Canadian Food Studies La Revue canadienne des études sur l'alimentation

Original Research Article

Supply management and the business activities of Ontario meat processors

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Abstract

Canadian supply management policies in dairy, poultry and eggs have been hotly debated for over 50 years. During the most recent renegotiation of the North American Free Trade Agreement (NAFTA) in 2017-2018, the U.S. threatened to cancel NAFTA if concessions were not made to Canada's supply management policies in agriculture. During the renegotiation, many arguments for and against supply management in agriculture were repeated, some were updated, and some newer perspectives relating to sustainability and social responsivity were more enthusiastically discussed. Most arguments critical of supply management have been developed using economic analyses of market and industry-level impacts of supply management. On the other hand, supportive arguments are often qualitative, focus on the survival of smaller farms and generally lack empirical investigation based on application of relevant theory. This paper uses management theory to investigate the impact of supply management of management and business activities on food processing firms. We use a framework that links business activities with the broad regulatory environment to interpret evidence from a study of independent meat processors in Ontario, Canada, particularly those that processed turkey, which is a supply managed sector; and pork, which is not. Results suggest that the broad regulatory environment facing Ontario meat processors is of greater concern to managers of independent processing businesses than the specific regulatory environment of supply management. Results also suggest the value creation activities and strategies used by a business may affect how managers assess opportunities and challenges in this specific regulatory environment.

Keywords: Management, public policy, meat industry supply management, international trade, value chains

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DOI: 10.15353/cfs-rcea.v6i2.290
ISSN: 2292-3071

Introduction

In October 2017, the United States government first signalled it might cancel the North American Free Trade Agreement (NAFTA) if Canada did not make concessions to policies that regulate pricing and production for some supply-managed agricultural products. As a result supply management policies covering dairy, chicken, turkey, and egg production in Canada again became the subject of public debate. Beginning in the 1970s, the debate about supply management has made heavy use of research conducted by agricultural economists, who have generally focused on developing market and industry level impacts on economic welfare using econometric analysis grounded in partial-equilibrium micro-economic theory. Proponents of supply management have been supported by a variety of researchers including rural sociologists, selected agricultural economists, geographers and historians whose work has often been dismissed as lacking empirical evidence and focusing too much on the benefits for farmers, and not the impacts on other members of the value chain. However, despite the increasing attention and impact of researchers whose work supports supply management from disciplines such as geography, sociology and history, our research revealed that research grounded in "management theory" was largely absent from *any* work on the conduct and impact of supply management. As such, this research was motivated by the need to add a management theory perspective to the supply management debate in Canada.

This paper presents the results of a study that examined interrelated questions: How do (a) the broad regulatory environment and (b) a specific regulatory environment affect business activities? Both the broad regulatory environment and the specific regulatory environment generally comprise external factors, which means that managers and businesses cannot control them and must instead respond using business strategies (which managers and businesses can control). However, the specific regulatory environment can be influenced by managers' decisions and businesses' activities in the economic and political sphere. This influence is not examined in this paper[1].

The general question examined in this study is: How do the business activities of firms relate to the broad regulatory environment? The specific question is: "How do the business activities of meat processors in Ontario relate to the supply management environment, particularly those that process turkey and pork?" These questions are examined in the contexts of both broad and specific regulatory environments by focusing on how the environment affects business activities. Business activities include any process for making decisions about a business as well as the processes for implementing them. They include management activities termed "functional or primary activities", such as operations and marketing and "support or secondary

[1] The issue of how businesses affect the regulatory environment is important and relevant to understanding how supply management has evolved and impacts businesses, consumers and other stakeholders—but this is not addressed in this paper. Also, the broad regulatory environment may also be affected by lobbying and other activities related to business-government relations, but the impact of these activities is generally considered to have less impact on any one economic sector, industry, or industry segment.

activities" such as human resource management and financial management (Porter, 1985). Both types of activities are important to "value creation", which is the main function of a business. Businesses create value using resources, competencies, and capabilities to create a competitive advantage through superior efficiency, quality and/or superior customer responsiveness (Barney, 1991; Barney, Wright, & Ketchen, 2001).

Given the study's focus on the impact of the broad and specific external environment on the activities of a businesses, it is organized as follows: Section 1 provides a brief background on supply management in agriculture, including an explanation of the key policy instruments and a summary of arguments both supportive and critical of supply management. It concludes by identifying gaps in knowledge about supply management. Because the focus is to understand how regulations in the external environment are linked to business activities, Section 2 describes a framework that links these ideas. In Section 3, the method, logic, and propositions used in this research are described. Section 4 shares results for both the broad regulatory environment and the specific regulatory environment. In Section 5, results are discussed that help us understand the value-creating activities of businesses and how these may be related to supply management regulations. Section 6 presents conclusions and suggests the impact of the broad regulatory environment on business activities is greater than is the impact from the specific regulatory environment that comprises supply management regulations. Implications for policy makers and managers and study limitations are also discussed.

Background

Supply management in Canada

Debates about market interventions preceded the introduction of the Farm Products Marketing Act (1967) in Ontario [2]. Usually, the debate heats up when trade negotiations are under way. The policies that govern the production and marketing of "dairy and feathers"[3] agricultural products have been the subject of reports by academic researchers, policy organizations, think-tanks, consultancies, government enquiry, and media coverage for over 50 years[4]. (Barichello,

[2] The Agricultural Products Marketing Act of Canada (1985) consolidates many regulations for provinces, some of which restrict supply and pricing for some agricultural products; however, the Farm Products Marketing Act of Ontario (Farm Products Marketing Act, R.S.O. 1990) contains the regulations that concern supply management for the production and pricing of turkey in Ontario, so they are the focus here.

[3] Dairy and feathers refers to the product of dairy cows, not other animals that produce milk, while feathers refer to turkeys, chicken and eggs, and does not include ducks and other birds.

[4] The references that are provided in this section are illustrative of the research conducted on supply management. They were selected to provide a general overview of the types of research approaches and output that have been used in the debate. The list is far from exhaustive.

Cranfield, & Meilke, 2009; Forbes, Hughes, & Warley, 1982; Hall-Findlay, 2018; Hoskins, Mumey, & Beck, 1994; Knutson, Romain, Anderson, & Richardson, 1997; Martin & Warley, 1978; Mussel, 2017; Mysicka & McKendry, 2013; van Duren, 1993; van Duren & Brown-Andison, 1995). Most discussion about supply management in Canada's agriculture and food sector, however, has examined the regulations at the level of the market through the lens of "economic welfare". Despite conjecture by economists, there remains a gap in understanding how these regulations are related to the value-creating activities of businesses.

