contacts from websites of agriculturally related agencies. In all about 96 crop farmers were invited and about 12 officials. An online ad was also sent out on Facebook to invite participation (see Appendix H). However, only 16 farmers and 7 officials participated. About 11 farmer interviews and 5 officials (one officials interview included three people) were carried out (see Table 3.3).

Table 3. 2 Participants Recruitment

Unit of Inquiry	No. of Emails	No. of Follow up Calls	Email Replies	No. of Interview	No. of Participants	Percentage (%)
Farmers	96	38	21	11	16	69.6
Officials	12	3	9	5	7	30.4
Total	108	41	30	16	23	100

Source: Author's construct, 2018.

The purpose of using primary data was based on the researchers' decision to empirically answer the research questions. Specific data collected through this source included: information on existing programs to attract farmers, views on challenges

preventing people from entering the industry, motivations of farmers, and views on possible ways to attract and retain farmers. Primary data described above were collected using multiple tools and techniques as presented in the next section.

Interviews were the main primary data collection technique. According to Silverman (2016), interviews have become the trend for information seeking today's world, especially in qualitative studies. Doody and Noonan (2012) suggest that the popularity of interviews is related to humans being perceived as 'talking' and talking is natural. Rowley (2012) conceives an interview as a face-to-face verbal exchange in which one person, the interviewer, attempts to acquire information from and gain an understanding of another person, the interviewee. This, he explains, involves the interviewer seeking to get the interviewee to express their own attitudes, beliefs, behaviours or experiences, as a citizen, user, consumer or employee (Rowley, 2012). This conception is limited, considering expansion of technology which has moved this method beyond face-to-face and telephone which came later. The growth of digital technologies through email and video platforms has expanded the scope of interviews. For applicability, I employed both the traditional interview style involving face-to-face and phone call interaction. Specifically, semi-structured interviews described the use of predetermined questions, where the researcher is free to seek clarification (Holloway & Wheeler 2010) were used.

My choice of semi-structured interviews was rooted in literature. Many previous studies that have studied the issue area have largely employed this technique, either solely or complimentary with others (see Hamill, 2012; Noorani 2015). In applying this technique, interviews were designed as focused discussions that lasted between 24 minutes

and 1 hour 42 minutes. An interview guide for farmers (see Appendix B) and for officials (see Appendix C) was designed to provide the focus to all discussions. All participants were given a one-page summary (see Appendix D) of the research and they signed a consent (see Appendix F) form prior to the interview. Interviews were recorded for transcription, and there were no cases of respondents opting to speak off-record.

The choice of interviews was based on its ability to provide in-depth and detailed data, and its potency to provide a more relaxed atmosphere for participants (Boyce & Neale, 2006). Interviews are also helpful in gaining insights about a phenomenon; they give participants the chance to express their feelings and are good for generating quotes and stories (Bryman & Bell, 2015; Doody & Noonan, 2013; Rowley, 2012) which were all important in understanding the phenomenon under study. Despite its strengths, the intrusiveness on the participants (Barlow, 2012; Doody & Noonan, 2013), and its time consuming and expensive nature (Doody & Noonan, 2013; Gill, Stewart, Treasure, & Chadwick, 2008) may have impacted on the data collected since some may have opted not to participate due to the time requirement. The tediousness of transcript, as well, came into play and impacted on the research process.

In addition to the primary data collected, secondary documents were sourced and used. Search terms such as farmer attraction; farmer retention; motivating farmers; challenges of farmer attraction and retention; interventions to attract and retain farmers; Newfoundland and Labrador agriculture, policies to attract farmers (in Canada, and in Newfoundland and Labrador) were used. All retrieved documents were uploaded onto Zetero and used to scan through for relevant aspects of the research objectives. This was

done as part of a continuous review of literature aimed at gaining insights into broader theoretical underpinnings and contributions to the study (Vom Brocke, et al., 2009), how the research fits existing works and what has already been done in other areas (Booth, Sutton, & Papaioannou, 2016; Webster & Watson, 2002), current happenings (Booth, Sutton, & Papaioannou, 2016; Machi & McEvoy, 2016) in the agricultural industry in Newfoundland and Labrador, and appropriate methods for the study (Webster & Watson, 2002; Zorn & Campbell, 2006). Secondary data was mostly accessed through literature review with application in the analysis stage for triangulation (see Bekhet & Zauszniewski, 2012). In addition, secondary data in the form of policy documents were also sourced from websites of organization such as NLFA, YFF, Agri-food Canada etc. These were sourced to complement primary data on interventions collected from primary fieldwork. And they provided first-hand information on existing policy interventions on farmer attraction and retention.

3.8 Data Processing, Presentation, and Analysis

Data collected from secondary sources and fieldwork was processed through series of steps: editing, organizing, and deductions. First, all interviews were assigned numbers prior to transcription. Farmer interviews were numbered as, Farm 01; Farm 02; and so on. Interviews with officials were labelled as: Official 01; Official 02 and so on. Interview recordings were transcribed from January to March through an extensive process using Express Script Version 6 and with the support of Microsoft Office Word. Transcripts were then processed for a two-stage coding through editing. The first coding involved manually reading through hardcopy transcripts to gain insights from the data and to form initial

themes. After the first set of themes were derived, scripts were uploaded onto Nvivo 11 Software, which was used to extract quotes under each theme. Coding at each stage made use of both pre-determined themes and new ones that emerged. For analysis, thematic and content analyses, generally used in qualitative research (Howitt & Cramer, 2009), were employed. Thematic analysis is “a method for identifying, analyzing and reporting patterns within data” (Braun & Clarke 2006: 79). This involved a procedure for identifying themes in data. In applying this method, the analysis began with familiarization of transcripts. Familiarization involved reading and re-reading of the transcribed data from interviews, together with policy documents, after it was uploaded onto the Nvivo. This helped group ideas into pre-conceived themes and emerging themes. Recurrent themes were then sorted and grouped under a smaller number of broader and higher categories placed within the overall research objectives (Ritchie et al, 2003). After themes were grouped under research objectives, a more inductive approach was used to present ideas in line with the research objectives. Use of thematic analysis was informed by its flexibility (Braun & Clarke 2006), but the lack of transparency, as well as the absence of clear and concise guidelines on its application, proved difficult and problematic (Mays, Pope, & Popays, 2005). However, combining it with content-based analysis helped reduce the weaknesses.

For content analysis, manifest content, a technique of identifying what is said was used. With this, my aim was to describe what was said, and this was done by staying close to a respondent’s words (Bengtsson, 2016). To achieve this, Nvivo was useful in the process. The software was used to do a word search in policy documents and interview transcripts. These two procedures revealed where information clustered around and helped quickly identify contents around policy, programs, projects, and so on. And though I did

not dwell on the frequency of words or phrases, this technique allowed me to closely identify some of the key points noted by respondents. Also, quotations are used to help echo the voices of respondents (Ritchie, 2003) as employed by Noorani (2015), Hamill (2012) and many other qualitative researchers. Direct quotations from respondents allowed me to stay close to the words of respondents. This helped enrich the quality and validity of data and analysis presented in the work.

3.9 Reliability and Validity of the Study

Validity and reliability are the overarching objectives of all scientific inquiries. Ensuring validity and reliability is of utmost importance in this study. This is to ensure that the study measures and presents what it intends to achieve in ways that do not undermine the ability to generalize to larger populations (Blaxter, Hughes & Tight, 2006) or in my case, inform broad policies. To ensure that data gathered was relevant various efforts were employed. The study went through ethical screening by the Grenfell Campus Research Ethics Board (GCREB) in conformity to the Canadian Tri-Councils Ethics procedures. Ethics approval was issued in November 2017 (see Appendix E). Also, the snowballing technique, developed around constant interaction with industry actors was used through word of mouth to get in touch with farmers. This was important in enhancing the validity of the research as it contributed to incorporating the diversity needed to understand the study population. To reduce biases in data, responses from farmers and officials were both integrated and analyzed alongside policy documents. Hence, efforts were made to verify claims made from one source with others. This was, however, done while appreciating the discretion of the researcher to interpret claims and being ethical in the process.

3.10 Limitations of the Study

Despite the deliberate effort to ensure the study is scientifically sound, there were foreseeable limitations in both methodology and field work that are worth noting. Methodologically, a focus on farmer and actors in the agricultural industry has the potential to leave out valuable information. Due to the focus on farmers attraction and retention, including people outside of the sector of agriculture could have provided good inputs, but this was left out because of the non-existent scope of that group. Thus, the actors in the industry have been studied and selected to limit the amount of data and to prevent an instance where just about anybody could have been a respondent. Incorporation of an in-depth interview with key institutional informants helped reduce the impact of this limitation on the study outcomes. Moreover, the researcher intended to combine both quantitative and qualitative data collection and analysis. However, time available to complete the study did not permit such an approach. With respect to the field work, many blocks undermined the study. The researcher's inability to drive limited access to some farmers and resulted in extensive use of telephone interviews to access people from away. The use of telephone, however, may have limited my ability to fully understand certain points raised, as non-verbal cues of gestures and reactions are essential components of the interview communication process. However, the fact that I conducted all interviews myself and transcribed the scripts, did, to some extent, minimize the data lost through telephone interviews. Finally, interviews were not carried out in the Labrador part of the province due to logistical constraints. However, the broad outlook adopted for the policy analysis makes it possible to speak generally to the entire province in certain instances. This should

however be done carefully considering the existence of different dynamics of farming in both areas.

3.11 Conclusion

This chapter aimed to provide an overview of the study area and methodological design of this research. The study methodology is presented vis a vis the research setting, which is important in preparing the grounds for field research. I have provided a brief overview of the study area, which includes geophysical, historical, institutional, and social context relevant to the research. The study context is premised on the theoretical argument of how environmental factors influence the motivation of people (Ryan & Deci, 2001). Concurrently, methodological lessons learned, largely from research in the key concept areas in the literature, are used to design an appropriate methodology to understand farmer attraction and retention in Newfoundland and Labrador. The positionality of the researcher, research design and a justification for my choice of mixed methods, and the specific procedures for collection and analysis of data, which are all influenced by environmental factors are discussed (Creswell, 2003; Noorani, 2015). The study setting, and the methods, therefore, set the stage for the ensuing chapters.

Chapter 4: Farmer Attraction: A Motivational View of the Decision to Farm in Newfoundland and Labrador

4.1 Introduction

There is a consensus among researchers that part of what makes humans to engage in an act or behave in a particular way, including the choice of an occupation, can be explained by motivation (see Deci, Olafsen, & Ryan, 2017). Motivation is the process where “goal-directed activities are energised, directed, and sustained” (Schunk, Pink, & Meece, 2008 cited in Schunk & Usher, 2012: 13). Motivation is applied to understand the forces inside and beyond an individual that lead to certain actions or behaviours. As argued in Chapter 2, although there are numerous motivation-explaining theories human, self-determination theory provides a good analytical lens to understanding work-related behaviours (Deci, et al., 2017; Rigby & Ryan, 2018). For motivation to make inputs or influence decision making, including policy, Deci et al., (2017) have argued that studies are needed to understand how actions are autonomous versus controlled, and the variations in the need for competence, autonomy, and relatedness across cultures and industries. Engaging the argument of the necessity for understanding these needs across occupations and cultures (Deci et al., 2017), this research explains the decision to farm in a specific context. The decision to farm is presented as the output of both internal and external factors, which contributes to autonomous and/or controlled actions towards attainment of the need for competence, autonomy or relatedness (Deci & Ryan, 2008; Gagne & Deci, 2005). The research expands on the studies of motivation, and their application to work (Deci et al., 2017) by establishing the diversity of factors that influence the decision to farm. The

research contributes to the growing body of application of motivations in agriculture in general (Mishra, Mishra, & Jabbar, 2016; Rashid, Islam, & Quamruzzaman, 2016) and in understanding farmer behaviours in particular (see Shawn & Glen, 2010; Mishra et al., 2016; Morais, Borges, & Binotto, 2018; Moumouni & Streiffeler, 2010), employing experiences from Newfoundland and Labrador.

Newfoundland and Labrador has a long history of agriculture and a geophysical, economic, social and political setting that provides a distinctive context for understanding farmer motivation. From the island nature to the unfriendly boreal climate to the rocky and swampy lands (Environment Canada, 2013; Government of Newfoundland and Labrador, 2016; Natural Resources Canada, 2013), the province's physical characteristics have influenced agricultural activities throughout its history. Politically, the frequently changing government policy environment, roving between support of commercial versus supplementary agriculture (Cadigan, 1998), has had an impact on the agricultural sector (see Chapter 3). Cultural attachments to fisheries, supplemented with agriculture, and the race to modernize in line with Canada in the 20th century (Natural Resources Canada, NL., 2004) are also a few of the contextual factors which have influenced agriculture and farming in the province, impacting how the society views one of world's oldest occupations (Snir et. al., 2015). This thesis builds on the unique setting of the province to assess the motivation of people in agriculture at a time when there appears to be general lack of interest in farming, and yet an explosion of interest in food and local food.

The purpose of this chapter is to describe what motivates farmers to engage in agriculture, as a way to describe the attraction of people into the sector. The chapter argues

that, even though the need for competence, autonomy, and relatedness are important determinants in the decision to engage in agriculture, careful consideration must be given to the specifics of these needs to better understand how they influence people's decisions to farm. Also, the mere presence of interest toward an act may not be enough to get a person engaged in it and triggering factors may be needed to move that desire into an action. To advance these arguments, two themes are emphasized in this chapter: 1) general motivations to engage in farming; and 2) trigger factors that got farmers started. The general motivations of farmers describe the direct case of what makes a person be a farmer and the broad interest that creates the desire to farm. Motivation to start explains specific experiences that turned the desire into an action or triggered the interest to start farming. Overall, these themes are nested into a general discussion of farmer attraction through the lens of self-determination theory. Independence and freedom are explicitly defined and differentiated from volition, and how all explain the need for autonomy is highlighted. Also, reference is made to how related factors including belonging to a system and a place influence the decision to farm. The role of policy actions, occupational mobility, coping strategy and availability of an input like land is highlighted. Also, how the absence of certain needed elements – for example organic products – or a problem in society can help create interest to farm or turn that into an action is also discussed. The experiences and stories of farmers are used to show how these contextual factors interplay to influence motivations in agriculture.

4.2 “Farming is my thing...”: General Motivations of Farmers

Just like the concept of motivation, and what gets an individual into an action, farming, as an occupation, a livelihood, a job or however one views it, requires some level of decision making (Mishra et al., 2016; Rashid, Islam, & Quamruzzaman, 2016). Based on one of the tenets of self-determination theory (Deci & Ryan, 1991; 2008; Ryan & Deci, 2017), the decision to farm can be controlled – an action done to satisfy an external purpose, or autonomous – an act done out of one’s own internal satisfaction. Also, the decision to farm, like any human action, can be influenced by the desire to satisfy the basic psychological need for competence (the ability to do an act well), autonomy (ability to control one’s own life and make choices) or relatedness (connection to something outside of the self). For farmers in Newfoundland, the question of how various factors influence their decision to farm reveals findings that enrich motivation theory, confirming and explaining elements of self-determination and also shed light on some of its propositions. The role of the need for competence, autonomy, and relatedness (see Appendix I) on being a farmer in Newfoundland and Labrador manifested as farmers shared how those have formed their experiences.

Ryan and Deci (2000) argue that people's conviction of their abilities can influence their decision to engage in action. If an individual knows they can do something, they are more likely to have the drive to engage in that action (Deci et al., 2017; Ryan, 2017). This research demonstrates that farmers are motivated by the desire to satisfy the need for competence -the feeling that they can do what they are doing well. For most farmers, farming is ‘their thing’ because they recognize their expertise and their successes with their

work: “You got to know something about farming, you just got to. Not everybody can take some seed into sand and make some good soil and grow crops successfully” (Farm 01). This analogy speaks to how farmers view their abilities to engage in their work. For most respondents, being competent at their work gives them a good feeling that they are in the right work, as also argued by Morais et al. (2018). Among all farmers, feeling of competence was extremely important to their decision to farm and continue farming (see Appendix I). One may not take up farming if he/she cannot do it, or else they may give up on the way, farmers argued. The competence of farmers is derived from different sources: some gained theirs from formal education or training in agriculture (Dodd, 2012), while the majority learned to farm from other informal sources (Hamill, 2012), including self-learning on the internet, trial and error or experiences with family during childhood (Cummins, 2009; Matheson, 2017) or engagement with experienced farmers. Farmers gaining their competence through experiences during childhood is not uncommon (Cummins, 2009), especially in the Global North (Graeub, Chappell, Wittman, Ledermann, Kerr, & Gemmill-Herren, 2016), and Canada in particular (Cummins, 2009) where, there is a movement towards family enterprises in agriculture (Statistics Canada, 2017). The fact that many farmers got their competence through informal sources highlights another theme, relatedness, an important motivating proposition in self-determination theory (Deci & Ryan, 2012; Ryan & Deci, 2000a; 2000b). Relatedness highlights how the desire to be part of a larger system influence decision to act in a particular way.

The proponents of self-determination theory (Ryan & Deci, 1991; Ryan & Deci, 2000b; 2016) have postulated that an individual gains motivation to embark on an action through interaction with the social environment, from which many factors, including socio-

economic, natural, and cultural, interplay to create a drive. As the individual desire to be connected to these external features, they will engage in acts that lead to achieving such an aim. Specific responses from farmers aligned to the satisfaction of the need to be associated or belong to these external factors and the role of that in influencing the decision to farm:

[..] It (external environment) is necessary. Of course, it's vital I mean, I want to feel that I am part of something, part of an ecosystem, part of the neighbourhood. It's vital. I actually don't want to be separate from the world around me, and I don't want to be separate from the people around me. I don't want to be separate from my family. I don't want to leave 10 hours a day and go and work somewhere else and when I come back here. I want my family around me, I want my community around me, I want my animals around me. I want to be a part of it all, and I don't control it and I am not going to pretend to be in good control. But, I do want to be a part of it. (Farm 10)

The quote expresses the need for relatedness and how it influences the decision to farm. The desire to be part of a system, not to be disconnected from an important environment (Ryan & Deci, 2016), as noted by the respondent, confirms how the need to be part of a larger ecosystem influences human actions, for instance, farmers' choice of occupation. Of importance, also, is the attachment to family and the need to feel relevant to a community. The desire and need to be part of these external elements (Deci & Ryan, 2012; Ryan & Deci, 2016) are important to many farmers who have had their lives shaped and directed by such forces into internalizing the decision to farm. For some, they farm to be connected to the end purpose of farming, as a respondent noted that: "I like to do things that have a purpose, that has an end purpose [...] Vegetables are something that we (humans) need to live. So, for that reason, it was more important to me" (Farm 07). For this respondent, farming is not personal, but associated with a larger purpose which the activity serves. The larger purpose, in this case, speaks to feeding other people and conservation of the environment (Maybery, Crase, & Gullifer, 2005), as the respondent explained further.

The proclamation of the respondent confirms the assertion that people's behaviours can be influenced by the end purpose of their activity (see Hamari, Sjöklint, & Ukkonen, 2016; Kollmuss & Agyeman, 2002). Farming for its end purpose explains the role of the values attached to an action and why people engage in it. While being a farmer is a matter of social values and connection to people, surprisingly, that is not always the case.

Farmers who do not see such connections to an external environment were rare, but they had their own reasons. To these people, engaging in agriculture was a matter of 'do or die' — an occupation they choose because they were left with nothing else to do, hence, a last resort as earlier noted by Mukembo, Edwards, Ramsey, and Henneberry, (2014). Others who expressed that farming made them occasionally connected to people attributed it to their experiences with the public, which were not always rosy, making them feel dejected by people's actions, including family members who never appreciated their decision to be farmers. Equally, the fact that people got discouraged by the family was confirmed by some current farmers, who argued that farming was never something they wished for their children, largely attributing this to “hard work with no money” (Farm 06). This finding confirms the idea that social contextual factors (Deci & Ryan, 2012), including parents and peers, have the tendency of fostering and thwarting motivation (Deci & Ryan, 2012; Lavergne, Sharp, Pelletier, & Holtby, 2010). Additionally, farmers not wanting their children to farm raise questions about the role of generational transfers in facilitating farmer attraction and could change the face of farm succession in the near future.

Associated to the need to be part of something and to belong, and how that generates interest in farmers, are also the themes of the sense of place, and the preservation of societal values as well as repaying societal trust. As a participant noted, in relation to the decision

to enter agriculture in 1979:

My wife and I, we had a child at the time, and we were trying to pick out whether we will stay in Newfoundland. I did have a couple of university degrees and she had third college courses, and both of us could have done better financially doing something else. And we made the conscious decision that we weren't going to leave Newfoundland. But everybody do that [sic]. If everybody who can get a good job leaves, then Newfoundland will sink. And if we were going to repay society for having educated us and brought us to where we could, and with a good income, and the skills necessary to create jobs, much better to stay and try and do something. We also loved rural Newfoundland, we didn't love living in cities. And bringing those together, it was something like charming, an obvious need. And seeing ourselves living in rural Newfoundland and contributing to the rural economy which desperately needed contributing to. And promote the values of the rural settings, and to live a better life and a more productive one, and a more human one and do something that was really worth doing [...]. (Farm 10)

The quote speaks to: 1) the sense of place and belonging; 2) responsibility to society; and 3) promotion of social values. These are relevant to understanding the motivation of farmers, as well as informing policy on attraction and retention. The sense of place and belonging as expressed by the respondent was echoed by many farmers operating in rural Newfoundland, who explained that their love of the place was the key in motivating them to stay and engage in agriculture. This finding conveys the strong sense of place and belongness in rural areas (Flora, 2018; Thulemark, 2017) including Newfoundland and Labrador as postulated by Markey, Breen, Vodden, and Daniels (2015). The role of the sense of place or attachment to a place in informing attitudes and behaviours is also emphasized by Cheng and Wu (2015); and Fernando and Cooley (2016). Linked to this finding is the role of the duty to society and repaying their investment. Farmers were motivated by the social investment in them which they wished to repay, arguing that farming was the only undertaking they felt could serve that purpose, and contribute to growing the province. This finding can help inform the policies on attraction and retention

by directing efforts that build on the strength of the place. How current policies incorporate such assets is worth considering.

Beyond the social relatedness, economic motives have also been heavily cited in the literature as a behaviour influencing factor (see Block & Landgraf, 2016; Vik & McElwee, 2011). Vik and McElwee (2011) explain that one cannot discount the role of money in influencing human action, and this includes decisions on choice of occupation. The role of money in motivating human actions is also explained by Ryan (2016) and Ryan and Deci (2005) from the perspective of how expected rewards control behaviour. People are likely to engage in an action as a result of an expected external reward, and farming is not an exception to the economics of human actions. Monetary reward and its tendencies to impact on occupation choice of individuals (Block & Landgraf, 2016) was also mentioned by respondents. “That’s [money] very important. You got to make money. You really do” (Farm 02). The respondent acknowledged the importance of money in being a farmer. However, to many farmers, it is a necessary reality that never comes to be, that only exist by its necessity, but not as a reason for their choices and at worst, negatively affect the decision to be in agriculture:

Well, it’s [money] of negative importance. Because, like I said, it’s like it cost you, it cost me. I farm because I want to farm. It’s been much better if I had taken my wages from teaching and put them in the bank. So far as money go, so how important is money? [...] It’s a tool to live a life. If I don’t have the tools to live a life, I have to earn it somewhere. So, I go to earn it somewhere. It’s of negative importance. It’s needed in order to be able to live a life. (Farm 01)

Respondents acknowledged economic incentives as a motivating factor but added their role in frustrating the desire in farming as well. Farmers attributing money as a negative influence is largely related to the unprofitable nature of the profession, albeit from

respondents' description. "It is virtually impossible to have a life based on farming without a supplementary activity", Farm 05 argued. The claim explains why the majority of farmers in Canada work off-farm as well (Statistics Canada, 2017). Economic and income diversification may not be peculiar to agriculture, however, the seasonal nature of the farming, among other sector-specific characteristics, may explain why it is common in the industry (Ghimire, Huang, & Shrestha, 2014; Sultana, Hossain, & Islam, 2015), especially in the developing world (see Mamgain, 2016; Mbonile, 2018). The finding also highlights the important role multiple economic activities and the diversification of income sources play as a coping strategy to individuals (Sultana, Hossain, & Islam, 2015). Policies to attract people into agriculture must look beyond the farm when dealing with farmers. Looking beyond the farm can also mean digging deep into the individual reasons and what motivates the farmer. That is not to say farming in the province cannot be profitable: some farmers make their living out of the occupation. These farmers believed one can overcome the unprofitability by being innovative, especially with marketing of products. However, for most farmers, much their motivation to farm is found well within themselves, and the desire to be free from the bondage of society, or family or other things they deem thwarting, which leads to the need for autonomy.

