STRATEGIC PLANNING AS A DIFFERENTIATING FACTOR IN PERFORMANCE

by

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ABSTRACT

The purpose of the thesis is to assess the level of strategic planning that farm managers utilize within their business and determine if it is a factor of performance. Through the use of an interview questionnaire, combined with current financial data, the study was conducted on an established client base from a banking institution. All of the participants are actively involved in primary production agriculture in Ontario, Canada. Significant variation identified through the development of a planning index, confirmed that manager's use planning in their farm businesses.

The primary goal of determining the relationship between planning and farm profits, measured through Net Income, is positive. Further to this, farmers seek profit maximization and efficiency through planning.

Factors affecting planning most notably include the manager's age—indicating the role of experience in influencing planning—and the number of people involved in the operation. The results of this research provide input into increasing bankers' understanding of how farmers plan and how to help them make stronger connections between their production planning effort and their financial planning efforts.

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CHAPTER 1: INTRODUCTION

1.1 Introduction

Although the value of planning is taken for granted in many business organizations, there is a general acceptance of the adage "Those who fail to plan, plan to fail." Thus, many organizations make significant investments in the planning effort. At the same time, many researcher efforts have also been allocated to studying the planning process and planning formats (see Mintzberg, Ahlstrand and Lampel, (1998)). Those who plan swear by its value and become evangelical about its importance. For example, they argue that by consciously planning the future of the organization, management positions itself to more effectively seize opportunities and deal with challenges that emerge. In other words, planning affords the organization a higher ability of strategically responding to its environment. Despite its inherent advantages, planning also frequently presents managers and organizations' leaders with significant challenges—from cognitive and emotional challenges to social, capability and financial ones (Eppler and Platts, 2009). The cognitive challenges emerge, sometimes, from information overload which leads to bounded rationality (Simon, 1982) regarding the strategic options open to the organization. The emotional and social challenges may emerge from communication and sense making constraints that limit management's ability to develop the appropriate metaphors to transmit their perspectives of the future. The financial and resource challenges emanate from the constraints that organizations naturally face and the constant challenge of deciding where to allocate these limited resources in order to obtain the highest benefits.

As a result of these challenges, some managers choose not to plan [formally] *and move with the flow*, believing that planning actually constrains their ability to respond effectively to their changing environments (Brews and Hunt, 1999; Tomlinson and Dyson, 1983). Indeed, Mintzberg, Ahlstrand and Lampel argue that under some circumstances, internal capability constraints may indeed make such decisions strategic. However, for these organizations to succeed, it is imperative that they exist and operate in more stable environments or have significant resource capacity to absorb the rapidity with which changes occur in their industries.

In general, there is a great consensus on the importance of planning and any disadvantage it presents is dwarfed by its inherent advantages of looking forward and developing strategies to respond to a changing environment. As the size of agricultural production firms increases, they are operated and managed more as traditional businesses. It is becoming common for their partners—financial institutions, suppliers and even customers in their supply chains—to demand the strategic plans of these businesses. The intention to help firms craft their own strategies to how they engage them profitably. Additionally, governments are increasingly insisting on businesses receiving governmental support to present formal plans to indicate how they intend to maximize the return on the investments. Implicit in this trend for demanding information on strategic plans is the assumption that there is a relationship between the existence of a plan on the one hand and the execution of the plan and performance on the other. It is important to determine if such an assertion is true and to determine its direction and strength. Given that the process of planning can be expensive in both time and other resources.

1.2 Research Problem

The problem that this research seeks to address is the determination of the effect of different types of planning on organizational performance and the strength of this effect. In other words, the research seeks to determine if organizations that undertake formal planning in the various segments of their operations do better than those who do not do formal planning.

The research question is this: What are the different types of planning that an organization does and which of them influences its financial performance? The research also sought to determine the factors that influenced the planning effort. For a financial institution working with agricultural producers, understanding the factors that determine their financial performance allows the bank to develop the appropriate tools to help its clients enhance their performance. To this end, answering these questions allows client managers to make the decision on whether to invest time and other resources and to what extent such investments should occur to help farmers adopt the necessary planning tools.

1.3 Objectives

The overall objective of this research is to better understand farm business planning, its process and implementation success. The goal is to assess the types of planning on farm and determine their potential effects on the farms' financial performance.

The specific objectives of this research are as follows:

1. Evaluate the level of planning that farm businesses undertake in the operation of their farm units and the factors influencing it.

2. Determine the direction and strength of the effect of planning on financial performance of organizations that plan.

3. Develop strategic initiatives that may be used by financial organizations working with producers to ensure that their clients maximize the net benefits from their investments in planning.

1.4 Methods

The research implements three specific methods in order to achieve the above objectives: a review of the literature; statistical analysis; and econometric analysis. The literature review covered academic journals on strategic planning as well as organizational management and decision making because planning is a function of the management of the organization and rests solidly in decision-making. Therefore, the literature on decision science as well as such journals as Long Range Planning, Strategic Management Journal and the Academy of Management Journal provided a foundation for the majority of the literature review. In addition, the review of commonly accepted works on farm business planning will help to provide insight into the current work on strategic planning.

The researcher collected primary data on agricultural production firms in Ontario, Canada for the empirical component of the study. The participants of the study were clients of the financial institution actively engaged in primary production agriculture. The data were as

first analyzed using statistical tools to provide an overview of the sample. Econometric models were then developed to address the specific objectives identified above. These models were estimated using Microsoft Excel and Minitab software, and the results were further analyzed to answer the questions motivating this research.

1.5 Outline

The remainder of this thesis is presented as follows: The literature review is presented in Chapter 2. Chapter 3 presents the theoretical framework, discussion of the models used in the statistical and econometric analyses and development of the hypothesis. In Chapter 4, the analysis results are presented. The summary, conclusions and recommendations are presented in Chapter 5.