Supply management policies in Canada were created to help producers of some agricultural commodities survive the boom and bust cycles typical for some agricultural products. The term *supply management* in Canada refers to a set of policy instruments enacted through regulations. First, the regulations limit production (the supply) of dairy products, eggs and poultry that can be produced. Second, they set product prices in Canada based on the estimated costs to produce the product. Third, the regulations set limits for import quantities and apply tariffs to ensure the product price can be maintained at its intended set level. Not surprisingly, interpretations of these definitions that have been offered by various stakeholders stress different elements of supply management. For example, some refer to the intended outcome from the regulations such as a "…fair return to the producers…" (FarmStart, 2010, p. 6). Others focus on intervention in a free market. For example, they "replace the supply side of the market place"; Forbes, 1982, p. 27). Others pointed to the similarities between supply management regulations and the agricultural subsidies used in other countries and categorized supply management with other "agricultural commodity stabilization programs" (Spriggs & Van Kooten, 1988, p. 1).

Supply management policies in Canada have legal mandates and the regulations are enacted through regulatory organizations referred to as *marketing boards.* Although the jurisdictional authority of marketing boards in Canada varies by agricultural product, supply management marketing boards are considered to have the greatest authority because their mandate includes (a) the authority to set prices for products, and (b) the authority to control supply of the product by regulating production and marketing using quotas (van Duren & Hansen Sterne, 2015).

Support and criticism of supply management

There are a range of criticisms expressed about supply management in Canada. Most can be organized into three categories: (1) economics-based; (2) consumer-focused, and (3) producer-focused. More recently, more research using sustainability and systems-based perspectives has emerged and we consider these as a fourth category. Much of this research and perspective is generally supportive of supply management.

Economics-based: These criticisms arise from a traditional, economics-based perspective and focus on policy impacts at a market and industry level. These criticisms include, but are not limited to the following:

- the policies constrain and reduce competition and contribute to inefficiencies in the system that lessen overall productive capacity and interfere with free market price signals (Petkanchin, 2006);
- the policies decrease market innovation (Robson & Busby, 2010);
- the policies limit market expansion opportunities (Mussell, 2012); and
- businesses that operate in an environment influenced by marketing boards have little motivation to seize new opportunities or innovate (Forbes, 1982; Thompson, 2011).

Support for the policies note that the policies encourage the viability of small-scale farms without the continual need to increase the scale of production.

Consumer-focused: These criticisms focus on consumer level impacts and argue that supply management policies are unfair for consumers because consumers should not pay unfairly inflated price, and that there is an undue burden on lower-income consumers (Hart, 2005), particularly when these are inflated to cover administrative costs of the board (Sparling, 2011, Tamilia & Charlebois, 2007). While these consumer-level arguments are interesting, they do not address how alternative strategies (for example, subsidies from governments to producers) are considered fairer for consumers or address lower incomes more generally.

Producer-focused: These criticisms focus on producers, specifically primary producers of farmers: (1) the policies create high entry costs due for new producers who must buy quota (Hart, 2005); (2) the policies force the relinquishment of export opportunities in exchange for domestic producer protection (Institute for Competitiveness & Prosperity, 2010); (3) there is a reliance on marketing boards to respond to market changes which leads to a lack of managerial skills (Tamilia & Charlebois, 2007); and, (4) market opportunities are restricted because relationships are limited between producers and processors in value chains (Mussell, 2012).

Sustainability and system-based: There are also arguments supportive of supply management, and many of these have been made producers in supply managed sectors of agriculture and from the organizations that represent them (for example, National Farmers Union). However, given increasing societal interest and concern about sustainability, social responsibility by business and the complexity of value chains and market dynamics in the food system, arguments focusing on these issues have gained more attention, although some of these arguments have been raised in the past[5]. Supportive arguments focus on the benefits to rural communities and to societies from ensuring producers in the value chain are successful. These

[5] Gervais, Guillemette & Romain (2007) provide an in-depth analysis of welfare implications from two different mechanisms for pricing in the Canadian chicken industry providing one illustration of the complexity of food value chains. Supply management may be an appropriate in light of two potential market failures. First, Coffin, Romain and Douglas (1989) argued that market and price risks associated with chicken production and processing activities are significant while no insurance and/or this hedging mechanism exist to perfectly redistribute risks across agents in the supply chain. Second, supply management can potentially counter-balance the existence of market power beyond the farm gate. Fulton and Tang (1999) found significant departures from perfect competition in the chicken industry but could not identify which group exercises market power.

include (but are not limited to): (1) the policies ensure producers are fairly and equitably compensated for their work without requiring government subsidies[6]; (2) the policies support high product quality standards; (3) the policies support rural communities and industries in developing countries are not hurt by exports from developed countries (Oxfam Canada, 2007); (4) there is less waste in the system because resources are more highly valued, and, (5) the policies protect producers from boom and bust cycles of the free market and ensure a consistent, supply of product domestically. Some supportive arguments address broader issues related to larger-scale agricultural production. The policies ensure that waste in the system is reduced because production is limited to only what is needed. Also, the policies support an environment better able to weather climate change impacts (Muirhead & Campbell, 2012). Last, the policies also support improved animal welfare (Qualman, 2012).

On reviewing comments both critical and supportive of supply management, it is noticeable that none address how the regulations supporting supply management might affect the business activities of smaller food *processing* businesses. Some research indicates that large processors may have adjusted to the system without significant adverse impacts on their business, because these larger processors are often multinationals who can manage the impacts of specific regulatory environments across different jurisdictions in which they operate (Larue & Lambert, 2012; van Duren & Brown-Andison, 1995). Some high level executives of these firms will say they have been co-opted. There is much anecdotal evidence about industry-level impacts, but there has been no single study focused on how supply management affects activities at the business level. In the management discipline, this gap is notable because it is at the business-level of analysis where managers consider external environmental factors to make decisions about business strategies and activities.

Supply management and businesses

The context for the supply management debate has been characterized as one of "clashing ideologies" (Mussell, 2010, p. 2). It can be argued that every point of view in the debate makes assumptions arising from a specific worldview, including those from neo-classical economics perspective—for example, a focus on agricultural products as commodities, the growth requirement for welfare, and perceived limits on resources (Hansen Sterne, 2016).