Ryan and Deci (2016) and Mahoney, Gucciardi, Gordon, and Ntoumanis (2016), in describing how individuals get motivated, argued that the desire to be free from external influences and to make personal choices, and the overall need for autonomy influences human behaviour. From the agricultural perspective, research has shown that the desire to be one's own boss (Rural and Regional Committee, Australia 2012:17; Sutherland, 2015), be independent (Morais, Borges, & Binotto, 2018) and enjoy freedom (Agriculture and

Agri-Food Canada, 2013; Sutherland, 2015) are important in people's decision to farm. These elements were supported by the interviews with detailed experiences. To some farmers, being their own boss was an important motivating factor for the choice of profession. Farmers saw the act of owning a farm and having control over it, like an entrepreneur, as a motivation. Conversely, though Morais et al. (2018) argue that farming provides independence and freedom, an important observation was made when farmers were asked to verify these variables:

No, it don't [farming don't give me independence] [sic]. Arrhmmm you know, every year, for last five years, myself and my wife take a vacation and go south, go to Cuba or Jamaica, go to a cruise of the Caribbean. Remember what I said, the last five years. When I was 30 years old, that was only a dream for ever going to south or anything like that. So, being a farmer today, yes, I do have some independence, I don't have any freedom. Freedom is probably one of the things I will miss the most. (Farm 01)

Another respondent made an important distinction between freedom and independence, noting how one can exist without the other:

[..]Well, it [farming] makes me feel that this is my farm and I can do what I want to or need to with it. So, in that sense it makes me feel like ok that I can do what I want to do. And on the other hand, it makes me realize how independent I am not, just how dependent I am on something as trivial as the weather or the thought of the weather station. When I phone up Environment Canada often and they give us the frost warning and I say, how realistic was [sic] the chances? [...] Freedom in the sense of doing what I want to do. I don't know if that makes sense to you. I think there was someone that said that nobody is free, we are all bound in chains. You got to do the right things for those plants else they just not gonna produce. I couldn't say I want you to produce, I can dream all sorts of crazy things, but they won't produce unless I work in line with the nature of the beast or the nature of the plant. I am a social animal and I have to work with other people. I am dependent on a wife, a worker, a weatherman or government or...please help me here. So, that's what I mean in the sense that yes, I can think I am independent and I can do what I want but my want has to be the want of the plants for whatever else. And I have to learn what they need, to do that. So, I am bound in chains. But it is a good productive work and it's enjoyable and it keeps

you sane. (Farm 10)

How independence and freedom influence the decision to be farmers is adequately captured in the extracts. As the quotes also show, the interpretations of freedom and independence differ and equally translate variedly for people. But independence and freedom are still important reasons why some are farmers, albeit not in a uniform scenario across the board. For some, they barely see themselves as enjoying these features which other researchers (for example, Mukembo et al., 2014; Morais et al., 2018; Hamill, 2012) have attributed to farming. The findings of this research, therefore, partly refute the idea that farming brings independence and freedom, albeit in the context of Newfoundland and Labrador. These findings call into question how we define such terms. Context-specific definitions must be considered going forward. However, most farmers see themselves as autonomous, arguing that they make their own decisions, choices and control their own lives. These findings are important in understanding the distinction between autonomy and independence (Chirkov, Ryan, Kim, & Kaplan, 2003) and provide an explanation to why recent descriptions have clearly argued against interpreting autonomy as independence and detachment, but to see it as “volition, choice, and concurrence” (Deci et al., 2017: 28; Chirkov, et al., 2003). Even though the study partly discounts the role of independence and freedom as associated factors to farming, at least in the case of Newfoundland and Labrador, other elements associated with farming were cited as motivations to farm. For example, the lifestyle of farming and its associated ability to make one’s own decisions and plan one's personal life appear to be pull factors to many farmers. The ability to take control of one’s own life, as the study has shown, speaks to the need for autonomy when interpreted as volition as argued by Deci et al., (2017) and Chirkov, et al., 2003. The finding

that people do not see themselves as independent even when they have control over decisions supports the notion that autonomy should be interpreted as volition rather than independence (Deci et al., 2017). The finding, therefore, advances the tenets of self-determination theory and provides insights for interpretations of the concepts in future research.

4.3 Motivations to Start Farming: Triggers

“The motivation was always there, but what got me started was [...]” (Farm 09)

The above extract from an interview reveals another theoretical observation in the motivation of farmers. Not only are farmers, from the quote, attesting that something motivated them to farm, but it further brings forth the existence of a starting point, and triggering elements in human actions. The context, therefore, shows that even with the existence of a general inclination towards an action, there is a need for a trigger: an event, a process or act that turns the desire into an action. This theoretical argument also subtly reflects in motivation theories which emphasize the role of intention (see Ajzen, 1991; 2008; Schunk & Hunk, 2012), but it goes beyond that to include the point when intention is turned into an action. For many farmers, the very factors that served as their general motivation were good enough to trigger their interest and attract them into farming. However, beyond these factors, other experiences were equally identified as drives to agriculture, to start farming:

... Well, I guess what got me into farming was (pause) when I was a teenager I did a project with 4-H⁶ and the project was gardening back then. And I really was interested in that. I really liked the idea of taking

⁶ 4-H is a youth-based volunteer organization that is internationally operated. The program presents youth with a wide range of opportunities to enhance their personal development in different areas, including agriculture (See <https://4-h-canada.ca/>)

seed and growing a crop that you could eat. (Farm 01)

The quotation speaks to about three variables on motivation: 1) the role of hands-on experiences; 2) natural interest; and 3) internal satisfaction. People get attracted to farming as they come in contact with it, and this could be through family, education or other training activities. Cultivating the interest in farming through a program like 4-H, confirms the assertion by Connors (2013) that extra-curricular activities contribute to generating interest in agriculture among young people. The role of interventions is also highlighted, as a program is able to provide the triggers needed. Related to the finding, is the component of the hands-on experience. The role of these experiences in agriculture is a straightforward case of farming being a skill-based activity (Dodd, 2012; Hamil, 2012; Mwaura, 2012), and only people with the ability would be tempted to do it. People are also able to develop an interest in an activity as they get hands-on experience (Mwaura, 2012), and this speaks to nurturing competence towards an action. The idea of internal satisfaction- the regard for one's own well-being and happiness- as deduced from “growing something one could eat” was mentioned by some farmers as well. Others made references to specific personal needs they wanted to satisfy – for example, to grow their own organic products. The role of competence as was mentioned as a general motivation, is also evident in the experience revealed. As people get competent in a skill, there is a natural tendency to develop an interest towards it (Ryan & Deci, 2000a) and to see themselves as part of it. Feeling competent through hands-on experience and cultivating interest through a program like 4-H confirms the theoretical process described by Deci and Ryan (2012) that people are able to internalize external factors to form intrinsic motives. This may partly explain why capacity building can play a role not only in making

people capable and competent as stipulated by Dodd (2012), but also generating interest, and turning that into action.

Another important element which could be described as trigger was the role of the family, friends and the social environment. Hamill (2012), in the study of students' motivations into agriculture related careers, revealed how parents influenced the vocation of their children. A similar argument is put forward by Block and Landgraf (2016), on family and personal efficacy development of the individual, as well as by Haller (1959) who emphasized the role of the primary group support system, by Mukembo et al., (2014) who explained the role of early life experiences in informing future direction; and McIlveen (2015) on how the social environment influences perceptions about agriculture. Even though family and friends, and the broader social environment is largely seen as an enabler of motivation, the revelations of this research points to a hidden triggering effect. The presence of such a support system was not only relevant in motivating farmers as shown earlier in the chapter, through its role in competence building, but also in triggering the initial thought, and in turning the interest into an action:

[..]Well, it was in the family actually. My grandfather started the farm. He was farming...arrhmm and just after he passed away I was fishing at that time. And the moratorium came in, Cod Moratorium and I needed something to do. And he passed away a few years before that. And he was always encouraging me to....you know, the land was there, right? So, I was looking for something to do, so I started pretty small and it just grew from there. Basically, it was in the family anyway, the farming.
(Farm 05)

The quotation speaks to different triggers to enter agriculture. The role of family is, however, clearly noted as the respondent highlights the encouragement the grandfather always gave: go start farming. Another interesting finding related to family is the role of

spouses in motivating a person into farming. The role of spouses in getting people into farming was observed in both ways, as the study recorded women influencing men and vice versa. Besides the role of the family in triggering interest, the quote also speaks to three other issues: 1) coping strategy; 2) employment mobility; and 3) role of land availability in farmer attraction. The respondents attested to starting farming after the Cod Moratorium came into effect, and the old job of fishing was no more. This not only shows that farming was a second-best option to cope with an unwanted situation, but it also reveals how people can move from one occupation to another through employment mobility. The case of employment mobility in agriculture subtly reflects coping with job losses, as Sutherland (2015) found, in the case of *ex novo* new entrants in Europe. These findings could inform decisions on who to target with interventions to attract people into farming. This is because, even when people are engaged in other activities (for example-fishing), they could harbour an inherent interest in farming which can be targeted by policy as a trigger.

Related to how interventions could target people, even actively engaged in other occupations, is also the role of land in farmer attraction and retention as referred to by the respondent. For many farmers "the land was here, and the farm was here" (Farm 08) and that was the starting point. Other farmers confirmed this as they were motivated by the gift of land, or an old family land being made available at a particular time. The land is the most important input for agriculture (AAFC, 2014; Sutherland, 2015), and one of the most challenging to people interested in farming as well (Sippel, Larder, & Lawrence, 2017) including people in Newfoundland and Labrador (Doyle, 2014; Quinlan, 2012). The finding, therefore, affirms the role of land in farming: it is not just an important input,

but its availability can trigger an action. The theme of land is further explored in the next chapter where motivation thwarting is introduced.

The discussion thus far has emphasized the presence of elements and how they influence the decision to farm. However, the study has revealed that, while the presence of certain factors could influence a person to start farming, the absence of other elements also counts. The absence of an important element or the identification of a gap also plays a role in triggering the interest, and turning that into an action to farm:

[..] I had the desire for a very long time ago for working for myself. I had just a big yard where I started but moving here gave me a much bigger area. I saw enough customers and not very much competition. (Farm 11)

The quote explains how a market void created a farmer, how a person can be motivated by a problem or an opportunity. This was not an isolated case because other respondents also mentioned how the presence of an unattended market led them to start farming. Another aspect to ‘a void’ creating a farmer was noted when other respondents decided to farm because of a lack of high quality foods – for example, organic products – in Newfoundland and Labrador. To these farmers, the desire to fix something viewed as a problem was important in getting them started with farming. In all of these cases, the farmers identified such gaps through interactions with other people or after targeted market research. Making up for a gap as a motivation triggering factor was present not just at the societal level, but a case of seeking supplementary life for personal self-sufficiency “...it [farming] looked at being supplementary income. For us, the farming side of it so [...], we were interested in sustainable living” (Farm 02). This explains how the search for a supplementary activity, a complementary life aimed at sustainable living (for financial sustainability) can create farmers. Farming as a supplementary income activity as revealed

by the study, is not new to the province, as this is rooted in the history of the province. An early history of the province has pointed to periods of supplementary farming, where fishers complemented their activities with a backyard garden, and in certain times, doing so through deliberate government support systems (Cadigan, 1998). The idea of problem-induced motivation, as has been discussed, is relevant to the further development of motivation theory. This is because psychological theory has paid little, if any, attention to this element. Such a finding shows that motivation theory must look beyond how people engage in acts by the presence of certain factors to further understand how the non-existence of a needed element could as well contribute to an action.

4.4 Conclusion

The chapter has drawn on self-determination theory to understand the decision to farm in Newfoundland and Labrador. As argued in the introduction, the study has shown that factors such as autonomy (farming to take control of ones' own life and make choices); competence (farming because one has the ability to do so and believes in the work); and relatedness (farming to serve the community, to repay society, to get connected with family) all confer the idea of being a farmer to achieve self-determination. How each need is satisfied to influence the decision to farm varies, and farmers attach relative importance to these basic psychological needs. The study has also shown that satisfaction of these three psychological needs interplays to create farmers. This is achieved through their roles in enabling the processes that motivate people into agriculture, and also trigger the interest that sets intention into motion. Likewise, farming is more autonomously motivated — done out of one's own will for internal satisfaction — than controlled-where an individual is led

into an act for external reasons. Hence, people enter agriculture out of their own desire to self-determine and for personal reasons. Even when the motives are external or extrinsic, like in the case of feeding society, they are identified and internalized (Deci & Ryan, 2012) to be intrinsically motivated to farm. The idea that autonomous behaviours lead to wellbeing (Deci, et al., 2017) is evident, as farmers do enjoy their work, and the lifestyle associated with their occupation.

The study has also shown that even when general motivation exists through experiences, triggers may be needed to turn that into action. These triggers, which also enable action, can include family advice, a manifested problem or opportunity in society, or programs that give hands-on experience. The intersection point between general motivation and triggering is where policy can better manifest, to contribute to the attraction of farmers. When people harbour interest, policy interventions can be employed to influence human actions, i.e. to trigger the interest to set the intention of farming into motion. The government and other institutions can impact on farmer attraction, through targeted interventions which cultivate the inner need of self-determination. In terms of theory, the research shows that blanket examination of motivation propositions can hide important insights. This is backed by how independence and freedom are differentiated, and how they both differ from volition. The non-existence or lack of certain elements on motivating people, as advanced in this chapter, also expand motivation theory and open research space for further development.

Chapter 5: Retention in Agriculture: Motivation Sustenance/Perseverance among Farmers in Newfoundland and Labrador

5.1 Introduction

I went from an initial investment of \$5700 a day, to a farm that is worth \$1.6 million. It was never ever easy, believe me. And somebody with a weaker will than mine would have given up. But I don't farm because it's an occupation, I don't farm because of the money, I farm because it was always something that I wanted to do. (Farm 01)

The quote speaks to two important elements about the life of a farmer: 1) the existence of hindrances which give a thought of quitting; and 2) a need for sustaining and reinforcement of interest (Deci & Ryan, 2012; Rocchi, Pelletier, Cheung, Baxter, & Beaudry, 2017; Schubk & Hunk, 2012). These two themes are important in advancing motivation theory: a behaviour explaining concept that is applied to understand decision making and how individuals end up doing what they do (Ajzen, 1991; 2008; Deci & Ryan, 1991; Sherman, Bird, Powers, Rowe, & Legault, 2016) and to sustain that (Shunk & Usher, 2012). It is equally important in understanding retention-what keeps people continuously engaged in an activity or not. As many motivational theorists have argued, human behaviour is the output of interwoven factors which ignite interest and create the drive to execute such actions (Deci & Ryan, 2012; Ryan & Deci, 2000; Silva, Marques, & Teixeira, 2014). Motivations, therefore, provide a lens to understand work-related behaviours and its theories have been applied in many occupations (see Deci, Olafsen, & Ryan, 2017) including agriculture. In agriculture, motivations have been used to explain farmer behaviours (see Shawm & Glen, 2010; Mishra, Mishra, & Jabbar, 2016; Morais, Borges, & Binotto, 2018; Moumouni & Streiffeler, 2010; Shawn & Glen, 2010). In agriculture and beyond, the focus of understanding human actions has been general, ultimately answering the question: why do people do what they do? However, a critical look at motivation reveals

a missing link, in relation to why do people continue to act in the midst of adversities? This question is subtly reflected in motivation theories including self-determination theory: through the proposition of reinforcement of desire and interest (Deci & Ryan, 2012). However, until now, empirical studies of human behaviour have broadly discussed motivation, with little recourse to advance this important component of the concept: perseverance and sustaining an action. The current chapter, therefore, aims to advance motivation theory by examining the reinforcement and sustaining of an act (farming in this case) in the face of adversities — desire thwarting elements (Deci & Ryan, 2012) using farmer experiences from Newfoundland and Labrador.

The agricultural industry in Newfoundland is burdened with many challenges which can be described as motivation-thwarting elements. These challenges make the industry underdeveloped, at least when compared to other parts of Canada (Food First, NL 2016; Carter & Temple, 2011; Quinlin, 2012). In the midst of the numerous interest-thwarting and frustrating elements, the sector is experiencing a demographic challenge: ageing farmer populations, a declining number of farmers, and farms, which is among the most significant decrease in any part of Canada (see Section 1.2). Part of the problem can be attributed to the amalgamation of certain farms (Carter & Temple, 2011), loss of interest and desire on the part of farmers (Quinlin, 2012) and exits at the end. Taking clues from this situation, the chapter examines how people are retained using the motivational experiences of current farmers.

The pages that follow examine the factors that influence the decisions to continue to be a farmer in the province. It argues that farmers' motivations are challenged by factors

both within the reach of systemic policy solutions, and others which may be beyond individual and institutional control. As well, there are general problems and specific experiences which thwart interest in agriculture. However, farmers are able to sustain their interest by relying on internal mechanisms and external environmental factors. How to keep the farmer requires more than internal satisfaction and determination, and the role of a functional social and institutional system including consumers, government actions, and other farmers in retention is emphasized. How natural, social, and economic conditions contribute to retention of people in agriculture, via their roles in influencing human motivation is discussed as well. These themes are put forward by employing the concept of motivation thwarting/frustrating (Deci et al., 2017; Morais et al., 2018; Rocchi, et al., 2017) and sustenance/reinforcement (Rocchi, et al., 2017; Ryan & Deci, 2002) in order to advance theory, and to understand the retention of farmers in Newfoundland and Labrador.

5.2 Motivation Thwarting: The Challenge to Retaining Farmers

This research has revealed that the thought of quitting is an everyday act in farming in Newfoundland and Labrador. It is a daily routine that greets farmers once they remember the challenging experiences of their occupation. The everyday adversities farmers go through are well documented, and farming in the present age is beleaguered with many problems (Mukembo, Edwards, Ramsey, & Henneberry, 2014; Noorani, 2015; Proctor & Lucchesi, 2012; Tafere, & Woldehanna, 2012; Tadele, & Gella, 2012) and Newfoundland and Labrador is no exception to this. In Newfoundland and Labrador, several challenges to the development of agriculture, and farmers, in particular, are

evident in the literature (see Catto, 2010; Department of Natural Resources, NL, 2004; Department of Fisheries, Forestry, and Agrifoods, NL, 2017; Quilin, 2012) and further emphasised by this research. The motivations of farmers are hindered by these challenges, which are found both within and outside the realms of agriculture and can be environmental or systemic. Environmental challenges are natural and may be difficult to solve through individual and institutional efforts. Careful adaptation of technologies may, however, reduce their impact in thwarting interest. For systemic issues, careful considerations of policy and directed action by actors can help eliminate their impacts. Natural factors, including the climatic and soil conditions of the province have been cited by many writers as the key factors hindering agriculture in Newfoundland and Labrador (Catto, 2010; Quilin, 2012), as were revealed by the interviews as well:

Our biggest challenge is our short growing season and arrhmm it depends on where you plan to put your farm. (Farm 02)

With the challenge, I will say the weather is the biggest challenge. (Farm 11)

Both field and greenhouse farmers described the climate and weather conditions of the province as their biggest hindrance. For field farmers, the shortness of the growing season (Catto, 2010) has limited the kind of products that can be grown, while the unpredictability of climatic factors also causes problems with crop growth (Department of Natural Resources, Newfoundland and Labrador, 2004). Poor summer weather, characterized by frequent rain, limited sunshine and temperatures well below normal agricultural requirements, can have negative impacts on plants (for example, delayed maturing of crops and with poor yield and quality) (Catto, 2010). Aside from the bad

climatic conditions, there are other natural factors which hinder agricultural development, and farmer interest: “We don’t have the best soils.” (Farm 08), professed a respondent, when asked what challenges negatively affect the desire to farm. The Department of Natural Resources, Newfoundland and Labrador (2004) confirms this issue when it stated that agricultural development in the province has been hampered by the nature of soil deposits which are shallow and stony. The shallow and stony areas, which are more dominant in the province, hinder various agricultural activities.

The earlier points relating to weather and poor soils are environmental and may be beyond the realms of individual and policy solutions to completely undo them; they can however be improved with adequate interventions, for example, improved technologies that require minimal use of land (vertical farming) or growing under controlled conditions (greenhouses). Conversely, there are other challenges which are systemic: for instance, access to land, markets, and so on. These challenges are well within the solution of policy. For many farmers, getting good land where the soils are ready for agriculture is a big challenge:

You have seen this province how it looks, 90% of the population is over there [Avalon], the good land is over there [West Coast]: eight hours, eight hours. That’s ok, that’s what logistics can take care of that [...]. (Farm 01)

The linkage between the choice of where to farm and where land is available is clearly articulated in the quote above. To many farmers, it is not just about land availability, but, access in relation to settlements:

Our main issue is the location within proximity to major centres. And within urban regions and planning, you get the conflict within areas. Lands not used for some time or maybe has been taken out of agricultural zones or in municipalities and people putting houses on it. People want land in close proximity. So, the interest on the Avalon, I like a piece of land, how

far away from where I live. (Official 6, Interview 5)

This finding speaks to not just availability, but access to land. Access to land is a systemic issue which can be addressed through policy (see Davy, 2016; Quinlin, 2012). The idea of policy solution is echoed as the respondent pointed to ‘our ability to address the problem logistically’. Also, farmers wanting to have land close to where they live is a matter of policy since they are not allowed to put structures on leased lands until after five years of operations. The issue of competition for land, and how that plays into making access to land difficult for farmers was also a common problem acknowledged by farmers and officials alike. These land-related problems have been a major concern for agriculture, and despite the land-based challenges, Newfoundland and Labrador remains among the few places in North America where new lands are still currently cleared for agricultural purposes (Department of Natural Resources, NL, 2004; Department of Fisheries, Forestry, and Agrifoods, NL, 2017). This presence of more lands, despite farmers noting same as a challenge shows that the problem is lack of access rather than availability. Hence, efforts towards solving problems of land should be focused on removing barriers to access rather than providing more land. The idea that difficulty to access land is a motivating thwarting element relates to how its availability can attract people into agriculture, as argued in the preceding chapter.