CHAPTER 2: LITERATURE REVIEW

There is a large volume of literature which contributes to planning as it relates to strategic development within organizations. The purpose of this chapter is to review, analyze and contribute to the understanding of strategic planning from a historical context to the current use of these initiatives. Secondly, this chapter seeks to explain two principal concepts: formal and informal planning and the associated debates surrounding them within the context of strategic management. Because the ultimate goal of planning is to improve an organization's performance, this section also reviews the literature on the relationship between planning and performance.

2.1 Defining Strategic Planning:

A great deal of emphasis has been placed on the notion of strategic development within firms. Starr (1966) opens his paper with a broad statement: "At present, the term planning has many meanings and little substance. It is an omnibus word or a dressing gown under which a variety of management matters masquerade." Steiner's definition of planning perhaps fits into these broad definitions by indicating that 'plans can and should be to the fullest possible extent objective, factual, logical, and realistic in establishing objectives and devising means to obtain them" (1969:20). Over the past several decades a great deal of work has been published in effort to provide frameworks by which strategic planning is utilized within firms.

Early research on planning by Luther Gulick (1937), defines planning as "working out in a broad outline the things that need to be done and the methods for doing them to accomplish the purpose set for the enterprise". Gulick's work is a classic example of the literature which has been produced to influence the views about the formalized process of planning.

Similar to Gulick, Alderson (1959) considers that planning is a process of putting a set of elements in order, with a goal of reaching an intended end. Not to oversimplify his definition, he considers that there are levels of complexity in all aspects of deciding and implementing strategies; however that it should be a process that is ordered and routine, but also considers a certain level of flexibility and resourcefulness to the development of strategy. Overall these early writings are very process-driven which reflects management's systematic approach to planning,. These early perspectives on planning, thus, fall under the 'Design School', where strategy formation is a process of conception (Mintzberg, Ahlstrand and Lampel, 1998).

In context to the previous writings on strategic planning, many firms attempted to integrate ideas of a strategy development process within their organizations. Igor Ansoff's 1965 book promoted the use of a formalized procedure of planning. Considered by Mintzberg et al. (1998) as the "Planning School", Ansoff's suggests that strategies be developed in a formal setting, often done by managers at the top level of an organization through performing a detailed analysis of the markets, products and environment (Ansoff, 1965). Tools used by planners included SWOT analysis or categorized planning methods promoted by the likes of Steiner (1969). Steiner believed the notion that planning could be

subdivided into separate categories including short, medium and long range plans. Similar to the Design School, the main difference is that Planning School of thought involves a process of implementation that is highly formal.

When planning becomes a formalized procedure with the effort of creating an articulated result, it forms an integrated system of decisions. In other words, planning is about formalization, which requires the decomposition of a process into clearly articulated steps, associated with rational analysis. Strategic planning does not mean strategic thinking so much as formalized thinking about strategy – rationalized, decomposed and articulated (Mintzbert, 1981).

Challenges exist with regards to formalized strategy development. The commitment pitfall can at times limit the uptake with firms that are utilizing formal planning exercises or formal planning tends to create change that is generic rather than creative; the process being overly analytical while the goal of creativity required synthesis. The political pitfall may be affected by the bias which impacts the organization. Alternatively, politics can create the ability to affect a new set of ideas (Mintzberg, 1994).

Another challenge relating to formalized planning is that of predetermination where preconceptions overrule the development of strategy. Strategy development may also occur not when the world is standing still, but rather in an informal setting outside of a board room situation. A risk of detachment may occur in firms as planning cannot be done from only a distance (example in large firm), nor simply from hard data, but rather with an approach that encompasses all levels of the organization. Since inception and

implementation of these formalized planning processes, many firms have chosen to move away from this as it has failed to meet business objectives because of limiting factors in the planning process. Ultimately firms move away from a direction based on the financial performance of such actions.

Moving forward in time, the "Positioning School" sees strategy formation as more about analytical processes. In 1980, Michael Porter published his work about competitive strategy that put to rest many differences with regards to the design and planning schools of thought. Through the use of analysis, in contrast to the Design and Planning Schools where the number of ideas was broad in scope, Porter encourages firms to use only a couple of different strategies within their organization (Minzberg et al., 1998).

The Positioning School's intention is to seek one's competitive place within the market and gain an economic advantage. The strategies may be generic in nature but there is a positive relationship with a strategic position in the market, which to drives one's own organizational structure. An important notion within the Planning School is that the environment provides a certain level of stability, allowing firms to engage their own strategy with confidence (Mintzberg et al., 1998).

Entrepreneurs are a valuable part of the economic fabric of the modern world; as such a school of thought has been named after such spirit. The "Entrepreneurial School" defines strategy development from people and firms that use future vision as a guiding principal. With a single person in mind, entrepreneurs develop strategy though the use of intuition,

judgement, wisdom, experience and insight. Often known as vision; these leaders have a mental perspective of strategy created or at least established within their mind.

Joseph Schumpeter (1947) viewpoint on entrepreneurs is less about people creating new products, but rather using existing resources in a more efficient manner to gain advantage over others. Indeed vision is key to the firm's success, but entrepreneurs can also be within larger firms that take on leadership roles where one proactively and single-handedly encourages specific strategic development. In many ways, agricultural firms may fall into this category of involving single minded strategy development.

Not to discredit the entrepreneurial spirit, at times this school of thought has limitations as people will view single-mindedness as being narrowly focussed or after a period of time may become unaware of other ideas. It is important to recognize that just because a person owns their own business does not mean that they participate in the "Entrepreneurial School" of planning, a shortcoming as to those that attempt to copy such strategy, but fail to adapt when the markets changes (Mintzberg et al., 1998).