Key arguments in support of supply management policies usually include the following: commodity pricing is fair to businesses at the producer level, pricing is predictable for consumers, quality programs are supported by the industry, farm income is equitable and predictable, rural communities are supported, and the system supports innovation, research, animal welfare, and environmental sustainability (Egg Farmers of Canada, 2015; McIsaac, 2008;

[6] Farmers in supply managed industries are eligible for the same types of generally-available government supports as farmers in other industries, which is consistent with the types of government supports that have evolved as being permissible over several rounds of GATT and WTO negotiations,

Miner, 2011; Nudds, 2012). Until recently, a focus on pricing supports and production limits reinforced the view that agricultural products were commodities without differentiating characteristics. From a management perspective, this limits the competitive strategies available to businesses, but there is evidence that some producers in supply managed industries are innovating to serve new consumer demands (for example, organic turkey, free-range eggs) arising from "new food economies" (Blay-Palmer & Donald, 2006, p. 383; van Duren and Brown-Andison, 1995). New product innovation, however, is only one type of innovation that can create additional value. Product, process, and organization innovation can occur at any level of the value chain (for example, processing or retail levels); it may require collaboration across the chain. Even though producer innovation may be more likely when returns to the business are greater (Pelletier et al., 2018, p 11), others argue that higher returns reduce the incentive to innovate more broadly (Forbes, 1982; Thompson, 2011).

Opponents of supply management also make assumptions. One is that economic growth in industry is important to increasing the welfare of a country's citizens. Growth in size can be achieved by increasing the value of resources without increasing the amount of inputs required or by rearranging the use of resources. Daly (1987) was among the first to observe that economists often approach growth as increased scale rather than "qualitative improvement in the structure, design, and composition of physical stocks and flows, that result from greater knowledge, both of technique *and of purpose*" (italics original, p. 323). Assumptions about growth, therefore, can ignore growth potential using other resources, for example, skills, and competences.

Arguments in the supply management debate have remained similar for decades, so it is important to consider these against the backdrop of changes occurring in some food value chains. For example, there are demand changes that are affecting both production and processing levels of meat value chains from the growth in demand for organic food (Agriculture and Agri-Food Canada, 2017a) and halal meat products (Agriculture and Agri-Food Canada, 2017b). A study by FarmStart argued that supply management has benefits for conventional farming, but should be modernized to address other types of production (e.g. less conventional farming, niche farming), and to address the need for new farmers who are not likely to have the economies of scale to support quota investments (FarmStart, 2010, p. 6).

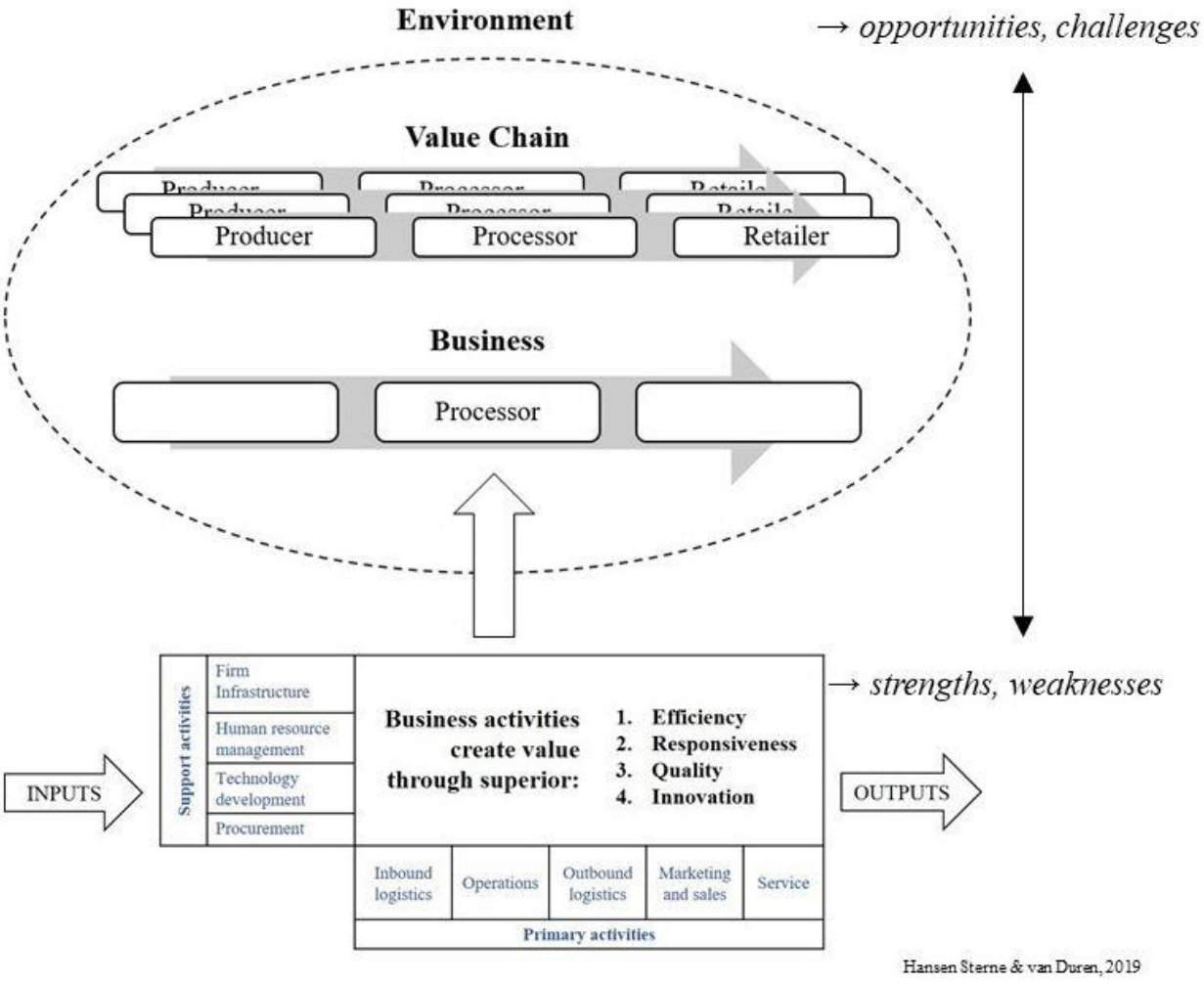
The report further underscores that policies should be modified to meet the needs of producers using a diversified strategy, and it argues that these changes will also help producers increase their resilience by reducing risk (p. 25). If supply management *does* limit producers from adopting a variety of strategies to create value, this may present a problem for some producers. However, it does not necessarily follow that these impacts on producers would have set effects on other levels of the value chain (for example, processors). These businesses do choose the strategy by which they create value. Following this logic, if supply management *does not* limit the strategies available to processors in the value chain, then the processing industry should show evidence that different types of activities are used to create value.