In addition, the research has revealed how policy interventions: an issue which forcefully emerges in the work of Lavergne, Sharp, Pelletier, and Holtby (2010) can frustrate interest. In their issue, they noted that people's perception of government actions influences their pro-environmental behaviours. And according to Quillan (2012), one of the key challenges to building agricultural capacity in Newfoundland and Labrador is the

large-scale biased government policies, in what some farmers referred to as corporate agenda:

They put their trust in people in supply chain economics systems to create supply chains. And well, Newfoundland, Newfoundland is a cooperate agenda. All resources are run through the corporate agenda. It's a colonial view of people and their landscape and resources where it's not efficient having people living on top of the resources. It's better to have corporations making monies out of it. (Farm 09)

The idea of corporate agenda, and how it discriminates against small farmers was highlighted by many other respondents. Farmers expressed frustration seeking support from government intervention, and for some, inability to access help had them frustrated and thinking of quitting, and not ready to deal with officials anymore (Arguments expanded in Chapter 6). The lack of governmental support, especially for small-scale agriculture has some historical precedent: Cadigan (1998) argued that deliberate attempts to modernize quickly after Newfoundland joined Canada led to that approach. Cadigan noted that the provincial government's desire to follow in the footsteps of the Canadian supply side management model influenced the policy towards large-scale industrial farming.

Another issue noted by respondents was human resources development problems. Quinlan (2012) argued that the lack of infrastructure for developing agricultural human resources is a barrier to the development of the industry in Newfoundland. Beginner farmers confirmed this claim, noting that, they almost certainly must move out of the province to seek agricultural knowledge, citing examples of how moving out can sometimes lead to people not returning. But the issue of human resource development is not only confined to the knowledge of the farmer; the entire industry faces challenges of having the needed labour as well, as a respondent noted: "Greatest challenge? [...]. Labour

is definitely one of the biggest challenges. Getting reliable motivated labour" (Farm 11). However, some farmers argued that the current efforts in the province seeking to connect foreign labour to farmers could help alleviate the situation, at least to some extent.

Furthermore, challenges in marketing of produce also serve as impediments to the development of the sector and contribute to thwarting farmers' interest to stay: "Getting access to market is another one, it's pretty difficult. Like for farmer's market, they get a lot of applications each year....." (Farm 11). The inability to effectively market farm products makes farmers reluctant to produce more (Njeru & Mwangi, 2015), and in some instances, to continue to farm. The finding that challenges in marketing of products hinder farmers' interest in the province directly speaks to how systemic issues can hinder human behavior. The fact that the province produces only 10 percent of its farm produce (Food First, 2015; 2016) calls into question why farmers speak to market as an issue. Many farmers, however, attributed this challenge to the difficulties in combining farming activities and marketing. Some therefore called for a collective marketing strategy that would take off that burden from the farmer. The issue of marketing highlights the theme of systemic challenges that can be solved through effective planning and policy.

There are many other systemic issues that could be highlighted; but what is of concern to this research is the crucial role of these challenges in impacting people's interest to getting into agriculture or remaining in the sector. Beyond these challenges, there are other adversities worth differentiating, and which are particular to farmers, such as physical injuries, debts, and so on. These challenges manifest in the day to day and case-specific experiences. The challenges impact on the desire to stay in agriculture by frustrating

interest. Respondents shared these experiences, arguing how such factors impacted their motivations. As an interviewee noted, in the case of physical experiences:

Ohhh so many. We... well I was injured, and we went to... I guess it all happened together. I got injured and then we lost our representatives and we had a couple of rough years and because I was under recovery from my injury and well because my husband had to work outside the farm to have stable income because we still had to pay the bill, right? And arhmm so then we were not sure what we're going to do, if I could get back from my injury and pick things up. (Farm 08)

Inherent in the quotation above is the physicality of farming, a situation which many farmers attested to, and has been long-established by the literature (see Browning, Truszczynska, Reed, & McKnight, 1998; Donham & Thelin, 2016). The physicality of farming and the hazard of injuries that may arise are adversities which some farmers find hindering. The issue of physicality was also raised from the perspective of hard work involved in farming, a situation some farmers described as stressful: “[...] think it’s stressful. It’s stressful in trying to run a farm and market the product at the same time. It became too much” (Farm 01). Majority of farmers described their work as stressful (Matheson, 2017) and explained that they usually think of quitting after a day of hard work. However, an interesting observation was made when another farmer questioned this. According to the farmer, farming is long hours labour work but not hard work as it used to be, arguing that technological advancements which provide the ability to remotely control farms had worked to change the face of agriculture. Whatever the case may be, farm stress and injuries are not uncommon, and some studies have been conducted to understand their various dimensions in different context (see Gross, Young, Ramirez, Leinenkugel, & Peek-Asa, 2015) including Canada (see DeWit, Pickett, Lawson, Dosman, & for the Saskatchewan Farm Injury Cohort Team, 2015). However, the

literature has been silent on how farm safety relates to the motivation of farmers, despite evidence of fatal injuries (Swanton, Young, & Peek-Asa, 2016), and other types of injuries which may make people unable to work further. The revelation that safety, and specifically farm injuries, plays a role in motivating farmers, albeit denting their drive, opens an issue area for further empirical investigation.

Another adversity mentioned by farmers were economic situations that hamper the progress of farms. And for the economics of farming, debts were the main issue mentioned:

[...] I have seen way back here, at the middle of the year, I will be 8-10,000 dollars short, go to the bank, borrow and cater for my debts, and start the spring with zero. I did not start off from zero: I started off with \$8,000 in debt from the previous year. Nobody does that, nobody stays in business on that or something like that model. (Farm 01)

Farm debt is a common issue among the farming community (Agriculture and Agri-Food Canada, 2010). Farmers usually run into debts due to low marginal profits (Matheson, 2017), coupled with extensive capital requirements and unpredictability of outputs (Agriculture and Agri-Food Canada, 2010; Tongs, 2008). For some farmers in the province, the situations they found themselves in debts and lacking the ability to pay debts, made them think of quitting. The issue of farm debt correlates with the challenge in accessing finance to support agricultural activities, especially for small farmers. Limited access to finance for agricultural purpose, as noted by farmers, is also argued out in the literature (see Government of Newfoundland and Labrador, 2016; 2017). The economic challenges have the potential to influence on the ability to sustain farms in the province, thereby implying that they could impact motivation. As a result, many farmers advised new entrants

to start on a small scale to ensure they do not incur with huge debts that will daunt their zeal:

Don't get over your head in the debt. That's the challenge that they have. No one wants to fund farms, but you got to be smart with it and a lot of farmers get so much into debt that they can't ride out of bad years. (Farm 02)

Though farm debts are economic situations, they have social traits which put farmers in situations they are unable to cater for themselves and their families. Linked to the social need, there were other retention frustrating factors revealed by the research. Farmers bemoaned the loss of a "farm community", a finding that establishes the need for relatedness among people in the agricultural industry:

The sad thing, I have seen a lot of farmers in my area retire. Sad side is some of them even pass away. Now it is gone. And what I found, I had a couple of friends that were farming, and then and the fathers died, and the fathers gave up. And I guess one of my biggest impediments, I had nobody else to talk to [...]. And like I said, the social aspect of the communication where I could phone one of my friends and say, by the way, there is a new variety of potatoes, they are calling that one [...], have you tried that? Are you gonna try that? Am I gonna try that? And he can phone me back next season and say how did you like that new variety? That was lost, and to me, that was an important thing to get lost. (Farm 05)

The quote speaks to the lack of social support for farming, and how that satisfies the need for relatedness. The farmer's assertion that losing their colleagues in the area was an important thing to be missing affirms the long-standing adage that humans are social animals. People thrive on living in communities that provide support systems, and to which they constantly wish to belong. The role of the social environment was also noted in Chapter 5, as primary group support and being part of a system. The finding adds a new dimension to its influence on the human action: support must not only be the family but can as well be just the existence of farmers in an area. Exodus as a problem by itself is

reinforcing the trend: such that, as people see others leaving, it hampers their motivation to continue. This emphasizes the need for agriculture agglomeration or collectivism (clustering). The idea of collectivism was apparent among all farmers, as they argued that they could only be successful if they work together as a team, rather than the current silo style. The finding is important for policymakers, because it speaks to the role the existing farmers can play in motivating others, and in keeping their colleagues in the sector. The specificity of this finding emphasizes why contextual factors are important in understanding human behaviour (Deci & Ryan, 2012). The theme of social support and the contextual implications of human behaviour are further explored in the next section when consumers' roles are introduced into the discussion. Whereas understanding challenges is important in decision making, the relevance to policy development for farmer attraction and retention cannot be underestimated. This is because, knowing what the problems are, it is important in making the right policy decisions and designing the right programs to motivate people to enter and stay in agriculture.

5.3 “That is my birth child, I cannot walk away”: Persevering in the Midst of Adversities

The discussion in the previous section established that farmers have a daunting task to keep doing what they do. So, to the farmer, perseverance is almost an inherent character a person must possess to be successful, for thoughts of quitting are as much a daily routine as taking a cup of coffee. That is not to say that farmers do not love their jobs; most respondents spoke fondly about their work, pointing to its lifestyle, life on the land, closeness to nature, and the social values attached. But even with all this fondness

about their job, a person surely needs an extra edge to be sustained in the midst of adversities. The idea of keeping the desire towards an act is integral to human behaviours and has been highlighted in motivation theories as sustaining and reinforcing interest (Deci & Ryan, 2012; Schunk & Usher, 2012). This research has shown that, in farming, sustaining factors are important to realize the output of motivation, that is to say, to turn human interest into an action over time.

Farming presents a unique case to understanding human behaviour, due to its structure: it is an activity that is embedded into a complex social and natural system, and as well needs to be carried over long-term, in some cases. People engaged in agriculture are able to internalize diverse social and environmental reasons to stay motivated, and to continue to work in the midst of adversities. From the perspective of intrinsic motivation, an important component of self-determination theory (Gagne & Deci, 2005), an intrinsically driven person sees the positives of an action, which translates into an internal satisfaction towards engaging in the act (Wang & Liang, 2015). This assertion is evident in how farmers view their day to day engagement, and their ability to stay in farming. As a farmer argued, the positivity attached to agriculture, by the individual engaged in it, and other factors reinforce and sustain a developed passion:

It's just the determination and sure will to succeed, really. I like it, I like doing it. It's very challenging and it's a challenge. Determination is a factor. You know, the general public perception, crop failures, weather conditions. There is a lot of things that you know. But you wonder why I am doing this, right? You, a positive thing happens, and you think how I make this bigger and better, right [...]. The key part of it. I do like the work, I don't hate it and I am always looking for the positive. I know I can do it this, so just the positives. (Farm 06)

The passion for farming- an intrinsically driven need (Deci & Ryan, 2000; Gagne & Deci, 2005), is what keeps most farmers going. Perseverance is a function of intrinsic

motivation, farmers argued, and the internal drive and love for farming are ingredients for sustaining the desire. The phrase, "I love my work" as stated by farmers, over and over again in the interviews, speaks to how intrinsic satisfaction keeps people going, and reinforces the interest developed over time. Beyond the will to continue, which is developed over time to sustain interest, farmers also see value in what they own, an idea that speaks to an extrinsic motive. As some farmers noted, the farm is a property, something worth keeping because of its monetary value:

And so many people come into our property and tell us this is their dream, they wish they had something like this. That we got a million-dollar property there and that's the motivation that keeps me going, for sure. (Farm 05)

[..] people say, why don't you just walk away and I say you know that's my ..that's my birth child. We started that from nothing and that's what it is for us right now. So, it's under child that we are raising. And we have something to call our own and that's what keeps us going, yes for sure. And that's what I feel for all the setbacks, we still feel going. So, we probably will be 65 and still be there. And that's ours, we started and had nothing, but trees and we started it and keep going. (Farm 09).

Emphasised in the quotes above is the sense of property ownership associated with farming. For many farmers, the farm is an asset worthy of investing (Chen, Wilson, Larsen, & Dahl, 2015), with good future returns, economically and socially. The investment component associated with their work influences their decision to keep going, a situation which describes the entrepreneurial nature of farming. The farms are business ventures, owned and controlled at will, devoid of external control, at least in theory. For some, the ability to control their lives is not just about having the property, but also expands to their daily activities. Associated with the day to day activities of farmers, and how they shape the motivation to be retained, is volition, choice, and control over one's own life. Farmers described in many ways how their activities present free will to embark

on what they choose, and for some, more importantly, to advance family life:

You know, to get up every morning and not have to get ready to go to leave to work, to go anywhere, to go and sit behind the desk, or answer phone or anything like that, that's the best thing in the world, you know. (Farm 05)

I guess I want to manage my own life. I don't want other people to manage it for me, and that's very important to me. You know, if I want a family, I want a family life, I want marriage, I want the freedom to be able to pursue the things that I think are good. And I don't want someone else coming along and trying to manage my life for me, and that farming helps there [...] that's why I come back each year. (Farm 10)

Advancing the arguments of volition in farming, as noted in chapter five, the quote above emphasises that the same factor is equally important in sustaining interest and ensuring perseverance. Concurrently, autonomy, to many farmers, is a family binding feature which allowed them to have the entire household contribute to one occupation, a situation that was evident as some farm interviewees worked with their partners, and in some instances their children as well. How farmers value their attachment to families, and the inherent values of farming which allows them to experience such goals to contribute to retention in adversities. This may not be the case for people who do not value family, especially in a rapidly changing western society like in Newfoundland and Labrador, which may be experiencing shifts away from large families. However, how farming links to the family is, therefore, an issue of policy. When this issue is properly exploited through calculated efforts to incorporate such social values into policies, interventions for farmer retention could be enhanced in many ways. Expanding on the theme of social value of agriculture, and how it contributes to sustaining the interest of farmers, is also the connection to consumers, the end users of the product:

You know, to just go outside, attend to your customers, that kind of thing, that's the best feeling in the world. [...]. And when they buy our product, you know we grow it from seed and that kind of thing and come back to tell us

how good it is, that's our motivation for sure for sure. (Farm 05)

The idea of consumer connection is not limited to direct contact, which any other occupation could lay claims on, but farmers do feel it, even in abstract terms. The idea of abstract connection was revealed when a respondent noted that:

[..] when I sit down at my Christmas dinner, I will say to my wife, do you realize today, how many people are eating our vegetables for Christmas dinner and I look good. It makes us feel good to know they are eating very safe, healthy food. (Farm 01)

The role of consumers is manifested in two angles: consumer's positive feedback to farmers, and the farmers' general sense of competence which emanates from interaction with consumers. The two-way impacts of consumers as revealed by the research are unique to agriculture. Though other occupations may as well have interactions with the consumers, the case of agriculture is unique in the sense of the natural feeling of, creating a product from nature. The role of community-focused or supported agriculture and the emergence of farmers markets and farmer-consumer interaction platforms speaks to this issue as well. While research may have pointed out how those spaces facilitate social interaction (for example, Mont & Nilsson, 2017), and how consumers are motivated by the direct contact with producers (Gumirakiza, Curtis, & Bosworth, 2014; Mont, & Nilsson, 2017), the revelation of how it motivates farmers could also advance the body of literature. Farmers are motivated to stay in agriculture as the feedback comes back positive, and this idea illustrates the role of extrinsic factors in influencing motivation as described in self-determination factors (Deci & Ryan, 2012). The finding confirms the role of the need to be connected to a broader system in reinforcing a behaviour (Deci & Ryan, 2000). Associated to the point of growing something from seed noted by respondents is the idea of closeness to nature which was emphatically emphasized by

respondents. Farmers expressed how the lifestyle of their occupation, the scenery of being out in the woods, being close to nature, is important in keeping them in the sector. But, beyond the consumers, another factor which speaks to the feeling of importance and being cared for in a system is the role of government interest:

[..] I think the motivation was already there. They [government] just kept our interest up and then the knowledge that somebody else is interested in what you are doing is something that keeps you going. And they did a lot of information session on you know your soils and all that sort of things. Your soils, and your pesticides and all that kind of stuff. That's a lot of information that is personalized Newfoundland farming, and they teach us and that kind of kept us going. (Farm 07)

The idea expressed in the quote not only supports the logic that triggers are needed even in the presence of motivation, it also introduces the concept of sustaining motivation. For many farmers, the role of government and broadly external agents in sustaining interest is a much-needed ingredient for retention. As noted by the respondent, the knowledge of care provides a much-needed cushion. The ways government's care and interest manifest and influence farmers are expanded on in Chapter 6.

5.4 Conclusion

The chapter sought out to understand how farmers are retained, through the lens of motivation perseverance and sustenance in the midst of thwarting and frustrating elements in an environment (Rocchi, et al., 2017). The chapter has argued that the same factors can simultaneously motivate and de-motivate individuals (Ryan & Deci, 2012; 2000) and this is expressed through the role of the family, and government policies and interventions in influencing the decision to farm. The decision to get into agriculture is sustained and thwarted by government policy actions, as evidenced in how large-scale bias policies

frustrate interest, and how the knowledge of institutional care enhances it. The notion of systemic and environmental problems also highlights how government policy could impact on potential farmers' interest in agriculture. In light of the challenges that undermine the decision to farm, the chapter also argues that the existence of motivation towards an act is not enough to get an individual engaging in it, especially in a sustained way. In instances when motivation leads to an act, there is the need for deliberate efforts to sustain interest.

Additionally, the need for a community of colleagues, and the role of consumers in sustaining farmers also introduces the notion of embeddedness of motivation (Ryan, 2016; Ryan & Deci, 2017), a situation when human behaviour becomes immersed in the system within which it occurs. Embeddedness, as revealed in this chapter, expands on the idea of social implications of human actions. In doing so, not only does the need for relatedness reiterated, the role of contextual factors, as argued by Ryan and Deci (2003), and Silva, et al., (2014), in sustaining motivation is brought forth. Contextual factors transcend the boundaries of geographies and cultures, to encompass industry specificities, as revealed by this study. Hence, case study approaches may prove relevant in further expanding the motivation theory, especially the social-cultural context of human action. Aside from the contribution of the chapter to theory, the ideas around motivation thwarting or frustrating and sustaining have broader implications for farmer retention efforts. The ability to retain farmers is inherent in our understanding of frustrating factors, which the research has revealed, and undermines people's interest in an action. Systemic issues that contribute to frustrating motivation, as the chapter has explained, can as well be solved through deliberate policy actions which target such factors.

Chapter 6: Intervening to Attract and Retain Farmers: A Newfoundland and Labrador Policy Perspective

6.1 Introduction

The Provincial Government is committed to attracting new entrants to the agriculture sector and providing the necessary support and advisory services required to establish new farm operations. Attracting beginning farmers to the industry is not only crucial for the success of the agriculture sector, but it will ensure the continued supply of locally produced safe food for our people. (NL Natural Resources, 2012: 5).

The above extract can be described as a policy statement — conveying government intent (Birkland, 2015; Dror, 2017) — and commitment to the attraction and retention of farmers through deliberate efforts. The policy statement, like many others, represents how institutions, including governments, intend to pursue existing problems or satisfy a need, for example farmer attraction and retention, through concrete actions. Farmer attraction and retention has gained attention in policy spheres, including in Newfoundland and Labrador (NL), and it represents the recognition of a need for urgent action to get people to enter farming. The province's agricultural sector needs to respond to a plethora of challenges which involve both endogenous and exogenous issues. To overcome these challenges, deliberate efforts, in policy and in practice, are needed. These deliberate actions are what are referred to as policy interventions or policy actions in this chapter (see Section 1.1). Governments and non-government actors have heeded to the aforementioned need. These actors have taken the path to influence farmer attraction and retention through policy actions (see Pratley, 2008; Susilowati, 2014; Tongs, 2012). Yet, as Tongs (2008) argued, even though there are continuous efforts in farmer attraction and retention, research has done little to provide a comprehensive view of the issue, especially from the policy

perspective. This chapter attempts to expand the literature by assessing policy efforts to attract and retain farmers in Newfoundland and Labrador.

The government of Newfoundland and Labrador and other stakeholders of agriculture in the province all profess to boost agriculture in the province (see Way Forward -on Agriculture [Food First NL, Government of Newfoundland and Labrador, & NLFA, 2017]). Their efforts are in line with renewed commitments towards food security and sovereignty, and agriculture-led economic development in the province. The just-ended government program, Growing Forward 2 (see Appendix A), and the new strategy, Canadian Agricultural Partnership (CAP) are policy commitments from the governments — federal and provincial — to develop the agricultural sector. These commitments have for over a decade provided the needed policy directions, financial resources, and research, and have laid the foundations for development of agriculture in Canada, and Newfoundland and Labrador. The agricultural sector work plan in Newfoundland and Labrador (see Appendix A), launched by the provincial government in 2017, reiterated these policy commitments. These commitments are accompanied by diverse on-the-ground activities by farmers and non-government institutions, all aimed at attracting and retaining people in agriculture and expanding the capacity of the industry.

This chapter takes inspiration from the policy commitments and aims to provide an overview of the interventions. The chapter also assesses the effectiveness of the efforts that come with such policy commitments, through understanding the discourse in the policy environment and the structural issues emanating from that. Interventions are presented and discussed in reference to how they impact attraction and retention of farmers and contribute

to building the general capacity of agriculture in the province. How the policy environment is characterised with emotions, including satisfaction, dissatisfaction, optimism and hope, and lack of trust, is also introduced along with the discourses that emanates from that. Structural issues in both policy design and approaches, as well as in implementation are introduced into the discussion. The structural issues are further employed in assessing the effectiveness of policy actions by highlighting the lack of room for experimentation, how strict and uneven requirements manifest themselves, among others. In the concluding part, the areas of policy interventions, as well as the structural issues, are nested in a theory-driven discussion that draws conclusions relevant to policy, practice and further research. Additionally, the discussions incorporate motivations — the broad theoretical framework of this research — to understand interventions, towards providing a deeper context of how policy actions do or could incorporate the cognitive, psychological needs of farmers into design and implementation mechanisms. In conclusion, the chapter argues for the relevance of deliberate policy interventions to attract and retain farmers, while emphasizing the need to overcome embedded structural issues in the policy environment.

6.2 Overview of Policy Interventions for Attraction and Retention of Farmers in Newfoundland and Labrador

In Chapter Two, the different policy actions that have been employed to attract and retain farmers in Canada (see Appendix A), and around the world (see Section 2.7) were highlighted. Among the diverse policy actions used, some recurring themes from around the globe included financial support schemes, human resource capacity building, strategic planning schemes, the rebranding of agriculture, and land-related policies (see Bates, 2005;

Barbieri & Mahoney 2009; Mwaura 2002; Susilowati, 2014 etc.). Similar approaches were noted in the case of Canada, and in specific provinces (Appendix A-Table 2 expand on the specificities of these actions). The idea of policy mobility (Cochrane & Ward, 2012; McCann & Ward, 2011) is introduced in this section as the literature is reflected upon and contextual interventions in Newfoundland and Labrador are discussed.

Experiences from policy actors recorded in the interviews which confirm interventions or shed more light on them are incorporated to enrich the discussion. This is also to empirically reflect on such actions in the province and to set the premise for later discussions in the chapter. A review of policy documents in Newfoundland and Labrador reveals similar approaches and areas of concentration to what was highlighted in the literature, in Canada and in the world. Apparently, similar policies can be applied in different contexts, as argued by researchers who work on the principles of policy mobility (see Cochrane & Ward, 2012). Policy mobility portrays the thought that policies that have been successful in other places can be applied in different contexts to a fair amount of positive results (McCann & Ward, 2011). Despite similarities in interventions, how such policies are applied may differ in context and in certain ways. In Appendix A Table 2, policy actions in Newfoundland and Labrador are presented with emphasis laid on current and immediate past actions within the last medium-term agricultural framework (Growing Forward 2 program). Policy documents and interviews from the research reveal two broad themes and six areas of concentration where intervening actions have centred.