Continuing the movement away from formalized planning, the "Cognitive School" seeks to denote strategy formation as a mental process. Somewhat unknown, it relates to individual people. This school is interesting when comparing to the small scale and individualized farmers in this study. It seeks to understand and ask the question 'why' in the mind of the decision maker, insist on certain decisions. As many organizations seek to better understand people, a cognitive testing has been used to evaluate the perception to the type

of decision maker one is, one example is through the Myers-Briggs instrument testing (Mintzberg et al, 1998, pg 154).

The Cognitive School of thought concludes that decisions are made in the mind of the individual; and strategies emerge as a perspective where a person is able to mentally map, configure, and deal with various components of interpreting their planning dimension. Ultimately the inputs deal with either objective or subjective information allowing individuals to filter the information through a model of perceived outcomes as they see fit. Rightly or wrongly, when a person seeks to obtain a means to the end, they have the cognitive authority to interpret their own data.

Henry Mintzberg's work on strategy development shifts the paradigm in which one perceives planning further away from the formalized process of early theorists. The "Learning School" is strategy development which Mintzberg articulates to be an emergent process, developed over time through experience. Strategic planning could be called strategic programming and promoted as a process to formalize, when necessary, the consequences of strategies already developed, i.e. provide analysis of what has gone on and prepare scenarios for the future. Strategic planning cannot go hand in hand with synthesis or the creative aspect of generating new ideas (Mintzberg, 1994). In other words strategic planning is about a process and implementation, not necessarily about creating new ideas.

Mintzberg suggests the use of an observational approach in planning, whereby it is useful to assess the situation over objective, factual and realistic information and devise a means to obtain the end with an articulation of the intended result. This definition describes

intentions rather than ultimate outcomes which in Mintzberg's opinion could involve even more operational considerations. Mintzberg suggests there be a need to isolate the formal procedures that actually gets converted into action, thus interpreting planning to be programming.

Power has played a role in how things get done in this world for centuries; according to Mintzberg, Ahlstrand and Lampel they have categorized such a word as direction of strategic development. The "Power School" is a process of negotiation whereby the sheer size and market power will allow firms to muscle their own strategic development. Power can also be related to politics in that certain decisions are made with direct reference to other parties. Not only do firms exude power, but so do individuals within firms who seek to have control over direction. No doubt that in small firms, individual's authority has a direct impact into certain strategic initiatives. Power is not only about one's own strength, but relates to partnerships and negotiations among other people and firms. The ability to negotiate and form alliances is strength in strategic development.

The culture of an organization is typically very important, however extremely vague in relation to strategic development. Although a positive culture is a nice concept, it is often related to a particular timeframe within an organization. The positive strength of the culture may also be its limiting factor in that people may be resistant to change. The "Culture School" does have a strength when the historical reference promotes the notion of accepting and considering new and different ideas and at times when a drastic turn around, known as a cultural revolution, has occurred.

The “Environmental School” is a unique theory as it is based on a reactive process. Due largely to circumstances out of ones own control, uncertainty promotes strategy development around contingency. Firms that derive strategy from the environment seek to provide stability for their firm; however they may face times of both uncertainty and periods of calm. Because firms exist within populations of competitors or alternatives, strategy may be formed out of fully understanding ones own strength and role of their business. As a result, firms must be in a position to respond to either positive or negative conditions or face being eliminated. A great deal of emphasis is placed on the leadership within an organization to seek, measure and guide the organization through turbulent times, otherwise if this direction is misguided, serious consequences may occur.

Strategy is crisis driven; an event which triggers the firm to use a rational and planned approach to developing strategy, may the crisis be over money, marketing or management. The findings of strategy formulation shifted from an emergent to a more planned approach over time with the degree of planning depending on the personality of the entrepreneur and experience of crisis. Compared to firms in a dynamic environment which has a vast range of possible outcomes; firms that exist in stable markets typically have a limited number of potential outcomes when looking across the planning horizon. Dynamic environments create challenges in planning having a reasonable amount of sound information available to make decisions. When the system is changing, it must readapt and not rely on historical references. Decisions must be made in dynamic situations when feedback is swift and certain.

Planning as "Configuration" is based on the process of transformation whereby planning brings order to the study of strategic management. Organizations exist over time. The configuration of the firm may shift from periods of calm to uncertainty or from being a new company to potentially market-dominating force. The Configuration School encompasses firms who implement changes from one school of thought to the next, allowing firms to adapt or position itself for success. In other words, it allows firms to seek parts of all the previous strategies to form plans, patterns or perspectives for the business.

To summarize the progress which strategic management has made over the last half century, the authors of *Strategy Safari*, Mintzberg et al. (1998) do it best:

> "Strategy formation is judgemental designing, intuitive visioning, and emergent learning; it is about transformation as well as perpetuation; it must involve individual cognition and social interaction, cooperation as well as conflict; it has to include analyzing before and programming after as well as negotiating during; and all of this must be in response to what can be a demanding environment. Just try to leave any of this out and see what happens!"

2.2 Formal vs. Informal Planning

The debate continues between two primary views on strategy development, the planning versus learning school. First, it is important to consider if there is a difference between planning and learning compared to formal versus informal strategy development. For the purpose of the research at hand, using the words formal versus informal may have less academic relevance, but relate to the level of farm producers; those that are the target for the research at hand.

The 1999 Brews and Hunt article attempts to resolve the planning school/learning school debate, and relate it to firm performance. The basis of their research was on the understanding that inconsistent studies have failed to identify a clear link in planning as it relates to performance.

The use of the terms "Ends" and "Means" provided a practical measurement for the Brews and Hunt study. By definition, "Ends" are the major, higher level purposes, mission, goals or objectives set by the organizations, each (should there be more than one) significantly influences the overall direction and viability of the firm. "Means" are the patterns or actions which marshal/allocate organizational resources into postures that, once implemented, increase the probability of attaining organizational ends (Brews and Hunt, 1999). The definitions provide clarity of what firms were seeking to achieve or actively integrate within the business.