Linking regulatory environments to business activities

Businesses need to create value and earn profits and sustain this dynamic to continue as businesses. To investigate how broad and specific regulatory environments impact business activities, this section links ideas about supply management to frameworks used by management scholars to conceptually link business environments with value creation through business activities.

Management scholars have developed a variety of frameworks to help understand how businesses achieve success. For example. some approaches address the external environment of a business to assess opportunities and challenges; others address exchanges between businesses in value chains. Still others examine how businesses can best create value through business activities. Figure 1 illustrates several levels of analysis used to explain how businesses are successful; these levels and the relation between them are described next.

Figure 1: Environments and business activities



The *environment* of a business comprises many factors (for example, political, economic, social-cultural, technological, legal, and environmental-physical) that create opportunities and challenges for businesses. Managers cannot control these factors but can respond to them using business strategies and activities. *Value chains* comprise organizations that coordinate exchanges of products, processes, and information. Theoretically, each level in the chain can add value as the product, service or technology is transformed from the primary-producer level to retailer[7] level before making its way to an end user.

Next, individual *businesses* create value through activities (Porter & Millar, 1985) and receive profit in exchange for creating this value. Finally, managers direct *primary activities* (for example, operations, marketing activities that relate to the transformation of inputs into outputs) and *secondary activities* (e.g. human resources, procurement that support primary activities) to create a unique competitive advantage (Hill, Jones, & Schilling, 2015, p. 118) that is different from, or better than, that offered by the competition. Value can be created in a variety of ways, but the following approaches are widely considered as useful in guiding managers' decisions:

- Businesses can create value through superior efficiency using economies of scale and process improvements
- Businesses can create value through superior customer responsiveness by focusing on and satisfying customer needs
- Business can create value through superior quality by improving product and service quality and production excellence
- Businesses can create value through superior innovation by focusing on market positioning and research and development activities.

Using these approaches, managers make decisions that coordinate and integrate value creation activities for the business. Their goal is to make the organization successful while taking into consideration the non-controllable factors that present challenges and opportunities in the external environment of the business.

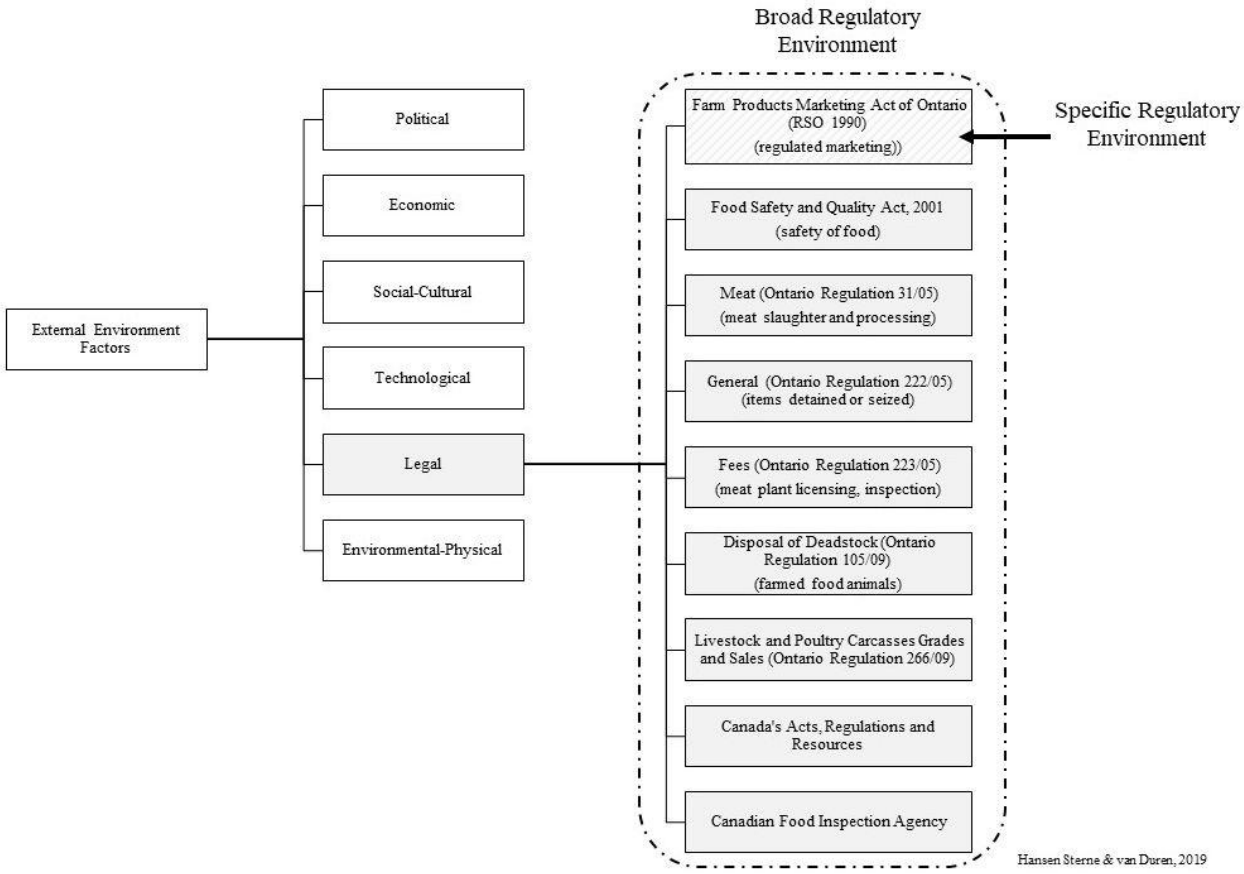
The framework shows one way of thinking about the relationships between the external environment and the activities of businesses; it also provides the logic used to consider the business activities of Ontario meat processors in relation to regulatory factors in the environment. The environment in which businesses operate has many dimensions. Figure 2 attempts to simplify by listing commonly-assessed factors in the environment. One of these are *legal factors* which includes regulations, laws and rules that affect all businesses; this can be referred to as the *broad regulatory environment* of a business. A *specific regulatory environment* can be described as a part of the broad regulatory environment and—in this research—refers to the environment where businesses are subject to supply management policies and regulations.