The two broad themes are direct and indirect interventions. Direct interventions are policy actions that provide support to the end user —the potential farmer or the current farmer. Indirect interventions are institutionally based, where institutions are supported to create, implement, and direct actions to attract and retain farmers; for example, an organization is provided funds to implement a program. Within these themes are the six explicit foci for farmer attraction and retention: financial incentivising, informational and resources support, skill development and capacity building, land reforms, institutional support, and changes in the operational mechanism (see Figure 6.1).

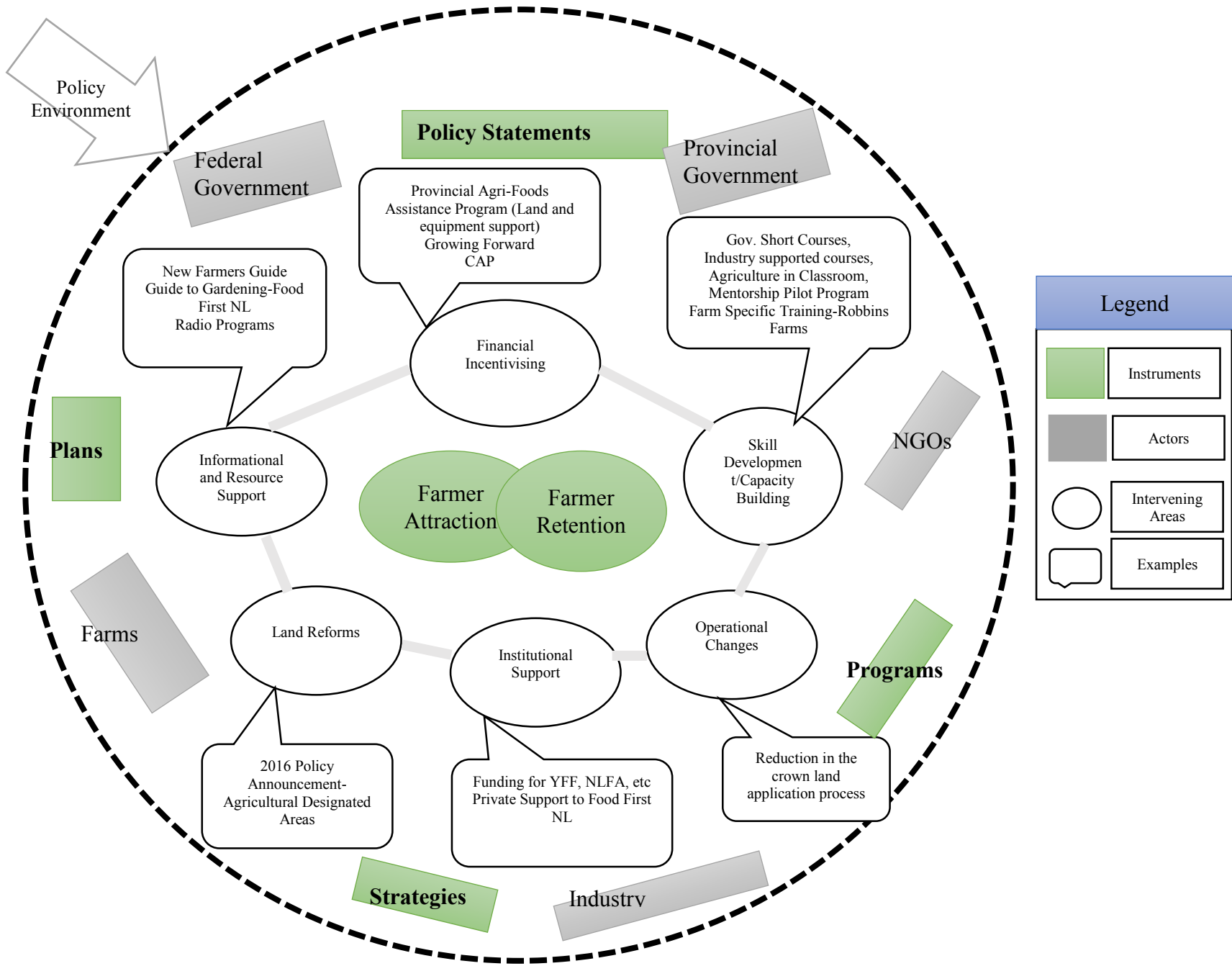


Figure 6. 1 Direct and Indirect Farmer Attraction and Retention Focus Areas in NL

Source: Abdul-Rahim Abdulai, (2018)

As noted beforehand, approaches to attraction and retention of farmers in Newfoundland and Labrador hint at policy mobility, the reason being that they mirror those of the rest of Canada and the world at large. The difference stems from how each of these policy actions is manifested within the context, which makes it important to further expand discussions in the issue area. Chiefly, financial incentivising of agriculture is common across the globe. It is manifested in different programs that provide funding support to new and existing farmers (see Demyanenko, 2011; Susilowati, 2014). These are happening at a time when the industry is working to get a demotivated population attracted, and these maybe be seemingly be informed by a notion that money could help salvage the situation. The approach of providing financial support for various farming activities, either in loans or grants, is also evident in the province (see Appendix A), with some cutting across the country. People engaged in the sector acknowledged both knowledge of and participation in such policy actions, as noted by a farmer respondent:

Yea. The provincial government assisted through Growing Forward. We got some grants in order to help with clearing the land, and then taking the rocks off the land and also a little bit of going to conferences and learning more about agriculture, especially from the organic stuff. So, government did assist. Not on a significant level but on a fairly decent level. They could have assisted more [...]. (Farm 03)

The extract shows one financial incentivization initiative which farmers benefit from and how it contributes to their decision to farm. Financial incentives are provided through both federal and provincial government programs (see Appendix A-Table 1 and Table 2), and in some cases third-party party institutions (example, Farm Credit Canada). The Provincial Agri-Food Assistance Program in Newfoundland and Labrador is created and operated by the provincial government. It provides grants covering up to 50 percent of

different project cost for farmers. The Canadian Agricultural Partnership, a federal-provincial initiative, also financially support farmers through different grant schemes. For many farmers in Newfoundland, financial support from the government is crucial to sustaining the interest in agriculture. How these contribute to attraction and retention is engrained in their role in helping interested people set-up and supporting existing farmers in purchases of inputs or undertaking different projects. For instance, there exists support to facilitate lands and infrastructure purchases which would have been otherwise difficult to achieve or would have led to high debts for farmers. Farmers expressed different opinions about such actions and how they contribute to attraction and retention, which will be expanded on in the later section on structural issues. Providing financial support for purchases in agriculture in Newfoundland and Labrador speaks to the larger government's commitment, in Canada and the world all over, to supporting farming through financial schemes. To many governments, it is a necessity to be developed for financial gains, and/or for promoting food security. Financial support also echoes the theme of how extrinsic factors — such as money — may be adopted as a motivating element. However, the findings of this thesis hint at a possible lopsided view by government on how incentivize farming among its populace: largely financial focus.

Besides financial support, other elements of motivation are education, mentoring, and hands-on experiences, and these are identified as interest creating, triggering and sustaining factors in the previous chapters. In Newfoundland and Labrador, people are attracted to farming through deliberate actions in education and capacity building, a finding which reflects the role of competence in motivating people into agriculture. This was

revealed from policy documents (see Appendix A), as well as experiences of farmers and officials, as stated by a host of respondents:

[...] Out, the provincial department of Agri-food then will put off a lot of short courses where you could go probably for a week and there will be something about, learn some of the basics about soils structure, fertility and stuff like that. (Farm 01)

We are right now, right now I think in the woods of starting a mentoring program. So, will be like you have an interest in farming or will like to learn more about farming or whatever. You could pair off with a farmer and you know like follow us around and get to know how things go and how it works. Like learn by putting your hands in the soil with the farmer. (Farm 03)

[.....] Yea actually I think all of them are doing a great job. And celebration of agriculture, Food First NL, and the young farmers, ... Young farmers are for workshops. If you want to be a farmer, come meet a farmer and we will show you how to farm. And Food First, NL held their conferences in St John's where they talk about food, cooking, production and they brought up people from everywhere and that wasn't agriculture at all but that was cool. (Farm 04)

The Mentorship Pilot Program is another thing. We just started trying to match mentors and mentees. So, people who want to learn hands-on on the farm. So now we are trying but we don't have anyone matched yet. We have not actually gotten to that stage but some more work must be done and you know, trying to find those people. (Official 04)

The extracts exemplify some education, and broadly, human resource capacity building efforts which are employed, by the government, NGOs and industry associations in the province. The capacity building interventions are evident in wide-ranging forms. One of such activities is targeted actions through formal education which is child-focused, for example, Agriculture in the Classroom program. Others focus on potential and existing farmers. There are a host of short courses operated by the government agricultural department, as well as industry formed network organisations. There are also workshops and capacity building sessions organised for both new and old farmers. An example is the annual workshop and capacity building sessions organised by NLFA and the YFF at their

general meetings. Also, the introduction of the mentorship program by the YFF, which is still under pilot, also speaks to education, albeit from a different perspective, focusing on hands-on experience. Programs in schools and mentorship aim at potential farmers; and the short courses, and other educational activities and capacity building workshops target established and new entrants into the industry. Another dimension to education is formal training in higher education, an aspect which is missing in the province. Farmers lamented on the lack of such higher-level opportunities and called for designated educational courses in food and agriculture. Beyond the efforts of government, specific farms also run programs that build capacity in agriculture and aims to train young people to become interested in farming. For example, the Robbins Family Farm and Gardens run a summer camp for children that provides them with hands-on experiences and expose them to agriculture at their early ages. Human resource capacity building, from the qualitative aspect, as revealed through these policy actions, is important. Such activities are not only aiming to get people farming, but to ensure the industry has highly qualified people who “can manage not only the basics of production, but also sophisticated technologies, the agro-ecological environment, the sociology and economics of their business” (Dodd, 2011:47).

Linked to education and capacity building is the theme of information and resource support. Information and resource support, like in many other places, is manifested in campaigns that reach out to people to trigger interest or/and sustain motivations. These are done through print, social media, TV, radio and other avenues. Resources in this context refer to brochures, guides, so on that are prepared to provide information to people regarding a particular topic. Policy actors shared experiences regarding such actions in their efforts to attract and retain farmers:

Ok yeah. One of the things is, we developed this new Farmer Guide. This is a resource that takes people through all the steps for starting a farm and what they have to do to start a farm business and arrmmmm. So, it takes them through the process, give them, connects them with resources, we get this, take that. [...]. The new farmer guide is one thing. [.....] Arrmmm what else are we doing.... We do awareness campaigns on social media. We developed a new video that highlights farming as a career for young people, so we are trying to get young people into agriculture. (Official 03)

As noted by the respondent, the new farmers guide is a resource that help people interested in agriculture to connect to services. The guide, like other informational support, is targeted mainly at potential farmers, and new entrants. In addition, government agricultural representatives provide information to potential and established farmers on a wide range of issues of interests, particularly on services and sources of support. Likewise, Food First NL embark on different campaigns and have resources that cut across different aspects of food. These resources help create awareness and introduce people to agriculture, directly and indirectly. Most actions within this broad theme are meant to create awareness or provide knowledge of the existing support, both of which are important in getting people interested in farming. These and many other specific resources provided by government agencies, and non -government actors, work to get information to people who need it, with regards to entering and staying in agriculture. The theme of information shows that policy actions for attraction and retention of farmers are not only within the frameworks of government, but other institutions as well contribute to the cause. Also, just like education, informational needs create awareness — a prerequisite to effective participation (Lim, Frangakis, Tanco, & Picinali, 2018). Awareness is also an ingredient to attitude formation (Sweldens, Corneille, & Yzerbyt, 2014) which can generate interest in farming and motivate people.

Another aspect of interventions evident in policy documents and confirmed by actors was land-related efforts or policies. Land is an important input for agriculture. As noted in Chapter 2 of this thesis, the land as a factor of production is vital in farming, and more importantly, serves as a motivation sustaining factor in most cases or frustrating factor if not well-managed. Noted as one of the barriers to agriculture (Agriculture and Agri-Food Canada, 2010; Njeru & Mwangi, 2015; Tadele & Gella, 2012), governments all over the world make efforts to ensure land is accessible to people interested in farming. Agriculture and Agri-Food Canada (2010) argued that land was among some of the key barriers to people entering agriculture. The statement may explain why the policy context of NL is fraught with continuous efforts to improve access to land. The Agricultural Designated Areas, an initiative announced in 2017 (see Appendix A) is an example of how the government is employing changes to increase access to land to attract and retain farmers in the province. An official gave a detailed explanation of the changes effected to enhance access to land:

We have certain areas on the Avalon and in our province, that are traditionally set aside for agricultural development, where agriculture get prioritized and they are part of the agricultural development areas. We call them ADAs [Agricultural Designated Areas]. And they are legislated in policy and with the government. So, what happens is, in these areas, any applications for agriculture get prioritized and then the other developments like residential will then go under further scrutiny like what impacts that will have on agriculture. With some acquiring land, is.... people will like ...will usually come to me and we will have a chat and see what is available and what they want to do. And I will tell them to make an application to Crown Lands to set aside that portion and then it will go through an internal review process within government channels. And if they come back with a satisfactory farm plan and the development officers say it's a viable business, you know, a feasible opportunity, we will send our approval. And they will receive a title from Crown Land, maybe within six months or maybe within a year and they can begin to crop. With that, to add to that, the government has set aside within an initiative, Areas of Agricultural Interest which are throughout the island. There is one near St John's, near what used to be

Memorial University's forestry facility. And that area is set aside as an area of interest and we have across the province about 60 or more of these areas across the island. They are specifically meant for agriculture. So, applications in that area for agriculture get prioritized and processed land acquisition is more easier and quicker process. (Official 05)

The quote speaks to the policy action, Agricultural Designated Areas, which was instituted by the provincial government to ease access to farmland. The policy designates some areas for agriculture and makes it easy for people to access them for farming. Similarly, the government in 2018 announced new plans to make more land available for young farmers. These interventions, and many others have the tendency to increase availability of land for agriculture. Respondents noted how important those initiatives would help the agricultural industry; some, mainly existing farmers, attested to benefitting from them to expand their farms in the last one year. Employing access to land as a way to attract and retain farmers speaks to why land is a key/needed input to agriculture, a situation which may change as more advanced technologies are developed.

Besides the land-related intervention embedded in the extract above, it as well highlights some operational changes which has a role in motivating farmers. The point on new agricultural areas speaks to land reforms, while the changes to processing time reveal the actions related to institution's operational changes. The second theme enshrined in the quote therefore shows improvements in mechanisms within the institutional environment. Strict operational procedures have been deemed as barriers to the attraction of farmers by some interviews; hence, such changes in procedures may needed to streamline processes for people to get into farming. Procedural changes policy actions are evident in many aspects of the province's agricultural sector, with the most recent one being a reduction in

Crown Land application time — a change farmers hope can bring positive gains to the industry by reducing the time it takes to get land into production. Officials noted that, with the coming into being of the Agricultural Areas of Interest, it becomes easy for one to identify farmland, and the ease that comes with that is equally important in getting people into farming:

And a lot of them [The areas of interest-land] just got posted. I can show someone that come into my office, that there is an area of interest here, all these green spots here that are labelled A2 are generally good for agricultural production for forage. If they are A1 that is probably really good for vegetable production. You see, this makes land issues easier now...especially for a beginner (Official 02)

The quote shows how changes within institutional set-up is employed to improve processes, and the impact that can have on the broader agricultural industry. Linked to the whole idea of institutions and interventions is the last theme and specific piece of intervening areas, institutional support. This intervention focuses on 'helping the helpers'. This theme, as shown in Figure 6.1, highlights the indirect intervention noted earlier in the section. This piece relates to how government supports institutions to implement direct interventions that can encourage farmers:

Arrmm ...well, from, from what we get from government, Growing Forward 2 program and that is why we have their logos on everything. With the publishing and printing and so we get support from that program, which is federal-provincial. And they also have the future farms initiatives also kicks in for new entrants, for them help people starting up. So, we direct people, individuals to GF2 as well. (Official 2).

As noted by the respondent, the new farmers' guide was a government-funded project to facilitate attraction of farmers. Many other institutional support interventions are evident, mainly in areas of community outreach and public awareness programs. For example, the NLFA, YFF, and other entities are funded by the government to carry out

activities to support the agriculture industry in the province. The institutional support schemes highlight how government can work in partnership with other agencies to facilitate the development of the agricultural sector, an issue area which will be expanded later in this chapter. The idea of partnering to support agriculture is evident in other provinces-for example the partnership between Government of Nova Scotia and Perinea (see Appendix A) – and could help reduce the burden on the government in some areas as argued by Delmon (2017); Hall and Reed (1998) and many other researchers.

Finally, like in other parts of Canada (see Appendix A), apart from these specific themes, plans (e.g., The Way Forward- in agriculture, Humber Valley Agricultural Strategy) are used to move forward the agenda of farmers attraction and retention (see Dolter, 2018). These are strategies that go beyond one component, and encompass the development of the entire agricultural industry, province-wide or regionally. The strategies are important because farmer attraction and retention are embedded in them but are not considered specific actions because they embody some to all of the targeted actions in Figure 6.1. The issue of broad scope also leads to the idea of general capacity building of the agricultural industry. Action areas discussed so far have highlighted the foci for farmer attraction and retention in Newfoundland and Labrador, including financial support; informational and resource support; education, and training; land reforms; institutional capacity building; and changes in operational mechanism.

Beyond the efforts discussed thus far, a careful look at these interventions reveals what is referred to in this thesis as the spiral effect of policy. The spiral effect describes how policy actions in one area can ultimately influence an entire system, a situation that

manifests through how attempts to attract people leads to strengthening other pillars of the industry capacity, including financial, human resource, infrastructural, and technological (see Millar & Doherty, 2016). This finding is important for policy actions in different contexts, and going forward, a more careful analysis of interventions at the design stage could facilitate making choices that effectively maximize this spiral effect and lead to overall development within a sector. Also, description of these policy actions has revealed complexities that are embedded within the system — with diverse actors, actions, and interactions across areas — which create interwoven views, perceptions, emotions, and feelings in the policy environment. Understanding the language, and the discourse in the industry is therefore needed to bring forth these interlocking views that may or can shape the future of agricultural policies in Newfoundland and Labrador.

6.3 The Emotionally Driven Policy Discourse in Newfoundland and Labrador

Agriculture

The preceding section introduced areas of interventions for farmer attraction and retention in Newfoundland and Labrador. The section concluded by acknowledging how such actions bring actors together and create complexity of actions and interactions. The arguments in that section ripples into a policy discourse that need to be further understood. Embedded in the discourse are emotions which manifest in perceptions and views about intervening actions. The concept of emotions in policy environments come out in the recent works of Johnson, Black, and Knobloch, (2017); Perlaviciute, Steg, Hoekstra, and Vrieling, (2017); Smith, and Leiserowitz, (2014); Tata and Jamieson (2017); and are extensively described by Renshon and Lerner (2012). The works of these authors acknowledge the idea

that emotions play a role in decision making and understanding it may help strengthen our course in policy.

The idea of discourse analysis also subtly introduces emotions, especially when meanings are read beyond the actual text (Johnstone, 2018). An integrative approach of emotions-backed discourse could provide a good analytical lens to understanding the discussions that surround farmer attraction and retention policies. Emotions are an integral role in the policy-making process (Renshon & Lerner, 2012), and manifest themselves in different ways (Durnová, 2015). How emotions impact on policy design and implementation is a matter that still needs considerable understanding in literature. Yet, existing application of emotions in policies are largely international oriented (see Durnová, 2015; Smith, & Leiserowitz, 2014), and in broader spheres of decision making. Emotions are an integral part of human life (Al-Shawaf, Beam, Asao, & Buss, 2016; Smith, 2017), and can serve as both an input and an outcome to behaviours in general, and motivations in particular (Al-Shawaf et al., 2016). Hence, it makes academic and policy sense to discuss how they manifest within local scopes — a perspective that informs the application in the agricultural setting in Newfoundland and Labrador. Coalescing emotions into the discussions does not only give a true sense to what the policy setting looks like, but, it also ushers in a research space to be explored in the future. It introduces a gap that needs attention because of lack of application to local policy cycles.

Emotions are human behaviours, observable through interaction, and largely expressed in body language (Greene, 2017; Smith, 2017). However, emotions can also be deduced from both spoken and written language (see Rodriguez-Hidalgo, Tan, & Verlegh,

2017). Although various techniques are employed to describe the policy setting in province's agriculture, the researcher largely relied on transcripts of interviews to deduce how actors received, perceived, and interpreted interventions. Different emotions — both from farmers and officials — were reflected in the interaction on farmer attraction and retention interventions, and the agricultural policy settings generally.

One emergent issue was disagreements and a blame game between officials and farmers in the industry. The blame tactics between farmers and policy makers reflect in different aspects of the industry, and this shows a discord in the policy environment. For instance, farmers complained about requirements for gaining assistance, emphasizing how a minimum sale of \$15,000 annually is required (Forestry and Land Resources, Government of Newfoundland and Labrador, 2018) to be considered a farmer and to be eligible for certain support schemes. They described the situation as inhibiting small farmers from getting access to government funding programs. In turn, officials justified this requirement, noting that it is not something difficult to achieve if a farmer was serious at the work. Officials also accused farmers of hiding the amount of their sales to avoid tax, a situation which makes them unable to meet such requirements. Officials further justified the requirements by comparison to that of other provinces, where a farmer needed to make substantial sales before availing of the government programs:

I mean that's [the requirement of \$15,000] not a living obviously. But I mean, I think in Manitoba, it other to be classified as a farmer and in order to access certain program like this, your minimum is \$50,000. So, we are very lenient in NL, but the problem is, there is a lot of people that are doing farming on the side and working off the farm. There is not a lot of people who can, I can't, I don't know statistics and I don't even want to venture to think of how much on-farm income there is as opposed to off-farming. (Official 6)

From the quote above, the respondent debunks the concerns of the farmers, and attributed the situation to a possible lack of focus, by noting, that people do farming as a part-business. The assertion of the official may be true; however, it probably reinforces the claims that policy does not pay attention to people ready to enter agriculture on alternative models (issue expanded in the next section). Similar points of contention were evident between farmers and officials, a situation which creates tension between policy actors and could influence the acceptance of interventions, a view that is subtly advanced in the works of Debrah, Mtegha, and Cawood, (2018) and Egeberg and Trondal, (2016). Tensions within a policy environment may both limit progress and undermine effectiveness by providing creating delays in decision making within the context. Likewise, tensions can lead to progress in a policy, a situation where actors are able to reach consensus on key points when well-managed. The fact that actors agreed on certain points could demonstrate why the tensions are always aberrant in the policy environment.