Brews and Hunt (1999) directly relate the formalized process of strategic planning to previously accepted methodologies of planning as it relates to the 'Synoptic Model' (reflective of the Planning School) They make a direct relationship between formalized development and that of the Planning School of thought. Subsequently, Brews and Hunt, for the purpose of their study, compare formal strategy development to the incremental model of strategy development which is heavily supported by Mintzberg.

Formalized planning deliberately states the intended ends first, followed by means to achieve the stated goals. This formal planning process should be a rationale and linear process whereby a full strategic plan will give way for the development of the means.

When the means are stated within the plan, it includes a complete operational plan that provides a guide to implement such objectives. Typically, formalized plans are mostly related to stable environments as the assumptions support continuity and predictability.

In comparison, informal planning may be referred to as incremental and adaptive learning. The ends are rarely recorded in a formal document and often go unsaid. However, if announced they are likely to be broad in nature and unspecific in detail. The means develop and evolve over time based on the interaction with the environment. Informal planning has a greater association with uncertainty and unstable environments where less formalization and more flexibility is required

A question that arises with regards to many small businesses owners, in particular those involved in primary production agriculture, is whether produces have direct and clearly stated 'Ends' which they hope to achieve? To follow the question on 'Ends,' do producers fully know the 'Means' by which they operate their business, or is it simply a matter of doing what was done in the past with expectation that the future will be better than the present?

When reviewing the ten schools of thought as presented by Mintzberg, Ahlstrand, and Lampel (1998), we see an indication as to the level of formality in planning. For this purpose, providing a broad outline as to categorizing each school as formal or informal for the purpose of this study is relevant (Table 2.1). Each unique strategic development dimension can be applicable to farm producers, this again is another measure to which we

may indicate the study group as being a formal or informal planner, relating it to the performance on their business.

Table 2.1: Summary: Schools of Thought in Relation to Formal vs. Informal Planning

Formal Planning	Informal Planning
Design School Planning School Positioning School	Entrepreneurial School Learning School Cognitive School Power School Cultural School Environmental School Configuration School

Within the formal planning notion, categorizing the design school as being formal is done so out of historical context, precluding the most rigid method of strategy development, the planning school. The design school's main contribution to strategy represents a fit between external opportunities and internal capabilities (Mintzberg et al, 1998). Despite an overall argument that this is about 'informing idea' or an overall concept of planning for the organization, the process at which one arrives is steeped in establishing and stating a clear set of 'Ends'.

Without a doubt, the Planning School of thought is a mechanism of formalized planning whereby objectives are set with a clear plan of action to obtain its goals. By way of formal planning, this highly involved process accounts for every step to reach the end results. The use of data early in the process is critical to set financial targets along with the ability to measure the progress. With analysis being a critical part of the planning process, this

formal notion has been criticized for not having the ability to react in unstable environments.

Finally, the Positioning School would be considered formal as it relates to doing research, analyzing, and selecting a specific tool to compete within the market place. The formal process involved relates to having data available for analysis. The main difference between the Planning and Positioning Schools is the increased focus on the specific strategy versus a large number of options.

The Entrepreneurial School would be considered informal planning, not so much based on a business plan which may be formal itself, but on the person at the helm of the business. The vision or leadership style of key decision makers that drives a firm will categorize this as informal planning. Similarly with the Cognitive School, when a person has mental mindset for his/her firms the course of action is very informal and often changing depending on the nature of the person. When a person with the entrepreneurial spirit or internalized vision is involved with other people in a firm or a larger company, their planning methodology may be categorized differently as those directions would involve a great deal more analysis, critiqued and documented, thus removing it from informal planning.

Enough stated about the Learning School as supported by Mintzberg; the entire premise for managing a firm relies on the experiencing, adapting and developing strategy in relation to the market on an evolving basis. Although touted as an appropriate method in uncertain

environments, the ‘Means” are rarely documented as they are subject to change, not to mention the ‘Ends’ may not be clearly identifiable.

Informal strategy development also includes the Power School, Cultural School, and Environmental School. It is for all the same reasons of change, instability and reliance in people is what makes these schools of thought informal. No firm will document the planning method as power by which flexing their muscle to achieve an end result. Culturally, firms may seek a formalized process of documenting their pride or desired results in culture but it is individuals that ultimately make up that result, not the document on which it is written. Finally, the environment may be stable or rapidly changing, however it is for the reason of the unknown which makes this strategy development informal. Perhaps if the environment was stable, the strategy development associated with that would tend to consider a “Planning School” thus formal.

To summarize, the difference between formal and informal planning relates more to the ‘means’ than to the ‘ends’. In other words, a formalized plan will fully state their ends followed by a detailed set of means. As with many farmers, who may not document their desired goals by way of a business plan, they may have the ability to articulate them. The differentiating factor is their rationale in describing the most specific means to achieve the ends. To then decipher the impact of environment or entrepreneurial spirit will further indicate the level of formalization of planning within the business.

2.3 Planning and Performance:

The goal of any firm is to increase shareholder value, regardless of how shareholder value is defined. For profit-oriented firms, this goal is increased financial returns. The literature on the relationship between planning and performance presents varied results.

Research on the impacts of planning in relation to profit has been taken beyond the confines of dollar values, to measure other tangible and intangible benefits of planning too. Venkatraman et al. (1986) argue that success of strategic management extends beyond the simple financial measures to operational improvements in the business. Under their framework, additional measurements which affect markets, production and other efficiencies, be it value-added or use of technology, will all contribute the success of strategic planning. The value of such research is to validate a link that strategic planning is more than bottom line financial performance.