In this study, we wanted to understand how the business activities of Ontario meat processors relate to broad and specific regulatory environments. Businesses that process turkey

[7] This describes a simple value chain for illustrative purposes.

and/or chicken (for example) operate in a specific regulatory environment (supply management), while businesses that process only beef and/or pork (for example) operate outside it. Most meat processing businesses in Ontario, however, process multiple sources of protein so they operate both inside and outside of the specific regulatory environment of interest (supply management).

Figure 2: Broad and Specific Regulatory Environments of Ontario Meat Processors



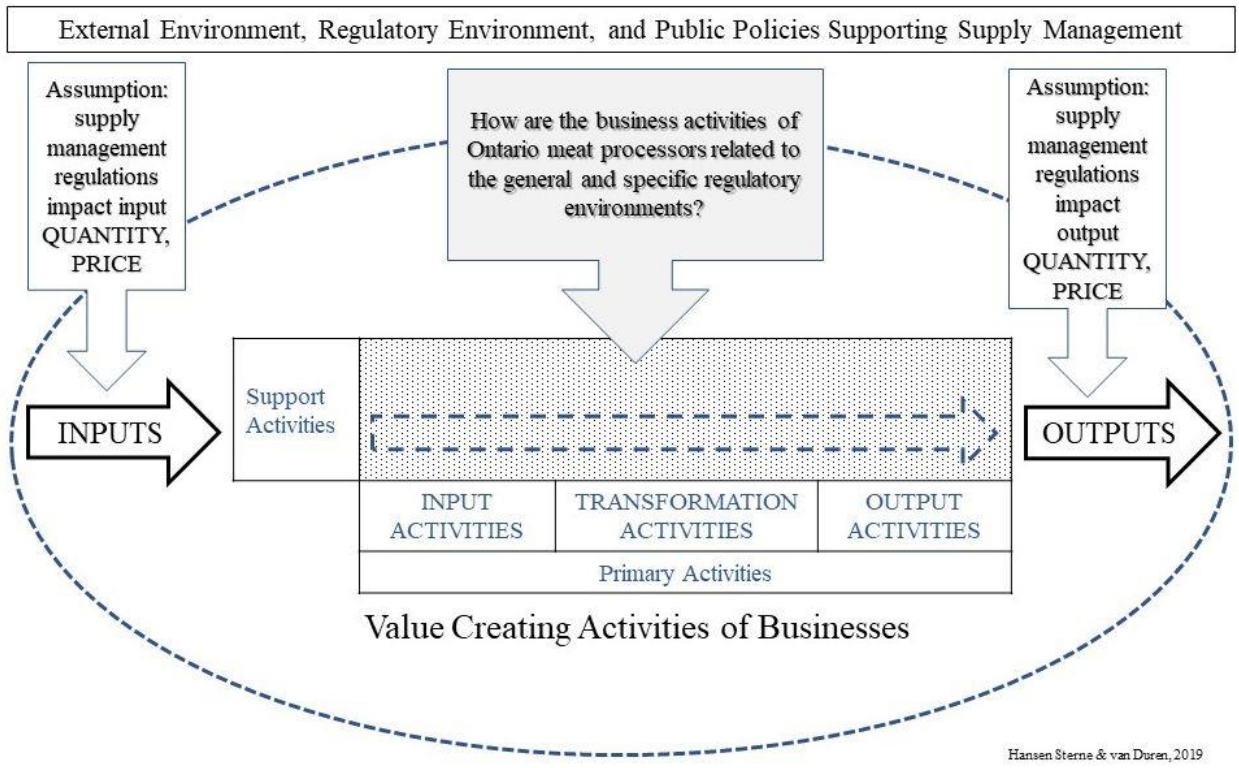
The case research method

The question we sought to answer here is: How do the business activities of Ontario meat processors relate to broad and specific regulatory environments?

Propositions were developed in order to explore the relationship between the specific regulatory context and the business activities of Ontario meat processors and to direct the attention of researchers during the investigation (Yin, 2009, p. 28). Primary business activities were grouped into categories according to their role in value creation, beginning with activities related to the procurement of inputs, the transformation of those inputs, and those related to selling and distributing outputs. Because existing knowledge suggests that supply management affects the quantity and price of supply-managed inputs and outputs, it is logical that business

activities at these phases would be affected for businesses that used supply-managed meats (for example, turkey) in their transformation (processing) activities. Logic also suggests that transformation activities may be impacted by supply management because those businesses processing high value products are more likely to focus on efficiency, decreased waste, or increase product innovation to create value and increase margins. Figure 3 illustrates the assumptions and logic used in creating these propositions.

Figure 3: Logic and propositions linking regulatory environments with business activities.



As part of the case method, two pilot studies were conducted. The first pilot study was conducted for formative reasons and helped to develop interview questions. The second was used to test revisions to the interview guide and to help the researcher gain experience in using the guide. This study's use of case research method of inquiry closely followed Yin's (2009) work. This included the use of an extensive case study database that added data from secondary sources (for example, company websites and media reports) to that collected in interviews.

A multiple case design was used to allow data to be gathered from meat processing businesses in three specific regulatory contexts. The first context comprised businesses that processed meat/poultry inputs from both supply managed *and* non-supply managed producers. The second context comprised businesses that processed inputs only from supply managed producers. The third context comprised businesses that processed inputs only from non-supply managed producers. Replication logic was used to select cases for each context. According to

best practices for case study research methods (Yin, 2009), *literal* replication was used within each context to select cases where similarities were expected while *theoretical* replication was used across contexts to select cases where differences were expected due to the specific regulatory environment.

Results

Results presented here describe the business activities of fourteen Ontario meat processing businesses operating in three regulatory contexts:

1. Ten cases operated in the BOTH regulatory context. These businesses processed multiple meat inputs that were supply managed and not supply managed. Each did process turkey (the supply managed input of interest in the study) *and* pork (the non-supply managed input of interest in the study)[8];
2. Three cases operated in the SM (supply managed) regulatory context. These businesses did not process any non-supply managed inputs. Each of the three businesses processed turkey; and,
3. One case operated in the NSM (non-supply managed) regulatory context. This business processed only non-supply managed inputs and did process pork.