This study also revealed agreements amongst similar actors (farmers) and between respondents of different interests (farmers and officials). An example of such contentment and agreement was found on opinions shared around the overall government funding packages, particularly on what was being covered in the province. Officials proclaimed government coverage of 75% funding through the Growing Forward 2 programs as the best in the country, a claim that was verified by the researcher as well. The claim was confirmed by farmers as well, who expressed satisfaction, — despite reservations on certain details around implementation. When a respondent was asked if any intervention could be discouraging to agriculture; after a smile, the interviewee said:

[...] I don't think any program will discourage me. They are all super [...] they are really good. They are all really good, they cover a lot of basis of farming and are meant to help those farming or you already have so much of your own time and money invested in farming. (Farm 04)

The extract expresses satisfaction with government intervention, a position that was further emphasized by another respondent when asked to describe the current interventions to attract and retain farmers: "[...] Ohh my goodness, I mean all of it [current programs] has been so helpful" (Farm 11). For the respondent, all interventions have been good, a point supported with how easy it is to get grants covering 50% to 75% of eligible projects cost. Beyond the idea of an agreement, these quotes express satisfaction on the part of policy beneficiaries. Some farmers expressed satisfaction – an important emotional response to policy – towards existing actions. To these respondents, the government was doing everything well at this time, and they can only be thankful of current efforts, a stand other farmers disputed due to their personal experiences. To some farmers, the government was taking the wrong approaches to the agricultural industry. Their argument was based on some structural issues within the policy environment — issues to be expanded on in the next section. The sense of dissatisfaction results in lack of interest in dealing with government programs, a finding which is evident in an answer given by a respondent on what government can do to help them stay in agriculture:

We, we don't really need grant money, and we are trying to do our own. In order to apply for Growing Forward, you need someone to be able to do your business plan. They won't accept the business plan if you do it yourself. It has to be done by a professional. So, and then that takes a fairly large amount of money and so in order to do that you need to get the funding to grow your business, you need money to do so. This is part of the reason we never apply for the Growing Forward money because of the money needed to actually have our business plan up and running and done with some help. (Farm 06)

After failing many times to get government funding, the farmer decided to not seek government support again. Farmers who fail in securing support at the beginning get frustrated with government, ending up not wanting to have ties later, a situation many respondents who started small attested to. The quote also brings forth discontentment with the current initiatives – at least with how they are implemented –, a state informed by what is described as unfavorable preconditions (see next section). Discontentment reintroduces the idea of disagreement, implying that even within the same level of policy actors, opinions about interventions do vary. The variations are largely due to different experiences each actor had gone through, a finding that partly speaks to a silo approach to dealing with farmer's needs, as respondents argued. The extract also brings forth how far emotions can get actors into the policy implementation process and impact on the outcome of interventions, including the willingness to participate. The assertion that they do not need government money could illustrate frustration, sparked by past experience, as another respondent argued:

The main issue was actually was to actually apply for the funding. Because they do a lot of advertising for that money and tell you it's there and then when you go apply for it, at the end of the year it was just ...turned out flat with no reasonable explanation. And there is not a lot of support throughout the whole application process. The time span from the time that it was initially applied for and the time we had had an answer back was almost a full year. Almost a full season was gone before anything ever came back from there, and then we were denied for most of it. So, it's ...it put some, it made such an impact on us that we wouldn't apply after. I have never applied a second time for money from Growing Forward. (Farm 08)

Farmers become frustrated once they are unsuccessful at going through government processes. To many people in agriculture, as the quote shows, frustrations get people discouraged, and the same time encouraged, leading to striving towards personal goals – to be self-dependent. Being self-dependent is not bad for the development of the

agricultural industry. However, the capital-intensive nature of farming makes that difficult for new entrants, who, due to their lack of experience and past successes are at high risk of failing in securing support. Despite these experiences, some officials do sympathise with new entrants, noting that, such experiences are a result of the requirements, but they are deemed necessary to sieving potential farmers. The finding that officials sometimes understand the frustrations farmers go through, and try to help them avoid such experiences, impolitely reveals some kind of power influences in the government sector. This is because it frustrates some farmers, but it is needed to ensure proper screening and value for government resources.

Another theme that came out strongly in the interviews was hope and optimism among policy actors. Policy actors expressed varied levels of optimism about government interventions, citing specific examples of initiatives that provided such emotions. As a farmer noted, when asked about whether or not the government is doing well with regard to current efforts to attract and retain farmers:

I know the government has so many guidelines that they came across but it's a great start that they are protecting the land because there is no farmland left there in the east coast because people ...there are too many people. It's a good start but there is still [...] yea, it's just the beginning and hopefully, it doesn't stop there. Hopefully, it will continue because they can get the word out better than us. They can get the attention of people. (Farm 03)

This extract shows an appreciation for the work government is doing, in addition to caution, and hope and optimism for future impacts. This view was assented to by other farmers and officials, who explained how government efforts are opening up new opportunities. As a farmer argued, within the confines of their operation, there has been an increase in interest in farming, with the coming into being of the Way Forward to

Agriculture document in the province (see Appendix A). This declaration was affirmed by an official that since the coming into force of the agricultural strategy, the number of people applying for support to enter agriculture had increased. Hence, some farmers and officials expressed optimism for the industry. They specifically referred to the current events within the industry which they touted as a buzz in agriculture in the province. That optimism speaks to how the social environment could influence people into agriculture (Hamill, 2012). Despite the finding that current efforts are bringing forth positive transformation, there was another angle to the discussion: an inherent political view of interventions. A respondent argued, when asked about recent reforms that increased available land for agriculture, that:

It's [ADA] great. But the issue is...I thought it was more of a political flag waving than anything else because there is already significant amount of land available for people to access. But like I told you, it's so expensive to clear it and get a return on. Very few people can afford it. So, when they did increase that access to land, most of it, I believe, not for sure, but I believe most of it was taken up by cattle or dairy farms to grow hay which there is a return. I guess it's cheaper to grow their own than to ship it from the mainland. So, those that were close enough to their farms, I think they picked them. (Farm 01)

The quote reveals doubt and suspicion of government policy efforts backed by the political twist of events in the province. As the respondent posits, though the efforts are great, there are doubts about the motives of such actions. The doubts in this context illustrate what the respondent termed as a political flag waving, a practice common within policy environments where governments may employ policies as political tools (Mayan & Daum, 2014; Turnbull, (Ed.). 2016). Some actors, therefore, see such broad announcement as political actions with no merit, which as such, may not materialize in real time. The assertion, coupled with the revelation that officials are not satisfied with farmers sale

reporting, brings to light two contrasting positions in the industry. The contrasting positions reflects a lack of trust within the policy environment which may undermine the effectiveness of efforts in varied ways. What can be deduced from this finding is that political environments cloud people's acceptance of policies and could hamper progress in the agricultural industry if not well incorporated into planning. Further actions may therefore be required to reduce such situations in the policy environment. The finding also speaks to the policy and politics nexus (Mayan & Daum, 2014): a complexly interwoven relationship. Disentangling such a relationship is necessary but doing so in a highly regulated area like agriculture may prove futile due to entrenchment at lower levels of the action. The politics associated with agricultural policies in Newfoundland and Labrador could hold further implications on how farmers and interested people accept and patronize interventions.

The discussions have scrutinized the Newfoundland and Labrador agricultural policy environment to unravel the discourse around farmer attraction and retention, and agricultural development in general. These discussions have shown the emotions that flood the policy environment, and the impacts on implementation at the ground, that could shape future actions in that direction. Within the context of the discussion is the idea that emotions are an integral part of policy cycles and understanding them could further enhance policy processes in the local context. Embedded in the discussion are issues that forcefully emerge from the emotions and reveal possible challenges to policy successes. These issues are rooted in how policies are made, the operating context, as well as implementation. Highlighting these issues will shed more light on the policy environment, and the next section picks up from this departure, to further understand the farmer attraction and

retention interventions atmosphere in Newfoundland and Labrador.

6.4 Structural Issues in Policy Interventions: Policy Approach, Make-up and Implementation

In this section, the emergent findings in the previous section are expanded on to discuss some of the conundrum of structural issues in intervening policy actions in Newfoundland and Labrador. The mere presence of policy interventions may not attract and retain farmers, hence, how such efforts are designed and implemented is equally important. A policy may only be effective when actors are satisfied with its outcome, and it meets its aims. The continuous decline in the number of farmers, and a seemingly dysfunctional agricultural industry (Quinlan, 2012)-despite existing efforts brings to light embedded issues in policy actions which hamper attainment of intervention aims. This research has revealed some of the issues, which hinder realization of policy goals, and for which further or different actions may be required to enhance farmer attraction and retention. These issues are evident at different stages and components of the policy cycle, including policy design and approaches and implementation strategies.

Policy design, which can be described as the blueprint of a policy action and how a policy is conceived (Sabatier & Weible, 2014), contributes to the eventual possibilities of achieving its aims. This research has shown that there are embedded issues in policy design which undermine the effectiveness of interventions, and they ultimately undermine farmer attraction and retention in Newfoundland and Labrador. Interviewees shared practical examples of how policy actions are designed and how they may impact on people getting into and staying in agriculture. One of the issues identified was government's

concentration on putting money in people's pockets in an attempt to get them into agriculture. This was acknowledged when a respondent asserted that:

[...] It's not just more, it's different. You know, throwing more and more money to something is not necessarily the thing to do, it's about how you want that money spent. (Farm 10)

Despite the role of money in supporting other components of the industry, respondents spoke strongly against this approach, noting that things must be done differently. As another interviewee noted: “Well, I tell ya, for the government, it’s not only financial, it has to be...they have to have a community” (Farm 08). The respondent affirms the financial focus of the government, which is done at the expense of other needed motivation facilitation element — for example, the community, as noted in Chapter 5. This finding was also evident through policy documents, where the majority of intervening actions are expressed by way of financial incentivizing (see Appendix A). The concentration of policy actions in agriculture around finance is not new, or peculiar to Newfoundland and Labrador. The approach is a common practice in many parts of the world. However, how that is translated into action is what matters. The main issue with this approach emanates from direct channelling of money to farmer, which others take advantage, as an avenue to exploit. And this is not only associated with the financial concentration but with land as well. Respondents argued that government has placed more emphasis on just providing land, an approach which underscores the role of other motivational components including farm community and infrastructure:

That’s what I’m talking about-the puzzle, the government can’t just say we are going to give away land and we are going to make farmers. Farmers got to have building, get to machinery, get to labour force. (Farm 01)

The extract above emphasizes how government lack of attention to certain areas

of support may not be the way to go in attracting and retaining farmers. As the respondent noted, the mere provision of land may not attract and retain farmers if other important elements are not taken care of. This finding confirms the view that both social and institutional support systems are needed to get people into agriculture, as argued in Chapter 5. And according to many farmers, the government must change the approach, by going beyond just finance, and land, to adopt broader approaches which acknowledge the embeddedness of the agricultural industry into a functioning socio-economic environment. The existence of other actors, and policy efforts, spanning diverse areas, may however complement government interventions.

Another emergent theme from the interviews was monitoring of existing interventions, a point which ties the financial and land interventions together. The availability of funds and land is may not be enough to achieve the goals of farmer attraction and retention. This is not only because they are skewed, but it also a matter of how such efforts are administered as well. A respondent cited an example of how people took advantage of government support for U-pick initiatives about a decade ago, to exploit funds and land which never came to fruition:

I think what may happen is the same thing that happened with the strawberry U-picks. A lot of people who aren't farmers are going to see it as a land grab and not necessarily going to make it work. [...]And then they will need to do a very careful screening of the kind of people they give the land to which I assure you is not going to happen in Newfoundland and Labrador. (Farm 06)

The extract brings forth the issue of how policies are monitored. Without adequate monitoring, people are likely to exploit the loopholes in government efforts (Posavac, 2015), as the above respondent argued. The issue of how policy actions are monitored

was agreed by both farmers and officials -government and non-government representatives- acknowledged and lamented, attributing it to the lack of funds and inadequate human resources personnel. The lack of monitoring as revealed in this research does not only impact on the government coffers, but as well impacts on farmer motivations on the ground. As a respondent explained, farmers depend on the services of government, and when there are inadequate personnel to monitor the progress of their farms, it makes them feel abandoned, dampening interest in farming. The issue of monitoring also emphasizes the role of *'the how'* in policy success, where, it is not the presence of interventions that really matters, but equal attention is needed on how they are applied. The issue of how interventions are applied was further emphasized from a different dimension when a respondent pointed out a loophole in government services to farmers:

You know, in the first to five years when people are getting established....it's not those that are established that need the help, it's those that are trying to get off the ground because there is so much overhead. And the cost for equipment and land clearing and you know it just goes on and on. It seems like there is something missing from when the first start-up, it's kind of there is a gap there and then they come back into the picture, you know, the ones that can make have been established for five years plus, or lifetime, or something. I just feel like it was good when we first started, the support seems to be there, there was help there and then, I don't know what happened, I don't know if they had cutbacks or what happened, but all those information sessions went away. (Farm 06)

The quote speaks to two important themes: 1) a situation where 'the how' of an intervention can undermine motivation; and 2) policy focus on retention versus simply attraction. On the issue of how, though there is an existing support system, the application techniques hinder the success of such efforts. For the respondent, failing to get support at the early stage led to a loss of hope in government. Also, the respondent's claim that there

is lack of support at the beginning, and government only helped those already established relates to the idea of concentration on successful farmers and neglect of the attraction component. As another respondent argued, "There are agricultural programs that will help out, but they don't help younger [beginning] people as well as they help established farms" (Farm 06). The quote speaks to the larger issue of limited support for beginning farmers — a claim officials denied cautiously. Some officials argued that the government only wants to support farmers who make a significant impact on the sector — an argument backed by the pre-requisites for obtaining government support. The requirement of backing only successful farmers puts new entrants at a disadvantage, a sentiment expressed by both farmers and some officials. However, government needed to find value for money as another official justified. The issue of limited supported to beginners is also evident in how the province defines new entrants. The provincial Agri-food Assistance Program 2018-2019 guide stipulated: "For the purposes of this program, a New Entrant is defined as someone intending to establish an agribusiness in the province of Newfoundland and Labrador or who has been operating an agribusiness for less than six years regardless of the level of agricultural sales" (Department of Fisheries, Forestry and Agrifoods, NL, 2018: 1). Such a definition holds consequences for the demographic progress of the industry, as interested people may not get the needed support to enter the sector, and new entrants who make it may not be able to survive in there for long. Likewise, the theme of government policy being skewed against a particular group, the study has revealed, reflects large-scale farmers inclined initiatives. This idea was noted by many small farmers and officials as well:

[...] A lot of agriculture reps doesn't even look at someone who wants to open up a farm on an acre to five acres. They want you to come in with 60 acres, 80

acres, 100 acres, they want you to be big. (Farm 06)

As argued by the respondent, government's inability to separate large and small-scale farmers puts the little guys⁷ at a disadvantage. The issue is extrinsically linked to the earlier view on making a significant contribution to the industry, a requirement that makes a small farmer unable to compete with the larger ones. This view reinforces government's cooperative approach to agriculture—a sentiment another respondent passionately argued for in Chapter 5 — a situation which maligns small farmers and undermines their contribution to food and agriculture. Aside from the disadvantage to small farmers, the skewed attention also manifests as support for conventional farmers, as organic producers claimed to have limited interest from government policy. And for this group, their only hope is left in the hands of the civil society, who share their values. This bias towards certain groups is also reflected in program requirements which put small farmers and organic producers at a disadvantage. Requirements include: farmers need to gain a gross revenue of \$15,000 a year; have a five-year business plan done by a professional; there is no funding for organic soil enhancements, and they must bring in significant investment. These are a few of the blockages respondents noted -which are also evident in the provincial Agri-foods Assistance program (Department of Fisheries, Forestry and Agrifoods, NL, 2018)- which undermines small farmers and keeps them from successfully gaining support. Some officials did justify these requirements, noting that this is the only way they could determine if a person is serious about farming, a point which they backed by what exists in other provinces in Canada. The back and forth between policy makers and beneficiaries reflect a broader discussion of tensions in policy environments (Jennings

⁷ Little Guys is an industry jargon for small farmers in the province

& Hoffman, 2017). Also related to the program requirements, and possibly a transition between policy and its implementation are the loopholes created by language. The use of languages like “bring significant investment”, “make an impact”, and many others in the policy setting are left undefined. This creates scenarios which leaves certain decisions to the discretion of officials. A finding an official confirmed through the story of a small new entrant:

[.....] when I did my assessment I strongly encouraged this application to go through but unfortunately it goes through an implementation committee where people see all the applications across the province. And unfortunately, her project was not going to have big enough impact and so they denied the funding. So as a new farmer who is in their 20s in a very.., I guess it’s a discouraging situation where they feel we were not there to support them in expanding, although we [some officials] thought they were doing everything right.[.....] So, they are basically saying no to the application when everybody said yes. And she may or may not get this piece of land, and now this piece of land is only about 5 acres but just moving from one to five, this may be a lot of work to her. She did put in application through our funding programs but due to volume of applications that we receive this year, the project that she had was just judged too small to have an impact, a significant impact on the agricultural industry. (Official 01)

Narrating the story of the young farmer, the respondent brings forth two issues already mentioned. First, large farmers competing against small farmers for the same support, a situation which technically put the smaller farmers at a disadvantage. Second, how interpretation of policy language could disrupt implementation processes, a position evident in the assessment that the farmer is not making a significant impact on the agricultural industry. As Yanow (1993) has argued, policy communication, which reflects in the language, among other elements, plays a role in implementation. When a policy is not written well, it leaves loopholes in interpretation and could undermine the success of implementation. And this finding tie into the broad issue of policy interpretation (Yanow,

1993).

In terms of implementation, many issues undermine farmer attraction and retention policies, and agricultural interventions in general, in Newfoundland and Labrador. The study has revealed issues which negatively impact the achievement of the aims of attraction and retention and which are embedded in the actual implementation process of various interventions. One such issue is lack of advertisement of programs. A policy which is human focused and needs the patronage of people can largely be successful if people are aware of its existence. Farming, and the case of farmer attraction in particular, reflects why reaching out to people could be important to success, but intervening policy implementation in Newfoundland and Labrador is confined to the farm community. Farmers argued that there is a limited advertisement of initiatives outside the realms of the industry, which makes it difficult for people to even know of the support systems available, a claim an official subtly confirmed, but defended, stating that:

[...] it depends on the individual. They have to be motivated to contact us. They are gonna need an information service if they contact us but we don't go knocking on their doors saying who wants to be a farmer? So those individuals, it's an incentive for those individuals to contact us. Nobody probably in the world put in so much effort.....expanding the agricultural industry. [...] So, we put in a tremendous amount of effort in the successful operation. (Official 05)

In the quote above, the official is defensive of the government's approach of not going out to get people interested in farming. According to the official, they will rather prefer to be contacted, only then can the commitment of the person be known. This assertion and its application to the implementation of interventions contradicts the finding in the previous chapter, on how motivations are created and sustained. The finding as well

preaches perfection and immediate success, with no room for experimentation. The approach undermines the undeniable and established fallibility of all humans (Bishop, 2017; Crowe, 2016). This research has shown that, even when an individual has a general interest in farming, policy actions that have a role in translating it into action are not considered in the process of implementation.

Another issue with implementation revealed by this research was the lack of coordination in intervening policy, a situation the researcher as well observed working with the industry. The lack of coordination is reflected in two spheres: 1) the silo thinking approach applied to each farmer; and 2) the lack of partnerships in the process of attracting and retaining farmers. For the silo thinking situation, farmers argued that the government deals with each person individually, a situation they think can be improved if actions were more collective:

Yes, because they treat...the government treats every individual like a sack, like a silo, right? Like they...they will look at one farm and say we will deal with your needs. But instead of looking at a group of farms and say, and say you all have a similar type of needs, how can we work together with all the farms? (Farm 02)

As the respondent noted, government interventions treat farmers individually, instead of looking for collective actions. Respondents noted that this approach leads to duplication of efforts and undermines the benefits of working together. This research could not ascertain why government adopts such an approach to implementing policy actions, but this could be attributed to the individual nature of farm business, and possible in-house competitions in the agriculture industry. For officials, farms are independent operations and should be treated as such. Whatever the reason may be, this finding also

relates to the role of collectivism, and of a farm community in motivating farmers, as noted in Chapter 5. The second component of this theme relates to lack of partnership, an overreaching issue which reflects how institutions work together in the cause of attracting and retaining farmers. Both officials and farmers acknowledged that there was limited synergy among different interventions, and especially between the farm community and institutions. For instance, while there are different farm level activities that work in educating and mentoring people interested in farming, there is limited knowledge of these initiatives among officials in the industry. However, coordination, as Brinkerhoff (1996) puts it, is important in achieving broader impacts of a policy. Lack of coordination in this sense, therefore, has the tendency to undermine how interventions may achieve eventual aims.

Finally, as typifies government actions, red tape was raised by respondents as inhibiting the success of intervening policies. A respondent, describing the experience of getting into agriculture, noted that: “With the government, there was a lot of red tape. Having someone take you seriously was also a challenge. No one took you seriously, and when you say I am going into farming, they will look at you and laugh”. (Farm 04). The respondents thus argued that there is red tape in accessing support, a point confirmed by the time it takes to get land approval, as well as the program requirements raised earlier in this section. Red tape is not new to policy, especially in the government arena (Bozeman & Anderson, 2016; Kaufman, 2015), but researchers have worked in many ways to contribute to reducing its impacts in practice. A contextual study in Newfoundland and Labrador on how this manifest in agriculture, and how it can be minimized will contribute to enhancing policy outcomes in the long run. The discussions

thus far have highlighted issues embedded in the agricultural environment, and specifically related to attraction and retention of farmers. These issues bring forth important elements that can contribute to enhancing any policy environment.

6.5 Conclusion

This chapter has examined policy interventions which are specifically aimed at attracting and retaining farmers in Newfoundland and Labrador and enhancing the capacity of the agricultural industry in general. It has argued that, despite the multi-actor driven diverse policy actions which target various capacity sectors of the industry, farmer attraction and retention will not be achieved if the structural issues including subjective policy language, red tape, stringent program requirements, and excessive focus on conventional farming, lack of partnership and silo approach to farms, embedded in the policy environment are not overcome. Also, such interventions may not be successful if the emotionally driven discourses within the policy environment, which highlights the need to consider human psychology elements including motivation, are not adequately understood and incorporated in policy design and implementation processes. Policy mobility, as the study has shown, through common interventions in areas including financial incentivising, education and skill training and land reforms in Newfoundland and Labrador, Canada and around the globe, may facilitate processes, especially at a time when most issues like the demographic challenge in agriculture wear global lenses. Yet, policy design and implementation need to acknowledge the social, cultural, economic, political environments in which it operates, and to contextualize such factors, to be effective. This is because there are structural issues in how policy approaches problems,

how it is designed, and implemented. These structural issues are context-driven, and do undermine how beneficiaries perceive, accept, and participate in policy actions.

The conclusions in this chapter provide a background to the advancement of farmer attraction and retention policies and practice, as well as further research within local policy environments. The conclusions can also facilitate policy making and implementation in general, to get the maximum benefits of intervening actions targeted at solving societal problems. The highlights on emotions and the diversity of assessment of policy interventions bring to light why implementation actors must be wary of the environment, and this is important for the practice of policy at the local level. Likewise, the need for further research in how to overcome structural issues within the policy setting, and to understand the direct impact of such issues at various stages of the policy cycle has become apparent.

Chapter 7: Conclusion, Summaries, and the Way Forward

7.1 General Conclusion

The demographic challenges in the Newfoundland and Labrador agricultural industry calls for policy actions and research to address these issues. However, academic literature frequently comments on agricultural policy in general (Tongs, 2008; Pratley, 2000) without specific focus on the issues like farmer attraction and retention. The literature also seems to be missing Newfoundland-specific examples, and it is perhaps also missing an analysis that links policy with motivation theory. This thesis bridges those knowledge gaps by assessing policy interventions to attract and retain farmers and considers how motivations could provide inputs into such policies. Farmer attraction and retention is approached with the notion that there is a link between human motivations and policy outcomes. Policy actions need to acknowledge such linkages to better achieve intended outcomes. To bring forth this idea, the decision to farm and to stay in the sector is explained through the lens of self-determination (Deci & Ryan, 1991; Ryan & Deci, 2016), and how people's need to reach that influences their decision to choose agriculture. The study has shown that motivations are heuristic — they manifest in different forms and stages: 1) the general motives that create an interest in an activity; 2) the specific triggering experiences; and 3) the sustaining and reinforcement factors. People are specifically motivated by their need for autonomy, competence, and relatedness. These needs manifest in different forms and influence the decision to farm variedly. However, the achievement of these needs and the motivations of people into agriculture are undermined by challenges

including access to land, inadequate finance, skewed government policies towards large-scale and conventional agriculture, among others.