Venkatraman et al. (1987) devised a two-dimensional conceptual model whereby the success of planning was measured by the improvement in the 'capabilities' of planning and secondly by the degree of 'fulfillment' in measuring the end objectives. The 'capabilities' being measured provide leading indicators to the effectiveness as well as relating to the overall needs of the planning requirements. In addition, the scenario provided a level of process by which the planning system can be measured.

Measured capabilities included:

1) Ability to anticipate surprises and crisis
2) Flexibility to adapt to unanticipated changes
3) Ability to identify new business opportunities

4) Ability to identify key problem areas
5) Ability of foster managerial motivation
6) Ability to enhance the generation of new ideas
7) Ability to communicate top management expectation down the line
8) Ability to foster management control
9) Ability to foster organizational learning
10) Ability to communicate line managers' concerns to top management
11) Ability to integrate diverse functions and operations
12) Ability to enhance innovation

The extent of 'fulfillment' of the planning objectives as supported by research are the intended goals or outcomes and benefits of strategic planning;' both financial and non financial. The goals are as follows:

1) Enhancing management development
2) Predicting future trends
3) Short term performance
4) Long term performance
5) Evaluating alternatives based on more relevant information
6) Avoiding problem areas

Thus, for the purpose of the research, this paper provides support that improvements may occur in planning capabilities which positively contribute to strategy development.

Boyd et al. (1998) surveyed hospitals and built on previous studies looking at the relationship between planning and success. Their survey encompassed a broad measurement of strategic planning, both tangible and intangible goals for the firm. They found, in order of importance for their study the following variables as being influenced by the planning process:

1) Annual goals
2) Long term goals
3) Mission statement
4) Action plans

5) Trend analysis
6) Ongoing evaluation
7) Competitor analysis

One can relate the foregoing metrics of performance from strategic planning to farm business owners. The notion of annual goals would be directly linked to meeting financial performance indicators, as well as production knowledge and benchmarking on farm. Not only setting targets, but measuring, reviewing and adjusting the goals are also related to ongoing evaluation. Seeking an indication to the thought process of farmers looking into the future is directly comparable to that of the study by Boyd et al (1998).

Mission statements may not be completely applicable to farm producers simply because the farm organizations tend to be small, family oriented businesses. However, ensuring that farm producers fully know their customers and expectations may be similarly important to meeting the usually high standards of today's food products.

Action plans usually involve a prescribed set of tasks necessary to meet identified goals. Although many farmers may not be considered formal planners, i.e., they may not have written action plans, they do develop guidelines and procedures or production targets as well as employee management. It is important that farmers use good communication skills in sharing what it is necessary to do.

Varied results between strategic planning and firm success have driven further research in this field. Inconsistent results have been linked to the stability of the industry than perhaps the planning dimension itself. Where the industry environment is stable, people plan more

but there is less variation in results. This success is related to the stability of the industry than firm specific. In industries where instability is more common, there is a greater link to planning and the success rate. Understanding the stability of the industry adds an additional dimension to evaluating strategic initiatives (Powell, 1992). .

In 1997, Hopkins and Hopkins undertook a study to evaluate the impact of strategic planning in the financial sector. Their study related to knowledge in strategic development. They constructed a model including managerial factors that impacted the level of strategic planning intensity. Organizational factors affected both strategic planning intensity and financial performance, whereby strategic planning intensity and financial performance where directly related.

The critical findings showed that financial performance and strategic planning intensity were directly related and that intensity had a positive affect on performance. Interestingly, despite the literature (Gup and Whitehead, 1989, and Whitehead and Gup, 1985) that shows as organizations grow and become more complex that the level of strategic planning does as well, this study found the opposite. Firms of a certain size possessed economies of scale that attributed to stronger margins.

The usefulness of the Hopkins and Hopkins study is the research model they developed looking at the relationships of management, organizational and strategic planning intensity factors related to performance.

In another research project, Grant (2003) examined the implications of strategic planning in more turbulent environments where change is inevitable. Recognizing that strategic planning is directly related to the desire for strong profitability, he was seeking to examine other finding with regards to the implications of planning besides direct financial measures.

Grant (2003) revealed that firms implement strategic plans and allowed fluidity of goals to be measured over time as information itself evolved. Referring to the initial formalized strategy development debate, compared to the emergent school, the study found the approach to be more planned emergence. Compared to performance as the only measure in strategic success, it valued the importance of management and their ability to react to the environment, all within a more formalized plan which encompasses the high level goals of the firm.

2.4 Conclusion of Literature Review

For the purpose of this study, strategy development was defined as setting a desired goal ('End') with an articulated process ('Means') to achieve this goal albeit by way of a formal or informal process.

Measuring the degree to which business managers set goals and establish process to meet the end result is critical to the success of comparing formal and informal planning. Mintzberg, Ahlstrand, and Lampel (1998) breakdown of the schools of thought was used, to better comprehend the degree of formality or lack of in planning for businesses.

Furthermore, research as shown that one can determine the relationship between planning and profitability. Strategic development starts with the creation of 'ends' or goals which a business seeks to achieve. In order to meet the ends, strategic planning further involves establishing a set of 'means' or process by which the goals are to be met. Ultimately, farmers often insist they have a goal, however measuring their existing actions or existing 'means' is pivotal to understanding their strategic planning success. Thus by measuring the capabilities of strategy development, researchers have developed models involving varying factors (tangible or intangible) affecting planning.

CHAPTER 3: DATA, MODELS AND ANALYTICAL METHODS

3.1 Data

For the purpose of the study, forty-six farm businesses were selected from the database of a chartered bank in Canada. The selection criteria included the requirement that participating farms must be engaged in their operations on a full-time basis, meet the bank's financial viability test and they must all maintain an active business account with the bank. Thus, the sample was drawn using a target sampling approach in order to ensure that the two critical criteria were met. All the farmers drawn were clients with whom the researcher and a colleague have direct professional relationships with for at least three years.