A case study database was used to track descriptive attributes that could be used to categorize cases in the study during analysis. For example, most cases were privately-owned businesses and were also incorporated; nine cases were firms of 30 years of age or more and none of the cases were less than five years in age. Table 1 describes the number of cases in the study by size of the business and provides the number of processing plants in Ontario and Canada for comparison purposes. Table 1 also shows the relatively high number of smaller processors that comprise the meat processing industries in Ontario and Canada.[9]

Analysis of the data comprised a series of steps that were iterative (but described here for simplicity as linear). Transcripts were read, concept maps were created from themes arising from the data, transcripts were read again, data from other sources was entered into case database, data was coded using NVivo software, transcripts were read again to capture illustrative quotations. Analysis continued through writing of individual case reports and comparative reports as recommended by Yin (2009). Inductive reasoning was used throughout the analysis, a practice

[8] The majority of meat processing businesses in Ontario process multiple protein inputs and would be categorized as the BOTH regulatory context.

[9] Further description of the cases is not possible without identifying specific participants.

that allows researchers to explore possible relationships between key concept areas but is not intended to provide causal evidence.

Table 1: Summary of Cases in Study and Number of Businesses Processing Meat (2012)

Firm Size[10]	Cases in Study	Percent of Total	Plants in Ontario	Percent of Total	Plants in Canada	Percent of Total
Micro	1	7.1%	49	18.7%	143	19.7%
Small	9	64.3%	165	63.0%	453	62.3%
Medium	2	14.3%	40	15.3%	108	14.9%
Large	2	14.3%	8	3.1%	23	3.2%
Total	14	100.0%	262	100.0%	727	100.0%

Researchers used *member check strategies* to support quality at two points in the research. First, because participants were assumed to be competent to share what they believed to be true (Hirschman, 1986, p. 244), transcripts of each interview were sent to each manager to confirm their accuracy. This step supported credibility in the research and permitted participants to verify data, make modifications to the transcripts, and offer additional explanatory detail (Bitsch, 2005). Second, member checks also included a presentation of the preliminary results by researchers to an audience of Ontario meat processors at an industry meeting. This step allowed researchers to share initial observations and relevance (Van de Ven, 2007) with an industry group that included participants and non-participants alike. Comments received from this audience indicated that initial results were an accurate representation of what industry managers experienced.

As ten cases of the fourteen were businesses that operated in the both context, researchers had an opportunity to learn from managers who made decisions in both specific regulatory contexts. Evidence about the broad regulatory environment is described first. This provides a backdrop for the evidence presented about the specific regulatory environment described second. Specific quotes from case transcripts are intended to highlight information provided by participants.

Impacts from the broad regulatory environment

Managers were first asked to address opportunities and challenges the business faced in the environment. Responses that related to regulations of any type were classified during analysis as negative, positive, or neutral based on their impact on business activities and are discussed in this order. It is important to note that the comments shared here are not theoretical, but were, in fact, based on the experiences shared by managers in meat processing businesses.

[10] Industry Canada uses the number of fulltime employees to create size ranges that translate to firm size categories: micro = 1 to 4 employees, small = 5 to 99 employees, medium = 100 to 499 employees, and large = 500+ employees. https://www.ic.gc.ca/eic/site/cis-sic.nsf/eng/h_00005.html)

Negative responses

Managers described challenges in the business environment that were related to regulations. These comments related to food safety regulations. Some comments related to interactions between managers and food safety regulation inspectors. Managers described the power or authority of inspectors. One manager indicated food inspectors "win in the end". Inconsistency and lack of transparency emerged as a problem based on the comments of many managers. Managers described a lack of trust and observed that food safety inspectors wouldn't put anything in writing when requested to do so. Some described food safety regulations as impractical or unrealistic, particularly by managers of businesses who had not been subject to a product recall nor a food safety incident. Some described the level of detail in food safety regulations as unnecessary. One manager described highly-detailed, food safety regulations in the industry as open to interpretation, and indicated this caused confusion for managers and time delays for both businesses and value chains.

The detailed and changing nature of these regulations meant time and skill were always required for a business to stay in compliance. Another manager waved a hand toward the end of the office while he described the numerous shelves that held reference binders for different regulations and their updates. Managers noted that the time required to deal with regulations put pressure on other business activities. One described how time resources were always required when regulations were involved. Managers also described that despite frequent updating, labelling regulations had still not kept pace with changing demand. Current labelling regulations, for example, were often a few years old and would not necessarily meet the needs of current customers. Managers also described how business activities were also impacted by regulations that "change an awful lot" in the industry. Regulations could also change or be revised more often than was practical, and regulations rarely had the flexibility to address the unique physical nature of each processing facility. Finally, some managers also described how they had to hire professionals with expertise in meat processing regulations to reduce the time burden of regulatory compliance and free up time for other business activities.

Positive responses

Managers also described opportunities in the business environment related to regulations. These comments also related to food safety regulations. Some described a preference for a relaxed approach with food safety inspectors and considered the inspector as a "third eye" that could make helpful suggestions, particularly for items that may have been overlooked by staff or managers. Food safety regulations could also be viewed as "goals that we strive for" rather than barriers. Managers supported regulations related to consumer health (for example, allergies and food sensitivities) and believed there was value in meeting labelling regulations. Some noted that labelling regulations could form a positive part of sales and marketing activities for some customer segments. Some managers described they had the opportunity to work with the

Canadian Food Inspection Agency (CFIA) to develop practical solutions for a variety of regulatory challenges related to industry food safety. One manager noted it was less stressful if one adopted the mindset that food safety regulations were a necessary part of the regulatory environment; it was best, therefore, to focus attention on the industry benefits received from food safety regulations rather than on complaining about unfair treatment by inspectors. Working with inspectors who knew industry regulations could support product and processing quality and increase processing knowledge.

Neutral responses

Managers also described aspects of the business environment that related to regulations but were categorized as neutral with respect to impact on business activities. They described the need to work with different levels of government to address industry regulations. Managers indicated that regulations were also regularly discussed with other members of the processing industry. Several managers noted on inconsistencies among regulatory jurisdictions (for example, between provinces and countries) but also noted that inconsistences could be problematic for some businesses but not for others. Inconsistences could be related to interprovincial and international differences in export regulations or to gaps between federal and provincial processing standards that consumers had perceived (for example, standards in Ontario versus Canada in the past). Managers also observed that the range of industry regulations and inspections could be considered the foundation of a strong industry, and that consistency in processing industry regulations was important because all firms in an industry could be affected by the same problem.

In summary, when asked about challenges and opportunities presented by the general environment, managers referred to food safety regulations and to some jurisdictional issues related to these same regulations.

Impacts from the specific regulatory environment

Comments made by managers about the supply management regulations were categorized by researchers as negative, positive, or neutral based on their impact on business activities and are presented in this order. It is important to again note that the comments are not theoretical, but were, in fact, based on the experiences of managers in meat processing businesses.