These challenges are embedded within agriculture and beyond, and they overlap with social policy, economics, and the institutional settings. If well nurtured, factors including policy actions can facilitate an interest in farming. The study has also shown that diverse policy actions are employed to attract and retain farmers. These areas of policy include education and skill development; institutional capacity building; informational and resource support; financial incentivizing; land reforms; and changes in institutional operational procedures. These actions are not peculiar to Newfoundland and Labrador, but they are evident in other parts of Canada, and around the world, which reflects the mobility of policies (Cochrane & Ward, 2012; McCann & Ward, 2011). The environment in which these policies operate is fraught with emotions of satisfaction, dissatisfaction, contentment, optimism, lack of trust, among others which shape and influence how interventions are perceived, accepted, and patronized by potential beneficiaries. The emotions in the policy setting also reveal structural issues which are embedded in policy design and implementation, including the need to understand the real motives of farmers, which can be incorporated into interventions. These emotions also advance the argument of incorporating human behavioural elements into policy processes.

The two distinct yet interconnected themes of farmer motivations and policy actions to attract and retain farmers have been nested in the entire thesis. The relationship created by the interlinking of these themes holds broader implications for policy and research. The findings of the research can inform policy in varied ways, including how policies can

motivate people and how emotions in policy environments can be channelled to enhance outcomes. The research also acknowledges the need to incorporate human psychological elements – for example, emotions (Durnová, 2015); motivations (Ryan, 2012) and the fallibility of people (Bishop, 2017; Crowe, 2016) – in policy actions. Motivation theory is also advanced by the arguments of how monetary incentives and the absence of certain factors in society contributes to generating and sustaining interest in farming. The distinction made among general motivations, triggering factors, and sustaining and reinforcement also moves the field of motivation forward. This distinction can spur specific research in understanding each of these elements and stages of human motivation in different context.

7.2 Summary of Research Findings and Implications

This thesis used the agricultural industry in Newfoundland and Labrador to investigate and appreciate issues around farmer attraction and retention, and how motivation may influence policy actions towards the subject matter. The choice of the topic and setting was largely based on the declining and ageing farmer populations which the researcher noticed while trying to become familiar with the agricultural setting in the province. In the paragraphs that follow, the chapters produced in this research are summarised and harmonized along the three objectives set out at the beginning of the study in Chapter 1.

The study aimed to 1) **understand what motivate farmers in Newfoundland and Labrador and the implications of that to attraction and retention of people to agriculture**. In Chapter 4 and Chapter 5, the concept of motivation is employed through

self-determination theory (Ryan & Deci, 1991: 2016) to adduce what drives people into agriculture, to get them started and staying in farming. The study has shown that human motivations towards activities like farming can best be described as heuristic and built on different phases/stages. The idea of general interest (Ryan, 2012), motivation triggering through initial intention (Ajzen, 1991; 1988) and the setting into motion, and the need for reinforcement and perseverance (Ryan & Deci, 2000) is introduced to give clearer understanding of what makes people go into farming. In Chapter 4, the general motivation to be a farmer and the decision to start farming are introduced as a broad peculiarity that should be understood to inform policy. People cultivate the general interest to farm through experiences or contact with agriculture, the connection to a community or a place, the closeness of farming to nature, the need for volition, and the competence in farming gained through varied means. The general interest has the tendency to influence the decision to start farming, however, triggers are sometimes needed to get the action started or to create the initial intention. Triggers such as family advice, identification of a gap/problem or opportunity in society, loss of jobs, along with others are revealed. The idea of sustaining and reinforcing motivation (Deci & Ryan, 2012) is highlighted in Chapter 5 to show that in the midst of interest-thwarting, human actions can still be promoted and moved forward. Government policies, the value of a farm as a property, the connection to customers, ability to control one's own life and stay attached to the family, belonging to a community, and being close to nature are some of the factors that help to sustain interest and retain farmers.

The discussions in Chapter 4 and Chapter 5 emphasized the need to differentiate the three aforementioned levels of motivations in an activity like farming — needing long-term commitment. Entrenched in the three broad themes are also how the need for

competence, autonomy, and relatedness (Gagne & Deci, 2005; Ryan & Deci, 2000) influence the decision to farm. The study has shown that people farm to achieve autonomy. Central to the discussion of autonomy is an important finding of this research: a distinction is made between freedom and independence, and how both may differ from volition which is important to farmers in NL. Other studies have attributed freedom and independence to farming (Hamill, 2012), but this study partly refutes that claim in the case of Newfoundland and Labrador. Rather, the study has showed that farming largely gives volition, which must be differentiated from being independent and free, as argued by Ryan in Deci et al. (2017). Farming is treated like a business; hence, the participant is an entrepreneur (Njeru & Mwangi, 2015; Tongs, 2008) and therefore enjoys some level of autonomy. So, people get into agriculture to have the volition associated with making decisions and having control over one's own life as an entrepreneur. But in whatever form one decides to describe it, the need for autonomy is important in the decision to enter and stay in farming. Also, this research revealed that farming is a skill activity, and those involved in it feel competent regarding their work. Farmers derived their knowledge which leads them to becoming competent from family, from school, the internet, or a blend of these sources. Others relied on other sources including colleagues and communities. The ability gives farmers the confidence to see farming as *their thing*. Farmers appreciate their products, and this reflects the belief in themselves and their work. This feeling ultimately provides them with a drive to be farmers. Finally, the need to be related to the elements in the broader environment manifested in being a part of a community, an ecosystem, a family, or other elements are integral to the decision to enter and stay in farming. The idea of relatedness, as it were, appears to be so important to many farmers. This finding speaks to how people internalize

external factors to gain intrinsic satisfaction towards self-determination (Ryan & Deci, 2000). Hence, policy actions can target these needs in an individual to channel that into attracting and retaining farmers.

The study has also shown that farming is a deliberate action, and people decide to engage in it from their own will. The will provides them with internal satisfaction: causing intrinsic motivation (Block & Landgraf, 2016). Due to the intrinsic nature, the decision to farm can best be described as autonomous rather than controlled. There are, however, some extrinsic motives - for example monetary incentives (Rural Futures Report, 2007, cited in Hamill, 2012) - which may have a role to play in the decision to farm. These are however not considered much of a motivating factor by many farmers because, to many of them, the occupation cannot provide the high revenues needed to have a good life. Other elements including the sense of place, connection to food, amongst others, are external, but cannot be described as controlling the decision to farm. These elements are internalized (Ryan & Deci, 2000) by the individual over time to create an intrinsic satisfaction from engaging in agriculture. Thus, the desire for farming as an activity can be cultivated in a person. So, targeted efforts, when well executed, can create and turn such external motives into internal satisfaction to attract and retain farmers.

The ideas advanced in Chapter 4 and in Chapter 5 are used to emphasize the diversity of factors which influence the decision to farm, and these hold implications for farmer attraction and retention. From the internal satisfaction from farming to the external motivating factors, how each of these elements is incorporated into policy can help attract and retain people in agriculture. Picking up from that analogy, Chapter 6 focus on 2) **policy**

interventions to attract and retain farmers in Newfoundland and Labrador — the second objective of the research. The idea of policy mobility (Cochrane, & Ward, 2012) is taken up to show that similar intervening actions including education and capacity building, land reforms, institutional support, informational and resource support schemes which are employed around Canada and other parts of the world are as well used in the province. The manifestation of policy mobility in farmer attraction and retention interventions is applied through the contextualizing (Cochrane & Ward, 2012) of broader initiatives used in other places. This means that the province can continue to learn from other areas, but only when care is taken in how such policies can be applied at home. Within the application of these policy actions are specific initiatives put forward by multi-stakeholders including government, NGOs, industry associations, community organizations, and farms. The revelation of diverse actions undertaken by different actors implies that policy is not the sole responsibility of one actor; hence, there are opportunities to build partnerships to execute interventions for attraction and retention of farmers.

Throughout the discussions in Chapter 4, Chapter 5, and Chapter 6, many issues which ultimately influence farmer attraction and retention are revealed. The intersection point of motivation and policy intervention are blurry, but there are 3) **challenges and constraints which impact and undermine farmer attraction and retention in Newfoundland and Labrador**. These challenges are embedded in Chapter 5, where motivation thwarting factors are discussed, and in Chapter 6, where structural issues in intervening policies are introduced from the emotionally driven discourse. The study has shown that the same issues that facilitate attraction and retention of farmers can also thwart them by frustrating motivations. In Chapter 5, the literature on existing challenges in

agriculture (Leavy & Hossain, 2014; Susilowati, 2014), and in Newfoundland and Labrador specifically (Cadigan, 1998; Quinlan, 2012) are expanded, to show how unfavourable government policies, inadequate access to land, finance, and markets, among other factors thwarts people's interest to enter into agriculture and also frustrate existing farmers. The idea of motivation thwarting (Ryan & Deci, 2012) is taken up to show that specific events and experiences including physicality of farming, loss of farming communities, and accrued debts hinder the motivation of existing farmers, and they impact on the attraction and retention of people into agriculture. In Chapter 6, structural issues in policy environments are introduced, and employed to explain how existing problems in policy design, approaches, and implementation mechanisms impact on farmer attraction and retention.

As farming is a social (Leavy & Hossain 2014; Matheson, 2017) and economic (AAFC, 2010; Leavy & Hossain 2014; Tongs, 2008) activity, the policy environment in which it operates is fraught with emotions, including satisfaction and agreements, dissatisfaction, suspicion, and optimism and hope, which ultimately influence outcomes of interventions. These emotions generate a discourse in the policy environment which brings forth structural issues which undermine the effectiveness of policies, and farmer attraction and retention in particular by upsetting interest. Farmers find solace in perseverance to keep going. Skewed policies that favour large-scale conventional farmers and undermine small-scale farmer and organic producers shut the door for people who wish to enter agriculture through different models. Additionally, unequal competition in the policy environment, unfavourable requirements for accessing government support, the use of policy language that leaves room for interpretation, red tape, and limited support for new

entrants all hinder processes of entering into agriculture and also frustrate retention efforts. Through the emotionally driven discourse and the back and forth between policy beneficiaries and officials, there is a clear indication of a limited room for experimentation. Policy actions leave limited room for experimentation. This manifests in the need for proof of success to gain support, the desire to also help people who can make an impact, and the provisions to support only committed people. However, uncertainties associated with farming (Matheson, 2017; Tongs, 2008) defeat this policy approach, and this also explains why the structural issues need to be addressed. The existence of motivation-thwarting elements and structural issues means that the mere presence of interventions may not bring the needed change to solve the demographic challenges in the agricultural industry, unless deliberate efforts are made to eliminate the effects of those elements.

Deep-seated in each chapter are discussions that revealed knowledge gaps and areas where further inquiries may be needed to advance motivation theory, and to better the understanding of attraction and retention of people into agriculture. First, the review of literature and the empirical data have shown that farmer attraction and retention is globally engaged but locally embedded. Though the concept appears straightforward, it is not well defined in academic spheres. There are limited focused studies that have noticeably discussed this issue, especially from the policy perspective. The research has defined these terms and builds on it to empirically examine how that manifests in Newfoundland and Labrador. Further research on the topic will be needed if the attraction and retention of farmers will make waves in policy and academic cycles. Studies that either duplicate or expand the current research in different context must be pursued by researchers interested in agricultural policy, and food security. The ageing and the declining number of farmers

in the province and other parts of the world further explain why such studies are needed. This is because, with these problems, the food needs of the population will be difficult to meet without sufficient number of people in the industry.

The study also brings forth insights that contribute to the development of motivation theories. It sheds more light on motivation and some general determinants of human actions. More broadly, the discussion of motivation is presented in a three-stage outlook: general motivation, triggers, and sustaining and reinforcement. The approach opens new frontiers of research into applying the concept to human actions that span long periods. The holistic measurement of motivation towards acts like farming may hide important insights needed to understand the phenomenon. Further studies could build upon these distinctions to get specific inputs. Also, a noticeable finding is the difference between independence and freedom, how those differ from volition and their relation to autonomy, an issue which has been mentioned in the literature (see Chirkov et al., 2003; Deci, et al., 2017; Deci & Ryan, 2012). The study qualitatively explained this contention in the literature (Deci, et al., 2017) to advance motivation theory. Not only does this finding made clear the distinction, but it has shown how the qualitative understanding of human values and characteristics can provide important inputs to motivational theory — and probably justifies the field of qualitative psychology. So, going forward, a similar approach, which uses qualitative techniques in understanding motivation would help expand the concept. Another important contribution is the role of monetary incentives in motivating people. The study has expanded on how monetary motives play into generating interest in farming. As respondents mentioned, despite limited financial returns, farming always continued. This goes on to explain that engaging in agriculture sometimes goes beyond the monetary

return, to comprise the need for other elements including the farm community and government policies. For instance, the existence of an active farming community will increase the visibility of agriculture and also ensure that farmers benefit from each other by sharing resources and knowledge. All these can help make farming attractive for people with the interest, and also keep those already in the industry in it for long.

This research has also highlighted, in different ways, how farmers are motivated. It has also discussed existing interventions for attraction and retention of people in agriculture. The study has shown that these two elements are disconnected but need to be intrinsically linked in policy to enhance effectiveness. The study has set alight this path of connection, highlighting what motivates farmers, and how some of these elements inadvertently are reflected in existing interventions. Further research that specifically assesses the policy environment to understand how motivations, and human characteristics and values more generally can be incorporated in policies across scales will help advance the connection this study has brought forth. Also, this research has primarily tried to explain farmer attraction and retention, dwelling on the motivations of people already engaged in agriculture. To further understand the barriers to farmer attraction and retention, an extended research which incorporates potential farmers, possibly people that have already expressed interest, and the general population will give a broader view of the demographic challenge in Newfoundland and Labrador agriculture. Finally, the finding that the absence of certain necessities or opportunities in society can generate interest and motivate people also needs further attention. As the study has shown through the absence of organic products grown in the province which prompted some people to engage in agriculture, a gap or problem in society can serve as a motivation to engaging in an act.

That finding, and argument may hold for other human behaviours beyond the decision to farm, hence further inquiries which engages that topic may contribute to advancing motivation theory.

7.3 The Way Forward- Intervening to Attract and Retain Farmers

The research has shown that there are general challenges and some structural issues which undermine the effectiveness of interventions to attract and retain farmers. This and many other findings can be addressed through policy. Going forward, the following recommendations are made to government, and other actors in the Newfoundland and Labrador agricultural policy environment to guide future actions in attracting and retaining farmers in the province.

Human Characteristics and Value Sensitive Policies: A policy is a human activity, made to inform change in society that manifest in people (Birkland, 2015; Dror, 2017). The study has shown that policy environments are fraught with emotions, which shape, inform and reveals the diversity of issues. Farming is about choices, and policies that aim to influence decisions towards that must take into consideration human characteristics and values, and their emotional effects, including the motivations of people. Another important human characteristic is the natural tendencies to make mistakes, especially for activities which require skills. The current policy environment leaves no room for experimentation, and only appreciates demonstration of commitment and immediate success. However, for agriculture, people are bound to go through hard times and learn from mistakes, as farmers have noted. Giving a human face to the policy actions will take them close to their reality—a human act — and will help yield desired outcomes.

Beyond Land and Finance: Government and other stakeholders who work to promote attraction and retention of farmers must look beyond land and financial support, though they are also necessary. As the study has shown, a wide range of factors influence people's decision to farm and incorporating such factors into incentive packages will go a long way to attract and retain farmers. For example, the study has shown that hands-on experiences, family, and other factors trigger, reinforce and sustain motivation. When policy efforts go beyond land and finance to incorporate some of the other motivational elements, it will open up the spheres of influence for intervening actions.

Diversity-Conscious Approach to Agriculture: A government must appreciate the diversity that agriculture has embraced in recent times. Just as people farm for different reasons, they also have different model paths they choose to engage in. Agriculture must be approached in a way that both recognizes this diversity and also provides the needed environment to support it. For instance, the new wave for small-scale agriculture and growing demand for organic products (Altieri, 2009; Horrigan, Lawrence, & Walker, 2002) has resulted in the proliferation of these models into the system. Existing support systems and new policy actions need to acknowledge the presence of the growing diversity and look beyond the current focus on industrial large-scale agriculture, to ensure that people who wish to enter agriculture through those routes do not feel unwelcome, as is in the case of Newfoundland and Labrador currently. An all-encompassing approach, when adequately employed, will ensure the boundary of agriculture is extended beyond the conventional large-scale farmer.

Sector and Model Focused Approaches: An approach that distinguishes on the specific sectors or farm models while embracing the diversity should be developed through new interventions. As the study has shown, people wish to farm in different ways, including small farms, large farms, family farms, co-ops, among others. A combination of all the diverse models under the same umbrella may crowd out the interest in sectors like small farmers and organic producers. To overcome this barrier, model specific programs, with qualification requirements tailored to each, can be developed. Such an approach which can have separate programs, for example, one for new entrants or for small farmers, will ensure that the people of the same capacities compete on similar grounds for existing support schemes. Not only will that ensure competition is fair, but it will create trust in the government policies. When people have trust in government services, they will be in a better position to accept and participate in its actions (Torney-Purta, Barber, & Richardson, 2004).

Partnerships: Partnerships are essential ingredients in the development context, and when well cultivated, can be utilized to achieve collective goals. Strong partnerships must be built to pursue farmer attraction and retention efforts. In agriculture, as the study has shown, the issue of farmer attraction and retention is on the agenda of many institutions: government, NGOs, farmers, etc. If well managed, partnerships can be built among this wide range of actors to facilitate implementation of policy actions. In fact, the government can consider delegating certain projects to other institution, even if they still hold control over them, to implement. Such an approach could also enhance monitoring and evaluation of policy actions.

Human Resource Capacity Building: Stakeholders must take agricultural education seriously to enhance the human resource capacity of the industry, albeit from the qualitative standpoint. Skill development plays an important role in developing people for any industry, and farming is no exception to this (Dodd, 2012). As Dodd (2012) argued, it has become crucial for stakeholders to adopt mechanisms that add value to the agricultural human resource through education and skill training. Likewise, skill development plays an important role in the formation of minds, and ultimately how people accept agriculture (Mwaura, 2012). For Newfoundland and Labrador, the non-existence of an agricultural school, and needed infrastructure to support capacity building efforts (Quinlan, 2012) reveals a shortfall that needs to be addressed. Efforts to build the capacity of existing institutions to get them up to a stage where they can lead the human resource development agenda will help enhance attraction and retention of farmers. Beyond the formal education, facilities and programs that get people to have hands-on experience should be set up in the province. The issue of capacity building is beyond the sole duty of government, and other actors should have a role to play as well. Non-governmental organizations should continue with the current works on food awareness, but that should be intensified and possibly expanded to include other aspects of agriculture-example-farm practice. Farmers can as well operate more open-door policies that allow people interested in agriculture to gain experience through their farms.

The Farming Community: The social life of a farmer is an integral part of the decision to be in agriculture and to stay in the sector, this study has revealed. Policy efforts must be made towards creating a farming community that thrives on collective success. The Humber Valley Agricultural Strategy that was built on the idea of clustering (Dolter

& Abdulai, 2017) is an important step towards achieving this goal. More efforts need to be made in similar directions, possibly in other parts of the province. Research has shown that clustering has been successful in developing agriculture in many places (Dolter, 2018). Adopting such a technique will contribute to attracting people as the farm community will become more diversified and connected in ways that allows different components of the supply chain to also interact. This will ensure agriculture also become more visible and create an aura around the sector in the province. Likewise, existing farmers will benefit from a vibrant community that provides support to each other in varied ways. A strong farming community will not only serve these purposes but will also show outsiders the commitment to develop the industry.