The data was collected by the use of detailed interview questionnaire (Appendix A) and information was gathered over a six-week period, from early March 2009. The first part of the questionnaire covered questions that the interview participants responded to based on their beliefs and perceptions about production planning, management planning, continuous improvement planning and financial planning. The second part involved financial data drawn from the participants' records maintained at the bank. The financial data were collected based on a three year historical average with the most recent information on file at the bank. Although not all data relates to the exact same year end date, the rolling average provides a strong indication of historical profitability and asset and liability levels.

The data collection process involved telephone interviews with each of the participants in the sample. A certain amount of selection bias occurs with the use of a known sample study. Known as a convenience sample, its use is based on the ease of collection of data

and complete access to all of the financial data of the sample (Studenmund, 2006). The risk of using such a sample is that biased, distorted results may occur. However, this approach served the primary purpose of this research, i.e., to determine the effect, if any, of planning on performance in agricultural production.

The use of a Likert Scale for the purpose of interview questionnaires allowed for a comprehensive set of data. The Likert method is a psychometric scale which provides data pertaining to the level of agreement or disagreement with regards to the statements.

1. Strongly disagree
2. Disagree
3. Neither agree or disagree
4. Agree
5. Strongly Agree

The Likert Scale provides feedback as to the manager's sense of agreement with the statement. By utilizing this common scale, the information may be formatted to form a complete set of statistical analysis. The challenges with the Likert method of analysis is that the measurement is inherently assumed to be continuous where in many cases they are not. The researcher maintained a cognizance of this challenge in the interpretation of the results from the study.

3.2 Models

3.2.1 Planning Index

As stated in the objectives, the goal was to determine the level of planning which each farmer utilize on farms. Four different types of planning were delimited in the study: production, management, continuous improvement, and performance. These four types are based on Venkatraman et al. (1987) where capabilities and an implication on meeting the goal of planning. In addition, the work by Boyd et al. (1998) supports both tangible and intangible goals of planning. The rationale was to attempt to see if there were differences in how agricultural producers perceived and managed their planning effort. It was argued that planning is not planning for all producers and that while some may focus almost entirely on production planning, others take a more comprehensive approach to planning, looking at all dimensions. The four types of planning are defined as follows:

Production Planning: Provides a measure of the amount of knowledge which farmers understand with regards to their individual production on their farm.

Management Planning: Provides a measure of the skills which farmers have with regards to knowing their productivity measures and the ability to communicate productivity goals to subordinates involved in the business.

Continuous Improvement Planning: Provides a measure to which farmers understand their individual knowledge, recognizing personal strengths and weaknesses and support for guiding others to increase knowledge about their business.

Performance Planning: Provides a measure of the level of understanding of financial information that farmers have with regard to their business.

It was also necessary to come up with a comprehensive measure of planning that incorporated these different dimensions of the planning activity. Thus, this research makes a contribution to the literature in the development of a "Planning Index", a quantifiable, weighted average metric that encompasses the four types of planning that were identified for the producers.

It was assumed that the relative weights of the different planning efforts were as follows: Production, Management and Continuous Improvement: 16.67 percent; and Performance Planning: 50 percent. This assignment of weights is premised on the fact that firm's objectives must be to gain and sustain their competitiveness. But, from the planning and design schools as well as the entrepreneurship and other schools, the greatest emphasis should be on performance.

3.2.2 Regression Analysis

Regression analysis is a statistical method that attempts to "explain movements in one variable, the dependent variable, as a function of movement in a set of other variables, called the independent variables, through the quantification of a single equation" (Studenmund, 2006). Regression analysis is helpful in providing explanations of causal relationship, hence it was used in this study to address some of the objectives. It was used to explain the producer characteristics that influenced the planning decision.

3.3 Hypotheses

The purpose of this thesis is to examine whether there is a difference in profitability between a farmer that strategically plans and a farmers that does not. The literature that relates profitability to planning strategy, shows a linkage, but the research is somewhat fragmented and incomplete, particularly for agricultural firms.

Hypothesis 1: The higher the level of planning that is undertaken by a farm, the greater its profits. That is:

$$H_0 : \pi_1 - \pi_0 = 0$$
$$H_1 : \pi_1 - \pi_0 > 0 \qquad (1)$$

This hypothesis suggests that farmers who employ a greater level of strategic planning in their operations will generate greater returns from their business operations. As noted early in the study, many farmers do not utilize formalized strategic planning, but rather make decisions intuitively based on longer term goals, thus they may employ informal planning initiatives. The questionnaire was designed to collect data on all aspects of planning. This hypothesis also attempts to determine the rationale for planning by farmers in the target sample that was used.

Hypothesis 2: The planning level undertaken by a producer is determined by the ownership structure of the farm, O, the age, A, of the principal operator, and number of people, N, directly involved in the farm business. That is:

$$
\begin{aligned}
P &= f(O, A, N) \\
H_0 &: \frac{dP}{dO} > 0; \frac{dP}{dA} > 0; \frac{dP}{dN} > 0 \\
H_1 &: \frac{dP}{dO} = 0; \frac{dP}{dA} = 0; \frac{dP}{dN} = 0
\end{aligned}
\qquad (2)
$$

The rationale for these expectations is that as the business ownership structure changes from sole proprietorship to corporations, the firm becomes more formalized and the need for more formal planning increases. As the principal operator becomes older, experience would suggest that planning is valuable and hence it will be incorporated into the business decision structures. Finally, as the number of people directly involved in the business increases, the need for more formal communication becomes important and hence, more formal planning will be undertaken. The alternative hypothesis suggests that none of these variables influences planning in the farm business.