Negative responses

Comments that were categorized as negative were those that provided challenges for business activities. Managers described how working with marketing boards cost businesses time resources due to bureaucracy and the politics around decision making. One manager used the

word "brutal" while recounting a personal experience with a marketing board[11]. Managers described how time resources could be in short supply because of lengthy delays in decision making by marketing boards and the time it routinely took to resolve issues. Time delays had costs for businesses and took time resources away from other important issues. Managers described a lack of transparency when dealing with some marketing boards and indicated they were interested in the details of how supply management worked with respect to calculations for pricing and quota. Other managers talked about the theoretical limits of the supply management system on processing activities for products that required inputs with specific characteristics (for example, organic poultry).

Additional negative responses to supply management regulations in the specific regulatory environment were described by managers of larger processing businesses that relied on processing a higher volume of inputs. These managers felt their processing activities were impacted because they had to process at a high volume in order to manage constraints created by supply management. They described how processing activities could be impacted because of a limited quantity of raw inputs that could be procured in a timely fashion. Managers described challenges faced in planning activities. When planning new products using supply managed inputs, managers reported challenges when developing and evaluating growth scenarios because of uncertainty in obtaining inputs in a timely way. Managers described that they were unfairly shouldering risk the processing level of the supply chain. When asked to clarify, managers described how supply management regulations impacted purchasing activities; fewer alternative suppliers increased vulnerability of processors during disease outbreaks or following severe climate events. Managers described how justifying capital investments made financial planning activities more challenging. The higher costs of supply-managed inputs did not always processors to price products high enough to gain returns considered reasonable.

Positive responses

Comments categorized as positive were those described as providing opportunities. Managers described how supply management regulations offered opportunities for processing businesses because they supported consistent and predictable prices and quality for inputs. Consistent quality and predictable pricing, in turn, supported purchasing activities and quality control activities in the business. Managers noted that processors were concerned about efficiency and waste reduction and all operations activities in the business focused on making wise use of all inputs. Managers observed that supply management regulations were not as important as other concerns they had, relatively speaking, because they were focused on building specialized

[11] The specific marketing board, although identified in the interview, cannot be identified in this paper for reasons of participant confidentiality.

skills[12] considered important to the differentiation strategy by which their business competed. Managers described how the acquisition of further processing capabilities[13] allowed the business to create new and unique meat products. One manager described the relationship between business strategy and supply management regulations as follows: "If you're processing a lot of poultry then (supply management) would be an issue".

Neutral responses

Managers also described aspects of the regulatory environment that were categorized as neutral with respect to impact on business activities. Other managers described how the political climate varied by marketing board. The impact on business activities from the political climate varied because it could affect the amount of time a business had to invest to resolve issues. Managers described a variety of experiences with marketing boards. One had experience with two marketing boards and observed that supply management regulations did not impact business activities but was simply a "marketing thing (with) ups and downs like anything else". Another described supply management as a relationship between farmers and abattoirs.

In summary, when asked about challenges and opportunities to business activities from the regulatory environment, managers shared a variety of experiences and opinions. Some comments suggest that the size of the processing firm (and the strategy used by the processor to create value) affects the perspective that the manager has about the impact of supply management regulations on business activities.

Discussion

The results in the research are discussed next, first, according to the general environment and second, according to the regulatory environment.

Business activities and the broad regulatory environment

Results suggest that managers in the Ontario meat processing industry hold a range of perspectives. Some see opportunities arising from the general environment while others see

[12] Specialized skills for smaller processors included butchering capabilities that supported the production of specialty products (for example, "broils" that required more than one type of meat input, sausages with proprietary recipes, or meat products using ingredients that supported special consumer dietary needs). Specialized skills also included marketing and communications expertise developed so processors could use direct-to-consumer marketing.

[13] Further processing activities are those activities that occur following slaughter and primary processing of animal carcasses.

challenges. The variation in perspectives can be largely explained by the perceived impact of this environment on their business activities.

Challenges presented by the general environment included issues related to working with food safety regulatory agencies (lack of time, expertise, trust, or opportunity); the frequency with which food safety regulations changed; inconsistencies in labelling regulations; and, gaps between regulatory jurisdictions across the country. Challenges impacted business-level activities by depleting time resources and increasing the need for specialized knowledge and skills to manage regulatory requirements. Despite these challenges, opportunities for businesses included: opportunities to improve learning capabilities; opportunities to support social or consumer health objectives (for example, for allergies or food safety) through product innovation; and opportunities to support marketing activities through labelling regulations that build consumer trust.

Managers drew on their past experiences with food safety regulatory personnel when describing impacts as challenges and opportunities. This suggests that relationships with regulators could also have an impact on how industry businesses choose to frame challenges and opportunities that can impact their business activities. The variety of experiences described also suggests there are managers open to closer ties with regulators despite the challenges found in these relationships. Closer relationships are perceived by managers as being useful in addressing the challenges and opportunities in the broad regulatory environment.

Food safety and labelling were regulations mentioned by all managers when asked about challenges and opportunities in the broad regulatory environment. However, the absence of comments across all cases (that is, all meat processing businesses in this research) that related to supply management regulations specifically suggests that supply management regulations were not considered the most important set of regulations in the broad regulatory environment. Instead, it appears that the sum of all regulations affecting meat processing businesses was top of mind for managers in the Ontario meat processing industry.

Business activities and the specific regulatory environment

Despite a dominant market-level narrative about the impacts from supply management regulations, it cannot not be categorically assumed that the regulations are assessed as a challenge to business activities by Ontario meat processors. However, our results suggest that a regulatory environment with supply management may be a greater concern for managers of larger processing businesses than for smaller businesses. Managers noted both challenges and opportunities for business activities that were related to supply management, but these comments differed by business size and were related to the generic strategy (differentiation or low cost; Porter, 1980) used by the business to create value. On a related note, it is interesting that industry associations representing meat processors also differ by the size of businesses they represent (for example, Canadian Meat Council represents larger processors, Ontario Independent Meat

Processors represents smaller processors). Why might the size of a business be important when considering the impact on business activities from the regulatory environment?

Larger processors are more likely to make use of a low-cost strategy and these businesses create value by focusing on business activities that support this strategy, for example, negotiating prices of inputs, processing efficiently, and quickly innovating to introduce and produce new meat products that respond to broad consumer trends. Business activities in larger businesses are designed to encourage a broad set of customers to purchase the products offered by the business where the low cost of the final product is a source of value for the end consumer. A low-cost strategy is challenging for processors who use supply managed meat inputs because the regulations create barriers for business activities developed around large input volume, efficient processing, and lower final product pricing.