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Appendix A: Overview of Policy Actions across Canada

Table A.1 Overview of National Interventions⁸

Program/ Territories	Description and Motive	Potential Impact
Advance Payments Program	The program supports young farmers and new entrants who are not yet well established in the industry. A cash advance of the value of products is paid to farmers before production to get them motivated to produce. The beneficiaries then repay the amount as they harvest and sell their final product. This program helps farmers to keep up with the huge capital requirements at the start of the season. It has the potential to encourage farmers to stay in the industry.	Retention
AgriCompetitiveness	The program is an indirect intervention that supports developing, young and established farmers through third-party nonprofit organizations. The program provides support to these organizations who in turn use it to strengthen capacities of farmers in different aspects including but not limited to: farm business management; farm safety; and farmer leadership.	Attraction and Retention
Agricultural Youth Green Jobs Initiative	The project provides funds to organizations to support young people who want to take up agriculture related internships, which have benefit for the environment. The aim of the project is to cultivate young people's interest in agricultural careers. It is also used to provide exposure to agriculture to people who may later develop interest in farming.	Attraction
Agri-Food Trade Service	This project is an informational piece; it offers a consolidated access to market information; counselling for trade activities; and export support services to either individual farmers or industry organizations. The support provided by this program is vital in making farmers abreast with the rudiments of their industry to sustain them in the sector.	Retention
AgriInsurance	The program supports farmers with an insurance scheme that protects them against natural hazards. Farmers who are registered under the program are protected from different hazards of their choices to help minimize the financial risk that could lead to exodus of farmers. This is important to help keep farmers in the face of unforeseen hazards in agriculture.	Retention
AgriInvest	AgriInvest provides farmers and food producers with matching contributions through a scheme that allows beneficiaries to make annual deposits to an AgriInvest account. The funds are then used to help manage income declines or make investments to mitigate risks in the sector.	Retention

⁸The programs depicted in this section were taken from AgPal, the Federal government database that outlines all existing policy actions or initiatives in each province in Canada—(see <http://www.agpal.ca/#/search/>)

	The support against risk is essential in keeping farmers in the industry.	
AgriRisk Initiatives	This initiative is an organizational focused action. Financial and technical support is provided to agricultural organizations to enhance the development and adoption of private-sector or other producer-paid agrarian risk management tools. These organizations work with farmers to enhance their capacities.	Retention
AgriStability	The program is a stabilization initiative meant to sustain farmers. Financial support is provided to farmers, mostly to large-scale, who experience declining profits. The program helps stabilize their operations during those periods to keep them in the sector.	Retention
AgriRecovery	AgriRecovery is made up of many initiatives which farmers are required to enrol on. The initiatives are designed to help producers with the extraordinary costs necessary to resume business operations or contain the impacts after a disaster. Financial support is provided to the producers to recover them from the unforeseen disruptions that undermine their operational sustenance.	Retention
Career Focus Program	The Career Focus Program is an institutional support scheme. In the program, institutions are funded to create agricultural internships that provide people with interest in the sector an opportunity to develop their careers. The program has the potential to get people interested in farming, or related activities, after going through such internships.	Attraction
Canadian Agricultural Loans Act Program (CALA)	The program is an attraction focused initiative that aims to support young and new entrants through loan schemes. Loans are provided to the farmers and agricultural co-operatives to support establishment and development of farm operations.	Attraction and Retention
Farm Debt Mediation Service	The program supports farmers and producers through financial counselling and mediation services in times of difficulties. It is largely for people already operating in the industry.	Retention
Agritalent	The program is an informational piece of interventions focused on providing people with knowledge of existing learning resources. Operated in a bilingual platform, Agritalent serves as a database where people interested in Agriculture can access information on where to find the right education or training opportunities in the country. The program is administered by Canadian Agricultural Human Resource Council administers the program.	Attraction
Farm Credit Canada (FCC) Ag Knowledge Exchange	The program provides people with opportunities to learn about farm management. Operated as a free program, it builds the capacity of potential and existing farmers in areas of farm management. It equips them with skill-sets needed to successfully manage farm businesses.	Attraction and Retention

FCC Farm Financing and FCC Crop Input Financing	In this scheme, people are given some financial support to operate their farm businesses. There are two loan programs operated by FCC to support people to start up or expand operations in the agricultural sector. While the Farm Financing is general to the agricultural industry, the Crop Input Financing is a sector focused initiative. They both aim to increase access to cheap loans for people to develop agricultural businesses.	Attraction and Retention
Managing Risk in Agriculture <i>Canadian Farm Learning Centre</i>	This program is an educational piece, and it aims to get farmers at speed with farm risk. The program is an online course. Participants are taught about some of the risks they face in farm operations and how that could be managed. The program has the potential to prevent farmer exodus emanating from failed operations.	Retention
AgriWorkforce Diversity	The program is a gender-focused intervention that aims to increase the participation of women in agriculture. The program seeks to increase women participation at various levels in agriculture, and to get them involved in a sector where their chances appear bleak. The program has the potential to reach out to women to engage in farming activities, and it could facilitate attraction of female farmers.	Attraction

Source: *Agriculture and Agri-foods Canada, (2017: 2018)*

Table A.2 Overview of Interventions across Canada

Province	Program	Implementing Agency	Description and Motive	Potential Impact
Newfoundland and Labrador	New Farmer Guide	Young Farmers Forum	The farmers' Guide is a resource prepared to provide information to new entrants on services available and other things to expect in the industry. The purpose is to ensure new entrants have the information for successful enterprises. It removes the barriers to information which could have otherwise undermine the success of people who show interest in farming.	Attraction
	Mentorship Pilot Program	Young Farmers Forum	This program is a pilot program that mimics similar ones across the country. Interested farmers are attached to mentors to get hands-on experience before beginning their own operations. The purpose is to “encourage the successful establishment of new farms in Newfoundland and Labrador and make the next generation of farmers have more tools at their disposal to contribute to their success.” (YFF, 2017: 2)	Attraction
	Agricultural Sector Work Plan	The government of Newfoundland and Labrador and others	The Agriculture Sector Work Plan is a policy document commissioned by the provincial government and other organizations to outline the way forward for agriculture in Newfoundland and Labrador. As a sector-wide plan, the document outlines the directions the industry will follow in the coming years. Among some of the areas	Attraction and Retention

			<p>described in the program are efforts to attract and retain farmers, as it can be seen in the following directions areas:</p> <ul style="list-style-type: none"> • Improve the Crown land approval process to create further opportunities for existing farmers and new entrants to the sector by reducing approval times. • Review and strengthen the development conditions on agriculture leases to ensure that farmland is actually for their intended purpose, and land that is not active or in development can be made available for other farmers. • Designate Provincial Government industry facilitators to liaise with new entrants or existing producers in early stages of development or expansion to guide them through provincial policies and support programs. • Identify new land for agricultural zoning in Labrador, including encouraging the use of the land already identified. • Consider the needs of existing and new entrants and the agriculture sector more broadly, as part of the on-going 	
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			<p>provincial review of business financing, including application, assessment and appeal criteria, and effort to make the provincial programs more reflective of current industry needs.</p> <ul style="list-style-type: none"> • Continue to provide post-secondary education in agriculture-related studies and develop new potential programming and articulations among programs. 	
	Provincial Agrifoods Assistance Program	The government of Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods	<p>The program is a provincial program, that evolves annually, with components that seek to enhance the development of the agricultural industry. As described directly in the program guide, "the Provincial Agrifoods Assistance Program (PAAP) provides financial assistance to eligible applicants involved in primary or secondary processing activities which will improve the economic viability of the agriculture and agrifoods industry; promote commercialization and growth in the sector; and enhance the competitive capability of the agriculture and agrifoods industry. The program may also provide selective assistance to regional pastures, agribusinesses, and agricultural groups for initiatives that support the priorities of the program".</p>	Attraction and Retention

			<p>Funding priority will be placed on those projects that:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Result in the development of new agricultural land through rough clearing and enhancement; <input type="checkbox"/> Support and enhance the development of Community pastures; <input type="checkbox"/> Address an identified need of the farm and/or the agrifoods industry; <input type="checkbox"/> Improve the profitability of the farm(s); <input type="checkbox"/> Enhance farm productivity and efficiencies; <input type="checkbox"/> Advance technology adoption and farm sales growth; <input type="checkbox"/> Improve economic viability of the agriculture and agrifoods industry; or <input type="checkbox"/> Enhance the competitive capability of the agriculture and agrifoods industry. <p>Government of Newfoundland and Labrador (2017: 1-20)</p>	
	Provincial Agrifoods Assistance Program-Land Development	Government of Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods	The land development program is a component of then Provincial Agrifoods Assistance Program. The program provides support to new and old farmers to get land ready for production. This involves financial support to clear or enhance land for production.	Attraction and Retention
	Provincial Agrifoods Assistance Program-Infrastructure Development	Government of Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods	This is the infrastructure development component of the Provincial Agrifoods Assistance Program. The program supports farmers in purchasing equipment or putting up the needed	Attraction and Retention

			infrastructure like greenhouses, barns, storage facilities, so on to enhance production.	
	Agriculture Access Road and Electrical Program	Government Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods Land Resource Stewardship Division	The Agriculture Access Road and Electrical Program aims to increase farm efficiency and promote the development of agriculture. The program provides off-farm access roads and electrical service that help create the needed environment to support farm operations.	Attraction and Retention
	Farm Business Planning Farm Business Management and Training	Government Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods Land Resource Stewardship Division	The Agriculture Business Development Division offers a wide range of farm business management training courses and workshops ranging from business planning sessions to farm business analysis. The Farm Business Planning Program provides advisory services for the development of a Farm Business Plan.	Attraction and Retention
	Farm Management Advisory Service	Government Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods Land Resource Stewardship Division	Through the Farm Management Advisory Service, Regional Farm Management Specialists are available to provide a variety of business management services to the farming community.	Attraction and Retention
	Real Property Tax Exemption	Government Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods Land Resource Stewardship Division	The Real Property Tax Exemption Program for agricultural land is designed to identify productive farm land and farm buildings used in connection with farm production. Eligible properties are exempted from real property tax in accordance with the Municipalities Act. This program can help lessen the burden on farmers and encourage people to put	Attraction and Retention

			up the needed infrastructure for agricultural activities.	
	Growing Forward	Growing Forward	Growing Forward 2 is a five-year federal-provincial-territorial agreement intended to achieve a profitable, sustainable, competitive and innovative agriculture, agri-foods and agri-products industry. Growing Forward 2 in Newfoundland and Labrador provides \$37 million to the agriculture and agri-foods industry through government investment into three priority areas to advance and strengthen the sector: Innovation, Competitiveness and Market Development and Adaptability and Industry Capacity. This Program will expire March 31, 2018.	Attraction and Retention
	Agriculture Land Development Initiative	Government Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods Land Resource Stewardship Division	The Agriculture Land Development Initiative contributes to solutions that enhance the productive capacity of agricultural land in the province and to improve the productivity and sustainability of agricultural land resources to address food security, feed self-sufficiency and crop management practices.	Attraction and Retention
	Agri-Insurance	Government Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods Land Resource Stewardship Division	Agri-Insurance is designed as a management tool to provide vegetable producers with a measure of income protection against uncontrollable natural perils.	Retention
	Business Development Initiative	Government Newfoundland and Labrador, Department of	The Business Development Initiative assists the agri-foods industry to better	Retention

		Fisheries, Forestry and Agrifoods Land Resource Stewardship Division	understand and manage their financial performance and/or identify and adapt to new and changing market opportunities.	
	Future Farms Initiative	Government Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods Land Resource Stewardship Division	The Future Farms Initiative enables the Newfoundland and Labrador agri-foods industry to attract new entrepreneurs and investment to improve and maintain its productive capacity, including the facilitation of farm and agri-business transfers. This initiative is important in getting new entrants into the sector.	Attraction
	Human Resource Development Initiative	Government Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods Land Resource Stewardship Division	The Human Resource Development Initiative contributes to the development and transfer of knowledge, skills, tools and services available to participants in the agriculture, agri-foods and agri-products industry in Newfoundland and Labrador. Investments are made in knowledge and skills training such as industry specific training opportunities, innovative product and process technology training, human resource development exchanges, conferences and workshops necessary to enable the profitability, adaptability and sustainability of agri-businesses in Newfoundland and Labrador.	Retention
	Agriculture Innovation Initiative	Government of Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods, Growing Forward 2 Program	This was a component of the broad Growing Forward 2 program. The program aimed to facilitate the growth of a competitive and sustainable agri-foods industry. In this program,	Retention

			financial support is provided to “facilitate the development or adoption of new or improved products, processes, or practices, and through knowledge and information sharing.”	
	Agriculture Land Consolidation	Government Newfoundland and Labrador, Department of Fisheries, Forestry and Agrifoods Land Resource Stewardship Division	The Agriculture Land Consolidation Program is a government initiative to purchase granted lands suitable for agriculture from their owners. The program is to create more agricultural land and to prevent suitable lands from being turned into other uses. It is an initiatives that works to make more land available for agricultural activities in the province.	Attraction and Retention
Newfoundland, Nova Scotia, Prince Edward Island, New Brunswick	Business Development Program - ACOA	Atlantic Canada Opportunities Agency	The program provides access to interest-free, unsecured, repayable contributions to businesses including farm enterprises to start, expand or advance. As a business inclined project, the program is important in supporting agricultural activities in the Atlantic regions.	Attraction and Retention
Newfoundland, Nova Scotia, Prince Edward Island, New Brunswick	Grow a Farmer-Apprenticeship and Mentorship Program	Atlantic Canadian Organic Regional Network (ACORN)	This program is a model-focused initiative; it seeks to attract people into organic farming. The program offers apprenticeship and mentorship through collaboration with farms, to engage people who show interest in organic farming. The farms "deliver comprehensive curriculum-oriented farm-based apprenticeships and mentorships to those seeking experiential education in organic agriculture."	Attraction

Prince Edward Island (PEI)	AgriStability	Prince Edward Island - Agriculture and Fisheries	This is a PEI version of the broader AgriStability program implemented across Canada. The program is a stabilization initiative meant to sustain farmers by providing financial support for large farmers who experience declining profits, to keep them in the sector.	Retention
	Buy PEI Initiative: Agri-Food Promotion Program	Prince Edward Island Department of Agriculture	The purpose of this program is to fund activities that increase visibility, awareness and knowledge of locally grown agricultural products and the individuals that produce them. The program has the potential to get people develop interest in local agriculture that could lead to attraction into the sector. The exposure given to existing farmers can also keep them in the sector as they see their work valued.	Attraction and Retention
	PEI 4-H	Prince Edward Island 4-H	Like all 4-H program across the country and other parts of North America, this program develops the potential of youth by exposing them to different career options, including agriculture. The young people are enrolled into different skill-based activities from which they acquire hands-on experiences. These experiences have the potential of turning into useful skills and possible future careers of the participants.	Attraction
	Starting a Farm in Prince Edward Island	Prince Edward Island Department of Agriculture and Fisheries	The program is a resource support scheme that exposes people interested in agriculture to the services available in the province. The "resource	Attraction and Retention

			outlines the support, training and services offered to help new and transitioning farmers to create a profitable and sustainable farm business." The document is mainly for new entrants, but it can equally be useful to people already operating in the industry.	
	Guide for Beginning Farmers on Agriculture and Prince Edward Island	Prince Edward Island Department of Agriculture and Fisheries	The program is an informational piece that provides new entrants with the needed information on where to get the right support. The guide support interested people by getting them to know the preparation and what is involved in the process before a person begin farming.	Attraction
	Growing the Island Way The Next Chapter for the Agriculture and Agri-Food Economy of Prince Edward Island	Commission on the Future of Agriculture and Agri-Food on Prince Edward Island	The program is a broad developmental initiative that focusses much on agriculture. As a policy document, it provides a direction to the agricultural sector in the province and places it at the centre of economic development. One prominent component of the plan is the commitment to attract and retain farmers.	Attraction and Retention
Nova Scotia	Agricultural Education/Awareness	Nova Scotia Department of Agriculture, Agriculture & Food Operations Branch, Advisory Services Division	This is an awareness campaign that seeks to enhance the image of agriculture in the province. It adopts a diverse range of mechanisms to equip people with information about agriculture and its general role society.	Attraction
	Building Industry Capacity Program	Nova Scotia Department of Agriculture, Programs and Business Risk Management (PBRM)	The program intends to enhance the general capacity of agriculture in the province. It supports projects of diverse forms that exhibit potential of a sector-wise benefit.	Retention

	Farm Innovation Program	Nova Scotia Department of Agriculture, Programs and Business Risk Management Division	This program aims to enhance profits of farmers. The aim is achieved by supporting them to adopt innovative technologies that improve their productivity.	Retention
	Farm Safety Nova Scotia	Farm Safety Nova Scotia	This program aims to ensure the safety of farmers in the province. It supports farmers in areas related to farm safety by providing guidelines to operations. The initiative does this through advocacy, awareness, training, and education to farmers.	Retention
	FarmNEXT Program	Nova Scotia Department of Agriculture, Programs and Business Risk Management (PBRM)	This is a pull approach to the attraction of farmers. The program incentivizes people interested in agriculture to set up farms in the province. The program is in the form of loans, which are made available to people interested in establishing farms in the province. The program funds reduce the loan principal to provide a stronger equity position to new farmers in their starting year of operation.	Attraction
	Field Services	Nova Scotia Department of Agriculture, Agriculture & Food Operations Branch, Advisory Services Division	This is a government service scheme that gives farmers access to experts, who work in decentralized regional offices. The role of these experts is to help farmers and other clients with information, advice, and referrals that can enhance their operations.	Attraction and Retention
	Graduate Research Training Initiative Scholarship Program	Dalhousie University Faculty of Agriculture, Research and Graduate Studies	This is a scholarship scheme set up to support Canadian students studying in the area of agriculture, at the Dalhousie University's, Faculty of Agriculture. It encourages people to take up agricultural related courses at the higher	Attraction

			level. This initiatives has the potential to direct people into agricultural occupations to support the industry in the province.	
	Nova Scotia Crop and Livestock Insurance Commission (AgriInsurance)	Nova Scotia Crop and Livestock Insurance Commission	This is an insurance program that covers loss and yield reductions for farmers caused by natural occurrences. Farmers are required to insure their crops, and in return, the program provides the needed support in time of crop losses.	Retention
	Nova Scotia Farm Loan Board – Lending Services	Nova Scotia Farm Loan Board	The initiative is a credit scheme designed to support agricultural producers and people in forestry in rural areas of the province. It provides lending services to these people to support their operations.	Retention
	Open Farm Day	Nova Scotia Federation of Agriculture	It is a farm outreach that is carried out annually. Each year, farms are advertised to the public, and interested people can tour the farms to learn more about agriculture in the province.	Attraction and Retention
	Perennial Innovation Centre	Perennial	Perennial Innovation Centre conducts many activities on behalf of the provincial government. It supports farmers in many aspects, aspects including research, and farm services. The operations of this entity shows efforts to use partnerships to develop agriculture in the province.	
	Rural Leadership	Nova Scotia Department of Agriculture, Agriculture & Food Operations Branch, Extension and Outreach Division	The project is a leadership development component that supports the 4-H clubs in the province. Young leaders, working as coordinators, provide leadership support to the 4-H program, agricultural organizations, and other community groups to promote diversity of	Attraction

			development in rural areas of Nova Scotia. The initiatives helps to support development in rural communities, which in turn may influence farming activities in those areas.	
	School Garden Project	Nova Scotia Department of Agriculture, Agriculture & Food Operations Branch, Advisory Services Division	This a school garden program designed to get younger kids acquainted with agriculture. It supports public schools interested in establishing gardens with a \$500.00 grant.	Attraction
	THINKFARM Initiative	Nova Scotia Department of Agriculture, THINKFARM Working Group	This initiative supports new and transitioning farmers by providing them with needed information kits, and outreach activities. Information that enhances access to programs and advisory services are also provided to get farmers acquainted to available support in the province.	Attraction and Retention
	Teacher Resources	Nova Scotia Department of Agriculture, Agriculture & Food Operations Branch, Advisory Services Division	This is an educational piece of encouraging agriculture. It is a program that is set up into the educational system of the province, where, guides, handbooks, and other support for classroom activities are provided to teachers.	Attraction
New Brunswick	A Road Map for New Entrants to Agriculture	New Brunswick Department of Agriculture, Aquaculture & Fisheries (DAAF)	The roadmap is a document, an information piece, created to guide potential farmers through the steps needed to get started. It serves as a guide on how to access the required services to start a farm in the province.	Attraction
	Advancing Agriculture Through Season Extension and On-Farm Storage Technologies	New Brunswick Agriculture, Aquaculture and Fisheries, Sector Specialist Services (Branch)	This is a sector-focused program that assists people in small fruit and mixed vegetable farming to enhance their margins. It involves support to procure equipment and technologies that increase	Retention

			their growing season, to help keep them operational for long periods in the year.	
	Agri-Food Market Development Program	New Brunswick Agriculture, Aquaculture and Fisheries, Innovation and Market Development (Branch)	This is a buy local inspired program that assists in creating markets for agricultural products produced in the province.	Retention
	Agri-environmental Clubs	New Brunswick Soil and Crop Improvement Association	The program builds on the social connections needed to sustain a sector. It operates by way of clubs that bring farmers together to assist each other issues related to farm environmental sustainability and other matters related to keeping farms safe.	Retention
	AgriInvest Program	New Brunswick Agriculture, Aquaculture and Fisheries, Financial Programs Branch	This is a profit sustenance program that gives producers a kind of safety net from net-income declines. The program protects the margins of farmers and helps reduce risks through making funds available for investments.	Retention
	AgriStability Program	New Brunswick Agriculture, Aquaculture and Fisheries, Industry Financial Programs (Branch)	Just like the national AgriStability, this provincial program protects the margins of farmers, by assisting them when their profits fall below 70% of a set historical benchmark. A benchmark is set based on previous records, and this serves as the guide to gauge payments when there is a high fall in profits in a particular year.	Retention
	Agricultural Insurance	New Brunswick Agriculture, Aquaculture and Fisheries, NB Agricultural Insurance Commission	This is an agricultural-focused insurance scheme that supports farmers against natural disturbances like drought, flood, excessive moisture, insect infestation, and so	Retention

			on that could run a producer out of business.	
	Agricultural Land Enhancement Program	New Brunswick Agriculture, Aquaculture and Fisheries, Sector Specialist Services (Branch)	The program is a land-focused initiative, and it aims to create new farmlands or enhance the productivity of old ones. It adopts sustainable crop rotation systems and increased land base for crops production.	Retention
	Agriculture Direct Loans	New Brunswick Agriculture, Aquaculture and Fisheries, Industry Financial Programs (Branch)	Supports farmers with financial assistance (loans), and projects strategically designed in line with the provincial government agricultural focus areas.	Attraction and Retention
	Agriculture by Choice Program	New Brunswick Agriculture, Aquaculture and Fisheries, Industry Financial Programs (Branch)	This is a beginner-inclined program that provides some resources to new farmers. It also supports organizations, mostly producer entities, to develop and deliver awareness programs to the farm community.	Attraction
	Crown Lands - Lease for Agricultural Purposes	New Brunswick Agriculture, Aquaculture and Fisheries, Leasing and Licensing (Branch)	This also a land-based program that makes land available for agricultural purposes. In this set-up, Crown Land may be leased from the Agricultural Department to start or expand farm operations.	Attraction and Retention
	New Entrant Farmer Loan Program	New Brunswick Agriculture, Aquaculture and Fisheries, Industry Financial Programs (Branch)	Under this program, new entrants get access to loans to start, expand or advance up their agricultural operations. The programmer is mainly for new entrants and can help attract more people into the sector.	Attraction
	New Mentorship Program	Agricultural Alliance of New Brunswick	The mentorship program links people interested in farming to those already engaged in it. The program has two components. The first component connects people showing interest in cultivating to existing farmers to gain experience that turn the	Attraction and Retention

			interest into an action. The second component links those who have exited the program or existing farmers who want to learn something new or broaden their ideas to other farmers who can help in that direction. The motive of the program is to incentives people to start farming and or stay in the sector.	
Quebec	Quebec Economic Development Program (QEDP) - Improve a business's productivity	Government of Canada	The program supports the development of companies, including those related to agriculture. This is done by helping entrepreneurs and businesses either directly or through support organizations to enhance the performance.	Attraction
	Agricultural Exhibitions	Quebec Ministry of Agriculture, Fisheries and Food	There are exhibitions carried out to showcase the agricultural industry in the province.	Attraction and Retention
	Farm Property Tax Credit Program	Quebec Ministry of Agriculture, Fisheries and Food	The program gives tax credits to farms in the province. This usually applies to farms which are in designated agricultural lands or areas.	Retention
	Quebec Economic Development Program (QEDP) - Market or export	Quebec Economic Development Program (QEDP)	The program provides "repayable contributions or non-repayable contributions" to agricultural activities to support increasing market development.	Attraction and Retention
	Support for conversion to organic farming	Quebec Ministry of Agriculture, Fisheries and Food	This program aims to increase the scope of organic farming in the province, to increase the availability of such products in the market. To achieve this aim, support is provided to develop organic farms and to convert other ones into organic as well.	Attraction and Retention

	Support for the development of agriculture and agri-food in the regions	Quebec Ministry of Agriculture, Fisheries and Food	“This program supports agri-food enterprise adaptation to a context of market openness and access. It is also aimed at mobilizing local development players around collaborative and collective projects and showcase the economic potential of the bio-food industry”.	Retention
Ontario	AgriStability	Agricorp	This provincial program protects the profits of farmers by assisting them in times of substantial declines in margins.	Retention
	Canada-Ontario Environmental Farm Plan (EFP)	Ontario Soil and Crop Improvement Association (OSCIA)	This is an educational program, the two-day workshop is organized to support farmers on the sufficient preparation of farm environmental plans to keep them sustainable.	Retention
	Community Futures Program	Community Futures Ontario	This is an organization that offers diverse programs and services including agricultural support to encourage community economic development and small businesses growth in the province.	Attraction and Retention
	Growing Your Farm Profits Workshop	Ontario Soil and Crop Improvement Association (OSCIA)	"The Growing, Your Farm Profits Workshop, is the starting point for the Business Development for Farm Businesses program under Growing Forward 2 [Ontario Specific]. This free, two-day workshop helps producers assess their current farm management practices, identify priorities and develop action plans aimed at reaching their business goals".	Retention
	Investing in Business Innovation	Government of Canada	In this program, IBI support entrepreneurs including farm enterprises with mentorship, entrepreneurial support,	Attraction and Retention

			and financing to facilitate their growth and development.	
	Production Insurance (PI)	Agricorp	This is an insurance program that covers losses and yield reductions for farmers caused by natural occurrences. Crops that are insured by the producer are eligible for this project.	Retention
	4-H Ontario	4-H Ontario	4-H is a non-profit positive youth-centred development organization which focuses on developing the skill sets of the younger generation. Opportunities to engage in different skill activities that interest in practical ways to get hands-on experiences are given to the youth.	Attraction
	Advanced Agricultural Leadership Program (AALP)	Advanced Agricultural Leadership Program (AALP)	The program is a leadership training scheme; it allows people interested in developing agriculture and food an opportunity to go through a 19-month executive development training. It aims to promote development in rural Ontario by channeling efforts in rural leadership.	Attraction
	AgScape		"AgScape delivers educational programming that connects food, farming, and health, expanding the profile of Ontario's agri-food sector.". This program is essential in linking agriculture to other sectors, increasing its visibility, and growing consciousness about the industry in the province.	Attraction and Retention
	Agricultural Business Management	Ontario Ministry of Agriculture, Food and Ministry of Rural Affairs (OMAFRA)	The program is hosted by OMAFRA and provides support schemes for successful management of businesses, including farm enterprises.	Attraction and Retention