CHAPTER 4: DATA AND RESULTS

4.1 Data

Upon completion of the collection of data, a total of 46 producers participated in the study from a period March 15th to April 20th, 2009. The average age of the respondents was 40 years. Also, the respondents were distributed across the following industries: 25 dairy producers, 15 poultry producers, 3 crop producers, 2 hog producers and one other type (unspecified) of production.

The average gross farm income for the participants in the research was $810,755, with standard deviation of $642,782, and the mean earnings before interest, taxes, depreciation and amortizations (EBITDA) was $307,846 with a standard deviation of $233,535 (Figure 4.1).

Figure 4.1: Average Income Characteristics of Sample

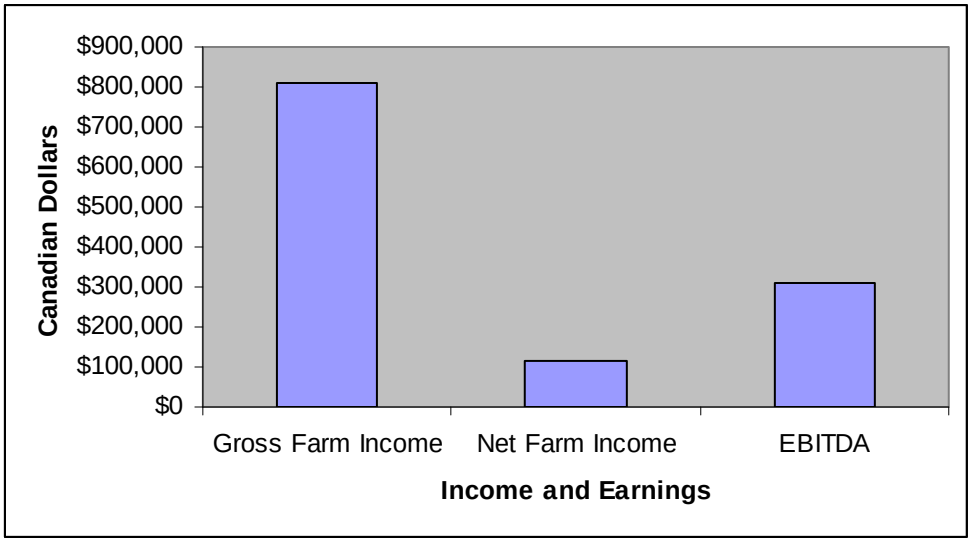
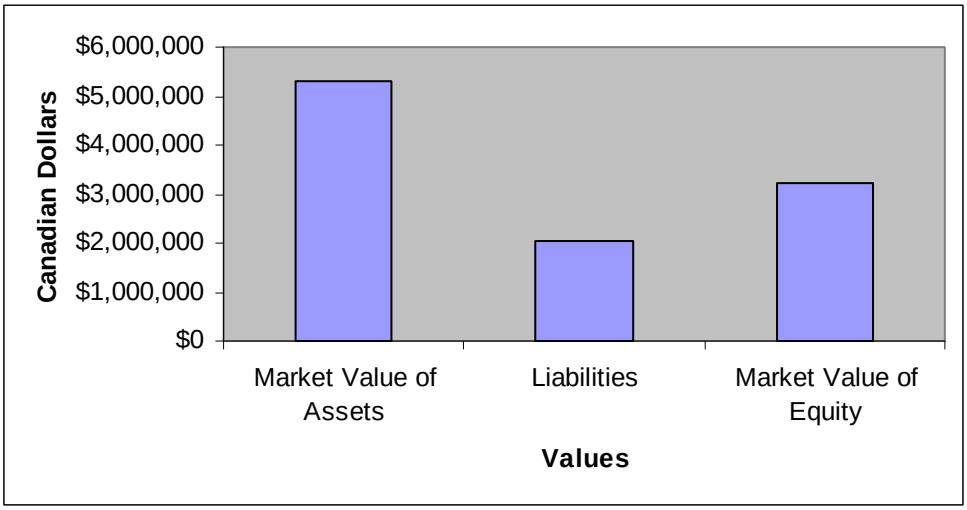


Figure 4.2 shows the average market value of assets, liabilities and market value of equity. The figure shows that the average market value of assets is assessed at about $5.3 million

compared to average liabilities of about $2.05 million. These financial data reflect the most up to date information on file, using a rolling three year average with respect to profitability measures, such that it accommodates any fluctuation in revenues, markets, or changes in farm sizes. The figures for valuation of assets is based on the most recent information on file, all taken within the past 12 months.

Figure 4.2: Average Values of Assets, Liabilities and Equity of Sample



The total number of people involved in the farm business includes owners, spouses, and children, full and part time labour (Table 4.1). Based on financial reporting data, the average was "Notice to Reader" financial statements, or a response of 2 in the survey results (Appendix A, question 45). For banking purposes, the average internal bank risk rating score is 4.71, which is considered better than average.

Table 4.1 shows the summary description of the principal variables used for the purpose of the specified objectives of the study. It shows, for example, that the number of people directly involved in the businesses participating in the study ranged from one to ten, with a

mean of about four people. Business ownership structure was coded as follows: Sole proprietorship (1); Partnership (2); Corporation (3). The results show that the most common type of business structure is corporation, accounting for 23 of the 46 participating organizations. This was followed by partnerships, accounting for 18 and sole proprietorship, accounting for only five of the total firms interviewed.