Businesses may adjust business activities to create more value through their procurement activities. For example, they may include negotiating skills to keep down input costs. Supply management regulations can constrain these business activities or encourage other procurement strategies; for example, buying partly processed food components. In addition, businesses using a low-cost strategy often operate with narrow profit margins and have less control over margins in supply managed regulatory environments. A low-cost strategy requires a business to create value through efficiency that is achieved by increasing processing volume and marketing activities. Results suggest that creating value through these efficiencies could be limited by supply managed ingredients because of production quotas.

Finally, businesses using low-cost strategies may also create value through business activities such as innovation and customer responsiveness. Production quotas for supply managed inputs could limit the ability of larger firms to react quickly to changing customer demands because the volume of meat inputs available may not always meet processor needs. Practically speaking, however, larger processors do work with supply managed producers to help estimate demand. This challenge may, therefore, be an example of larger processors wanting to extend control over the specific regulatory environment that manages the production of some meat-based inputs.

In the same vein, smaller processors are more likely to use a differentiation strategy and focus efforts on business activities that support this strategy. For example, they may focus on marketing activities like connecting with consumers to get feedback about their products or ideas for new products. They could also develop and use specialized processing activities to create unique products with higher margins that appeal to narrower market segments. Business activities can be designed to encourage multiple and smaller segments of customers to purchase differentiated products and services offered by the business, based on perceived value of the product attributes at a higher price. As a result, supply management environments can create opportunities for the business activities of smaller processors. Smaller processors were creating value through business activities that supported a differentiation strategy, for example, highly-trained staff and expert butchers who processed, packaged, and delivered meat products to niche

markets. A regulatory environment with supply management may support these business activities because the system provides consistent quality and predictable pricing.

As a result, businesses do not necessarily have to develop specialized procurement activities as do the larger processors. Instead, smaller businesses can focus on specialized processing activities that support a differentiation strategy, such as increasing knowledge and capabilities that support the processing of specialty meat products (e.g. gluten-free, allergen-free) for important niche markets. Because smaller businesses can focus on niche markets in which consumers pay a premium, smaller firms are able to capture the margin needed to cover input costs that are dictated by the supply management system and beyond the control of the processor.

Conclusion

Part of the specific regulatory environment for some Ontario meat processing firms is a set of regulations referred to as supply management. The propositions suggested that inputs, transformation, and output activities would be impacted by the regulatory environment and results support this connection. Results showed that managers of meat processing businesses had a variety of perspectives about the impacts on business activities from the broad regulatory environment. They suggested that the impacts from food safety regulations specifically were perceived as an impact on business activities including input, transformation, and output stages of value creation. Results also showed that the size of the meat processing business may be related to the perceptions of managers about the impacts from the specific regulatory environment. Industry managers described challenges and opportunities that were related to supply management regulations, but their perceptions differed according to the size of the business and were related to the generic strategy (differentiation or low cost) that the business used to create value.

Results in this study indicate that it is important to consider the size of the business and the generic, value-creating strategy used to create advantage before considering how supply management regulations could impact business activities. The complete set of government-enacted regulations that impact businesses in the Ontario meat processing industry provide a greater challenge for processors than were supply management regulations specifically. This research also found that a variety of business activities supported value creation in the Ontario meat processing industry. Regulations supporting supply management provided challenges for larger businesses that created value using a low-cost strategy while smaller businesses that created value using a differentiation strategy saw opportunities.

There are limitations in the research. The case method of research was an appropriate method by which to study the research question. However, while the method provided flexibility for researchers and descriptions of business level activities for specific regulatory contexts, all managers interviewed worked for businesses that were successful (as defined by their existence at the time of data collection). It would be interesting to have included interviews with managers

of businesses that no longer existed. Some processors closed in the late 2000s when government-enacted regulations for meat inspection in the province of Ontario changed. It would, however, be difficult to locate these managers; furthermore, several industry contacts told researchers these managers would be unlikely to participate or unwilling to recall their experiences.

In addition, there are few processors that operate in supply managed (SM) or non-supply managed (NSM) environments; some managers in these regulatory contexts would not agree to participate in the research or could not be reached. As a result, there were few other processing businesses that could be contacted as replacements. To address this challenge, the researchers relied on data provided by businesses operating in the BOTH specific regulatory environment.

This research makes several important contributions. First, the research presents results that suggest that a set of highly-criticized Canadian regulations present both challenges and opportunities for the business activities of Ontario meat processors. This is important because reports that have claimed that supply management regulations negatively affect the competitiveness of the Ontario meat processing industry. This research suggest that specific sets of regulations may, in fact, offer opportunities for value creation by supporting some business activities. Second, the research addresses a gap in knowledge about the impact of specific regulatory environments on business level activities. Reports critical of supply management conduct market-level analyses but make conclusions at the business level. Third, the research demonstrates the use of multiple management approaches to create a framework that can help us think about business-level activities in specific regulatory environments. Existing management theories can provide knowledge helpful when considering value creation under a variety of settings, including a specific regulatory environment as described here.

Implications of this research are fourfold. First, policy makers should consider that business level strategies are the foundation of value creation using the management approaches applied here. It is important to consider the variety of strategies and business activities used by businesses in an industry to create value when considering the impact of policy changes or drafting new policies. Second, managers of businesses in value chains with supply management regulations may gain insights into how changes to supply management could impact business activities in the future. The insights provided by this research may help managers think about the business activities used to create value when they update strategic plans vis-à-vis expected and unexpected changes in their regulatory environment. Third, decision makers in government may wish to consider the challenges that highly-regulated industries face and the impact on business activities from a collection of regulations rather than a single set of regulations.

While managers in this research indicated they saw both opportunities and challenges to the general environment, it is important that governments support these industries through marketing, trade, and export policies that leverage the value created through the strategies and activities of businesses in a specific regulatory environment. Last, provincial and federal governments must carefully consider impacts (intended or unintended) from future trade negotiations. The Canadian government may need to plan how it will support the processing sector if the agreement is terminated. The Ontario meat processing industry is diverse with a

range of processors nimble enough to develop business activities that can successfully support differentiation or low-cost value creation strategies. It is important to understand, however, that business activities develop in a specific regulatory environment, and rapid changes to this environment may impact industry diversity by affecting some businesses more than others.

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