	Agricultural Information Contact Centre	Ontario Ministry of Agriculture, Food and Rural Affairs	This program is an informational and educational informed intervention. It is operated like a call center, for agricultural support. With experience and backgrounds in agriculture and agri-business, the centre's agents are available to answer questions, provide information to help you make decisions, and if needed, put you in touch with one of our experts.	Attraction and Retention
	Agriculture Land Use Planning	Ontario Ministry of Agriculture, Food and Rural Affairs	“OMAFRA has adopted policies to protect agricultural land and farm operations for the long term. Land use planning through documents such as the Greenbelt Plan, 2017; the Nutrient Management Act, 2002; the Farming and Food Production Protection Act, 1998; the Minimum Distance Separation (MDS) Document Formulae; and Guidelines for Livestock Facility and Anaerobic Digester Odour Setbacks; and the Provincial Policy Statement, 2014 help ensure future planning stability in rural areas”. These planning activities can protect agricultural lands and provide the vital input for the development of farming.	Attraction and Retention
	Commodity Loan Program (CLP)	ACC Farmers Financial	This is a loan scheme that supports farmers to carry out different activities to keep up their operations. Activities like crop planting, cultivating, and harvesting is supported to help farmers bear with high capital requirements.	Retention
	Conservation Land Tax Incentive Program (CLTIP)	Ontario Ministry of Agriculture, Food and Rural Affairs	The program provides a tax incentive to activities that promote conservation of land. Agricultural	Attraction and Retention

			activities that meet the requirements are equally eligible for such incentives.	
	Farm Property Class Tax Rate Program	Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) Farm Finance Branch	This is another tax-based policy effort which allows farm properties some leeway in taxes. Eligible activities get to pay only 25% of municipal tax on properties.	Retention
	Rural Economic Development Program	Ontario Ministry of Agriculture, Food and Rural Affairs	The program provides funds to support projects that stimulate economic growth in Ontario's rural and Indigenous communities, and this includes agricultural activities that meet such requirements.	Attraction and Retention
Manitoba	Greenhouse Production	Manitoba Agriculture	The program provides the needed support to help people adopt greenhouse production. It is aimed at helping both new and old farmers who wish to operate under such models.	Attraction and Retention
	Canada-Manitoba Crop Diversification Centre	Canada-Manitoba Crop Diversification Centre	This is a research centre that provides expertise and support for the farm community. The centre undertakes research and furnishes the community with research outputs in areas of technology transfer, crop diversification, and others to help improve production in the province.	Attraction and Retention
	Ag Action Manitoba Program for Industry Organizations	Manitoba Agriculture	This is an institutional support-based program which helps organizations to develop and implement management activities for long-term growth. This includes activities with an agricultural focus. The program targets “includes non-profit organizations that are actively engaged in representing farmers,	Attraction and Retention

			agri-processors, or agri-business members interests, and that are working to further the competitiveness of Manitoba's agriculture sector."	
	Ag Action Manitoba Program for Farmers	Manitoba Agriculture	This was the provincial broad agricultural support scheme that provided support under Growing Forward 2. The program “offers activities for farmers that support the growth and sustainability of primary agriculture” in the province The program has implications for attraction and retention as it provides for both new entrants and old farmers. Support is usually in areas of plant and animal health; Eligible farmers, including young and beginning farmers, can apply for activities that support; Production improvements; adoption of food safety, traceability, biosecurity and animal welfare practices; environmental sustainability; skill development; accessing research; and entering new markets or expanding market share.	Attraction and Retention
	Manitoba’s Local Produce Guide	Manitoba Agriculture	This is an informational and resource support program. It is a guide prepared to guide people on where to purchase local farm products.	Attraction and Retention
	4-H in Manitoba	4H and Manitoba Agriculture	Like other parts of Canada, the 4-H program in Manitoba focuses on developing the skill sets of the younger generation through opportunities to engage in activities that interest them. “Today 4-H clubs are going strong in	Attraction

			Manitoba, driven by thousands of 4-H members and volunteers, plus a strong partnership with Manitoba Agriculture. More than half of the members live on farms and about a third live in rural non-farm areas”.	
	Transition Planning	Manitoba Agriculture	<p>This is a broad policy program which covers diverse areas that help in farm transition in Manitoba. Some of the focus areas as directly related in the program include:</p> <p><u>Transition Planning Guide</u> takes you step by step through the process of creating a transition plan for your agribusiness. Successful transition planning involves looking ahead and planning for the future. Leaving behind a healthy business is essential to keep it viable and profitable for the long term.</p> <p><u>A Guide to Farmland Ownership in Manitoba</u> (PDF 655 KB) explains the factors you should consider when inheriting, buying, renting or leasing farmland. The guide discusses forms of ownership, rights and responsibilities and the legal terms used during the buying, selling and renting processes.</p> <p><u>A Guide to Farm Estate Planning in Manitoba</u> (PDF 1009 KB) prepares families for the successful sale or transfer of the farm business, either within or outside the family. The</p>	Attraction and Retention

			<p>guide explains the considerations of transferring property during your lifetime, transferring property at death and the basics of trusts, insurance and family law.</p> <p>Family Farm Flowchart (PDF 17KB) shows the many considerations involved in transition planning, and how all of these decisions ultimately support family goals.</p>	
Saskatchewan	AgriStability	Saskatchewan Crop Insurance Corporation	Similar to the national AgriStability and that of Nova Scotia, this provincial program protects the margins of farmers, by assisting them in times of significant declines in profits.	Retention
	Agriculture Awareness Initiative Program	Saskatchewan Ministry of Agriculture	The program targets public perception about agriculture and help organizations that carry other educational pieces to enhance the societal view of the industry. It focusses on public's perception of agriculture and its role in the economy, and to help disseminate the benefits of a career in the industry.	Attraction
	Agriculture Knowledge Centre	Saskatchewan Ministry of Agriculture, Agriculture Knowledge Centre	This is an informational program that keeps farmers abreast with topics in crop and livestock production to new research and technology. It also provides them with information on existing programs and services they could avail.	Retention
	Farm Business Development Initiative	Saskatchewan Ministry of Agriculture, Agriculture Knowledge Centre	Provides information, advice, and cost-shared funding available to support farmers develop plans and enhance their skills in specific business areas.	Retention

	Saskatchewan Agriculture Student Scholarship	Saskatchewan Ministry of Agriculture	This is an educational piece to support people ready to carry the message of agriculture across. It is a scholarship scheme awarded to a student who speaks up about agriculture and tells its exciting story in the province.	Attraction
	Saskatchewan Crop Insurance	Saskatchewan Crop Insurance Corporation	This is an organization set up to help producers manage their business risk to keep them producing year after year.	Retention
	Youth Leadership and Mentorship Program	Saskatchewan Ministry of Agriculture	This is a focused organizational program that supports associations which in turn create mentorship schemes to link the youth to existing producers in the province.	Attraction
Alberta	Alberta Green Certificate Program	The government of Alberta, Agriculture and Rural Development, Agricultural Education and Training Branch	Provides training to students to earn a credential leading to a career in agribusiness.	Attraction
	4-H Program	Rural Development /4-H Section Alberta Agriculture and Forestry	Like other parts of Canada, the 4-H program focuses on developing the skill sets of the younger generation through opportunities to engage in activities that interest them.	Attraction
	Ag-Info Centre	Alberta Department of Agriculture and Forestry	Provides a point of contact for members of Alberta's agriculture industry to access specialists, information and services within Alberta Ministry of Agriculture and Forestry.	Attraction and Retention
	Ag-Info Centre	Alberta Department of Agriculture and Forestry	The program provides a news package to Albertans on agriculture, food and beverage production, marketing, research, provincial events and policy, and home gardening.	Attraction and Retention

	Alberta Farm Safety Program	The government of Alberta, Agriculture and Rural Development	Provides educational information to farm families and workers to help integrate best practices into risk management on their agricultural operations.	Retention
British Columbia	Business Knowledge & Strategic Adaptation	BC Ministry of Agriculture - Agri-Food Business Development Program	This a multi-layer program that builds the capacity of farmers through information sessions, workshops, educational sessions, and other advisory services. It enhances the ability of farmers and other agribusinesses to manage their operations in ways that facilitate long-term sustainability.	Retention
	Market Intelligence and Advisory Services	BC Ministry of Agriculture - Market Intelligence and Advisory Services	The program is informational in nature and help producers to find markets-locally and internationally- to help them sell their produce. This program is essential for farmers already in operation in that it allows them to get markets that are important to keep them in production.	Retention
	Canada-BC Agri-Innovation Program	Investment Agriculture Foundation of BC	The program provides monetary support to fund projects which results in commercializing agricultural activities or adopting innovative products and technologies.	Attraction and Retention
	First Nations Agriculture Business Development	BC Ministry of Agriculture - Agri-Food Business Development Program	This program is established to help First Nation Communities in the province. Diverse support schemes are provided to contribute to economic and social development in the communities.	Attraction and Retention
	Strengthening Farming Program	BC Ministry of Agriculture, Agricultural Land Commission	This program is an inclined connection scheme which seeks to improve relations between different levels of government and the	Attraction and Retention

			farm community. Through the program, issues of land conflicts, community planning, among others are solved to promote agricultural development in the province.	
	The Smart Farm Project	Deer Crossing the Art Farm Society	The smart farm project adopts high density informed techniques to promote agriculture on small plots of land. "The Smart Farm Project explores whether increased density on such lots using low footprint cluster designs could catalyze small farms and provide affordable housing for the younger generation of farmers we so desperately need."	Attraction
North West Territories; Yukon, Nunavut	Entrepreneurship and Business Development (EBD)	Government of Canada	The EBD fund provides support to Aboriginal entrepreneurs, businesses, and commercial entities, in areas including agriculture to expand their business in the three territories.	Attraction and Retention
	Strategic Investments in Northern Economic Development (SINED)	Government of Canada	SINED supports projects, including agricultural enterprises that enhance growth and diversification in Northern areas.	Attraction and Retention

Source: Author's Construct with information from Agriculture and Agri-Food Canada, AGPAL Program and Service Finder⁹ and various websites of provincial agricultural units across Canada

Disclaimers:

This list may not be exhaustive of the recent and current interventions. It however provides an overview of the areas of focus of efforts to get people into agriculture and staying in the sector across Canada.

The language in the tables have been edited to the extent possible. However, some phrases or sentences may still be close to the original text for the purposes of maintaining the meanings of the policy statements.

⁹ <http://www.agpal.ca/#/search>

Appendix B: Interview Guide-Farmers

Section 1: Background Data

1.1 Can you tell me a little about your farming background? (*Inquire about how respondent started farming, specific crops grown, etc.*)

Section 2: Motivation into Farming

2.1 Autonomy: Does being a farmer give you a sense of independence or freedom? How important is it for you to be your own boss for why you're a farmer?

2.1.1 To what extent does being independent influence your decision to farm? or To what extent does the sense of freedom in farming influence your decision to farm?

2.2 Competence: Do you enjoy the work of being a farmer? How important is feeling like you're good at the work influence why you're a farmer?

2.2.1 To what extent does being good at your work influence your decision to start or stay in farming?

2.2.2 Other option: Did you have education/training/apprenticeship to become a farmer and to

what extent did that influence your decision to farm?

2.3 Relatedness: Does farming make you feel connected to people you care about, like family or friends? To what extent does your relationship with people influence your decision to farm?

2.4 To what extent does monetary motive influence your farming decision?

2.5 To what extent does feeding the community and people around give you a sense of encouragement to farm?

2.6. Do you have a big family working with you on the farm and to what extent has that influence your decision to farm?

Section 3: Interventions used to attract, and retain farmers in NL?

3.1 Can you share with me some of the programs in the province you know towards attracting and retaining farmers?

3.2 What specific programs did you benefit from before or during your farming career and what elements of the programs motivated you? (*Financial, land availability, local market availability, training offers, etc*)

(*Please explain what specific things about the program motivated you and the extent to which it has done so*)

Section 4: Stakeholder's views on effectiveness of interventions (Farmer Attraction and Retention and Food Security)

4.1 From your experience with programs, what do you think about their effectiveness in attracting and retaining farmers? (*Inquire about specific programs, program implementation and extent of effectiveness*)

4.2.2 Can you share with me your views on whether or not these intervention programs to facilitate the food security goals of the province? (*Also ask about extent of interventions*)

Section 5: Challenges in Implementing Interventions

5.1 What can prevent you from rolling onto programs aimed at attracting and retaining farmers?

5.2 In your opinion, what are the main hindrances to some of the programs discussed above from achieving their purposes? (Ask about other reasons that generally hinder attraction and retention)

Section 6: Making Farmer attraction in NL effective

6.1 If you were to make changes to current efforts, which areas will you wish to see changes? (*Inquire about recent land availability policy*)

6.2 What can be done to improve current programs to ensure more people are attracted into farming?

6.3 What other mechanism or interventions should be implemented to attract and retain people in farming?

6.4 In general, if you were to advise someone on farming in the province, what will some of the prospects and challenges you will tell the person?

***Note: All questions seeking to understand the degree of impact (the extent to which) will be answered on a five-point Likert scale.*

Appendix C: Interview Guide- Key Informants

1. How are you and your organization involved in agriculture in the province?
2. What is your view on the general state of crop farming in NL?
3. To what extent are you concerned about food security and sufficiency in the province?
4. To what extent are people in the province encouraged about farming? Please give reasons for your answer.
5. Are there barriers that can hinder people from getting motivated to engage in farming? A) Yes B) No. Please explain.
6. Do you think the government is doing enough to support farming A) Yes B) No Please give reasons for your answer
7. Are NGOs working enough to support farming in the province? A) Yes B) No. If yes, to what extent are they helping support farming? Please give a reason for the answer
8. Per your experience in farming in the province, what are some of the programs that have been put in place to attract people into agriculture in the last decade?
9. To what extent can these programs attract people into farming?
Explain your answer
10. What are some of the barriers to effective implementation of these programs?
11. How can these barriers be overcome to make interventions effective?
12. What are the general barriers to attracting and retaining people into farming in this province?
13. Do you think these barriers can be overcome and get more people into farming? A) Yes B) No
If no, please explain why you think so.
If yes, what can be done to motivate people into farming?
- 13 What prospects do you see for farming in NL?
14. What prospects does alternative agriculture/agro-ecology hold for farmer attraction and retention in the province?

Appendix D: Research Information Form

Researcher: *Abdul-Rahim Abdulai*

Project Title: *Building Agricultural (Farming) Capacity in Newfoundland and Labrador: Context, Challenges and Way Forward in Farmer Attraction and Retention*

This is academic research being conducted in part to fulfill the requirements for the Master of Art in Environmental Policy, Memorial University of Newfoundland, Grenfell Campus.

In this project, we seek to understand issues around farmer attraction and retention in Newfoundland and Labrador. We will examine a wide range of issues with focus on deliberate efforts being made to attract and retain farmers in the province. Thus, the study focuses on programs that have been pursued by stakeholders including public and private sectors to get more people interested in taking up agriculture in the province.

This will be achieved by interviewing various actors including farmers and other important actors working in agriculture in the province. Their knowledge on motivations to people getting into agriculture, what is currently being done to attract and retain people, and challenges in attracting and retaining people will be sought through a series of questions.

This is aimed at drawing important inferences on the general state and nature of farmer attraction and retention that will help inform future policies in this direction. Thus, the study will help in the development of the agricultural industry in Newfoundland and beyond as its recommendations will help addressing the key challenges in attracting people into the sector. It will therefore provide important insights that will shape actions intended to get people into agriculture.

Appendix E: Ethics Approval



Research Ethics Board
University Drive, Corner Brook, NL Canada A2H 5G4
Tel: 709-639-2389 Fax: (709) 637-2885 <http://www.grenfell.mun.ca/research-ethics-board>

November 14, 2017

Reference number: 20180683

Dear Abdulai Abdul-Rahim,

I have reviewed your resubmission and clarification of the issues the committee raised about aspects of your application. Your revisions answer all of the questions raised and present acceptable responses to risk and ethical concerns. The committee approves your research plan and wishes you good luck with your work.

John M. Bodner, PhD., Vice-Chair

Appendix F: Consent Form

Research Title: Building Agricultural (Farming) Capacity in Newfoundland and Labrador: Context, Challenges and Way Forward in Farmer Attraction and Retention

Researcher: Abdul-Rahim Abdulai, MA Environmental Policy Candidate, Environmental Policy Institute, Memorial University of Newfoundland, Grenfell Campus.

Supervisors: Roza Tchoukaleyska; Gabriela Sabau and Daniel Nadolny

Purpose of the Research:

The purpose of this research is to study how to recruit and keep farmers in Newfoundland and Labrador. We're examining how effective existing strategies are and what the main people involved think about these strategies. We will also be making recommendations to government and private actors based on our findings, to try to recruit and keep farmers in the province.

What You Will Be Asked to do in the Research: As a participant, you would be expected to have an interview of about 45-60 minutes, sharing your opinions on farmer attraction and retention in Newfoundland. **Risks and Discomforts:** We do not anticipate any risks, discomfort, or harm from your participation in this study.

Benefits of the Research and Benefits to You: By participating in this study, you learn about some of the efforts being made to attract and retain farmers in the province, and share your own experiences, to help create ways to get more people into agriculture in Newfoundland.

Voluntary Participation: Your participation in the study is entirely voluntary, and you may choose to stop participating at any time. Your decision not to volunteer will not influence the nature of the ongoing relationship you may have with the researcher, kind of your relationship with Memorial University or its community in any way either now, or in the future.

Withdrawal from the Study: You can stop participating in the study at any time, for any reason, if you so decide **up until the research is submitted for publication.** Your decision to stop participating, or to refuse to answer particular questions, will not affect your relationship with the researchers, Memorial University, or any other group associated with this project. In the event you withdraw from the study, all related data collected will be immediately destroyed wherever possible.

Confidentiality: All information you supply during the research will be held in confidence, and unless you explicitly indicate your consent, your name will not appear in any report or publication of the study. The interview will be recorded with a digital voice recorder. Your data will be safely stored in a locked facility and only researcher and people directly related to the study will have access to this information. The data will be kept for five years after the end of the project, and will subsequently be destroyed. Confidentiality will be provided fully to the extent possible by law.

Questions About the Research? The proposal for this research has been reviewed by the Grenfell Campus-Research Ethics Board and found to be in compliance with Memorial University's ethics policy. If you have ethical concerns about the research (such as the way you have been treated or your rights as a participant violated), you may contact the Chairperson of the GC-REB through the Grenfell Research Office (GCREB@grenfell.mun.ca) or by calling (709) 639-2399.

Legal Rights and Signatures:

I _____ consent to participate in 'Building Agricultural (Farming) Capacity in Newfoundland: Context, Challenges and Way Forward in Farmer Attraction and Retention' conducted by Abdul-Rahim Abdulai. I have understood the nature of this project and wish to participate. Signing of this form is however not a waiver of any of my legal rights. My signature below indicates my consent.

<u>Participant</u>	<u>Signature</u>	<u>Date</u>
<u>Researcher</u>	<u>Signature</u>	<u>Date</u>

Appendix G: Email Communications-Organizations

Hello,

I am writing to you to see if any of the farmers who are part of your organization may be interested in taking part in a research project that I am conducting. I am a master's in environmental policy student from Grenfell Campus, and my research is about attracting and retaining farmers in Newfoundland and Labrador.

As part of the study, I will be meeting for short interviews with farmers, and other key stakeholders in the Province of Newfoundland and Labrador on issues surrounding farmer attraction and Retention. I'll be asking questions about programs that have helped farmers, as well as what motivates people to become and remain farmers. I am hoping to get input from you or your organization considering your work on agriculture and food security within the Province.

I hope to be granted an opportunity to speak to you on critical issues of farmer attraction and retention including what is being done; motivations; challenges in farmer attraction and retention; and the way forward in terms of future policy.

It is my hope that I will be granted the opportunity to speak to a representative from your organization who is a position to share insights on these issues. I will be available to speak to any representative in person at your convenience.

Yours sincerely

Abdul-Rahim

Appendix H: Advertisement/ Social Media Adds

Abdul-Rahim Abdulai, an MA Environmental Policy Candidate at Grenfell Campus, is seeking to interview participants for his research project titled “*Building Agricultural (Farming) Capacity in Newfoundland: Context, Challenges and Way Forward in Farmer Attraction and Retention.*”

The research is part of the requirement for the fulfilment of the requirements for Master of Arts in Environmental Policy, Memorial University of Newfoundland, Grenfell Campus and the researcher seeks the participation of crop farmers in NL.

Participants are invited to take part in a 30-45-minute interview to discuss issues around farmer attraction and retention with the particular focus on *motivations into farming; programs to attract and retain farmers; challenges and barriers to attracting; and keeping farmers and innovative ways to attract and maintain farmers in the province.*

This is an academic research and participation in is voluntary; however, the researcher hopes to get many participants as possible as he explores issues around the challenged agricultural industry in Newfoundland.

Appendix I: Farmer Motivations Table

	Motivation Question	Very Important	Important	Fairly Important	Slightly Important	Not Important	Total (Percentage)
Q	Autonomy						
1	Does being a farmer give you a sense of independence?	Yes-100			No-0		100
2	Does being a farmer give you a sense of freedom?	Yes-95.75			No-6.25		100
3	To what extent does the sense of freedom in farming influence your decision to farm?	62.5	25	0	0	12.5	100
4	How important is being your own boss influence you to farm?	75	12.5	0	0	12.5	100
5	To what extent does being independent influence your decision to farm?	62.5	18.75	6.25	12.5	0	100
	Competence						
6	Do you enjoy the work of being a farmer?	Yes- 81.25			No-18.75		100
7	How vital is feeling like you're good at the work influence why you're a farmer?	75	25	0	0	0	100
8	To what extent does being good at your work influence your decision to start or stay in farming?	81.25	18.75	0	0	0	100
9	Did you have education/training/apprenticeship to become a farmer	Yes-37.5			No-62.5		100
10	If yes, to what extent did that influence your decision to farm?		18.75	12.5	6.25	0	100
	Relatedness						
11	Does farming make you feel connected to people you care about, like family or friends?	Yes-62.5		No-18.75		Sometimes-12.5	100
12	To what extent does your relationship with people influence your decision to farm?	62.5	12.5	25	0	0	100
13	To what extent does monetary motive influence your farming decision?	18.75	12.5	31.25	37.5	0	100
14	To what extent does feeding the community and people around give	62.5	12.5	25	0	0	100

	you a sense of encouragement to farm?						
15	Do you have a big family working with you on the farm	Yes-0		No- 100		100	
16	If yes, to what extent has that influence your decision to farm?	0	0	0	0	100	