Table 4.1: Summary of Data Characteristics

Variable	N	Mean	Std Dev	Minimum	Maximum
Planning Index	46	80.34	9.27	61.72	95.89
Net Income	46	113,456	106,372	-28252	511684
EBITDA	46	307,846	233,535	69938	1329201
EBITDA/Sales	46	0.3982	0.1073	0.2113	0.7021
EBITDA/Assets	46	0.06066	0.01767	0.02574	0.11504
Number of People	46	4.239	1.816	2.000	10.00
Age	46	3.978	1.043	2.000	6.0
Ownership Structure	46	2.391	0.682	1.00	3.00
Production	46	3.8554	0.5110	2.1500	4.800
Management	46	4.0717	0.6121	2.8000	5.00
Continuous Improvement	46	4.0348	0.5117	2.4667	5.00
Performance	46	4.0467	0.5773	2.9000	5.00

The level of planning under each of the four planning types was structured on a Likert scale ranging from 1 to 5. Table 4.1 shows that production planning had an average of 3.86 compared to management planning of 4.07, continuous improvement planning at 4.03 and performance planning at 4.05.

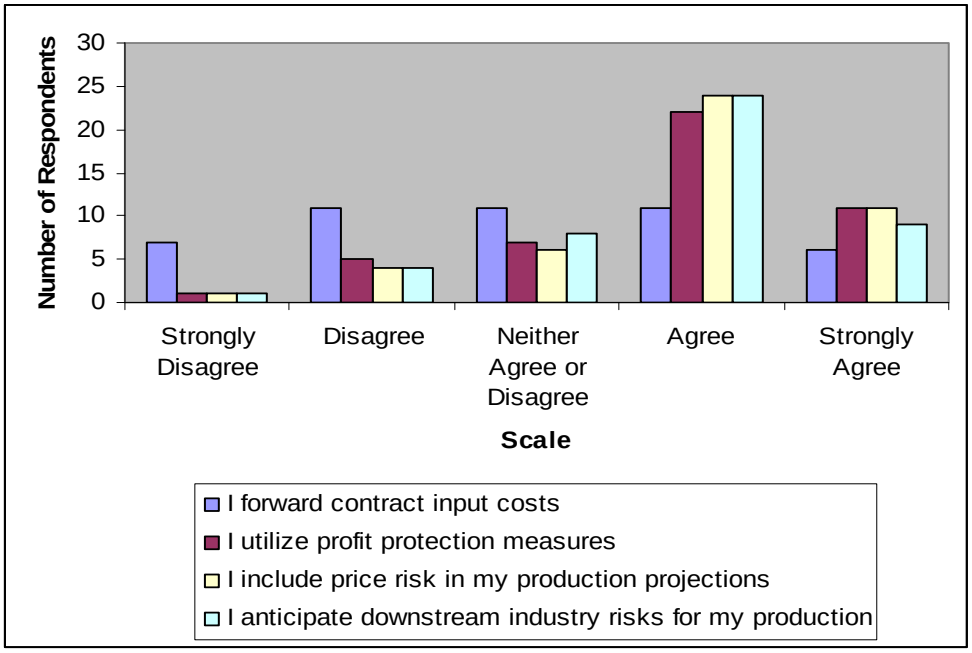
4.2 Development of the Planning Index

A planning index was constructed from the four types of planning presented to the producers in the research. As indicated earlier, the index was weighted according to assumptions about the planning objective for businesses as observed in the literature. The process involved taking a weighted average of the four types of planning based on producer

responses and researcher weight assignment. Prior to presenting the results of the planning index estimation, the distribution of the responses to the different types of planning is presented.

Production: The survey gathered data on planning as it relates to production through questions 1 to 9 in the questionnaire. An overall mean score of 3.86 and standard deviation of 0.511 based on the nine questions and related questing weighting (refer to Appendix A).

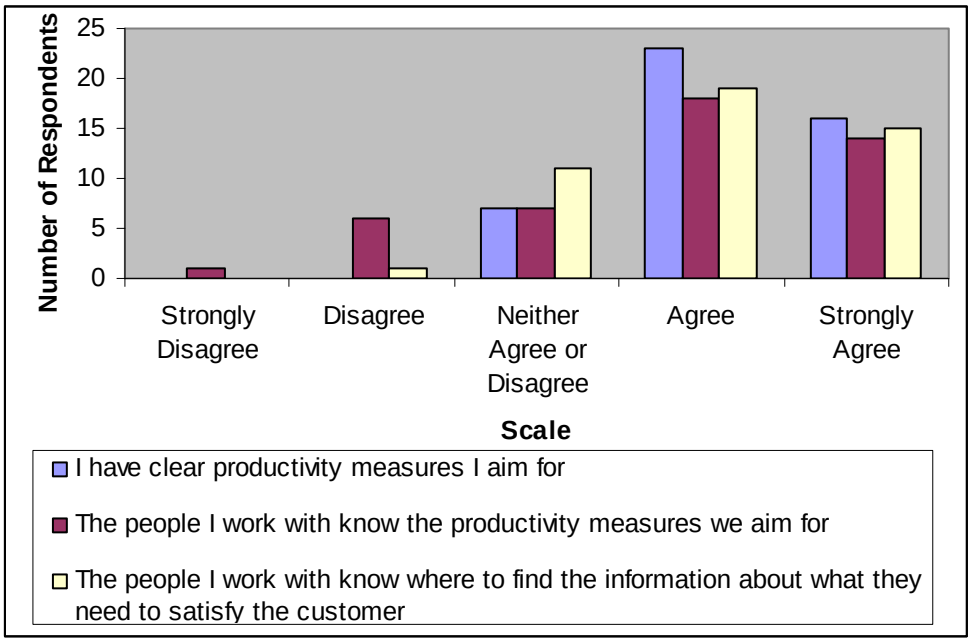
Figure 4.3: Sample of Production Question Results



The questions focussed on producer's agreement with statements related to indicators of production planning, e.g., forward contracting, minimizing production risks and variability as well as looking at production implications off farm and throughout the industry. Figure 4.3 shows the results pertaining to the production planning questions with strong relevance to the study.

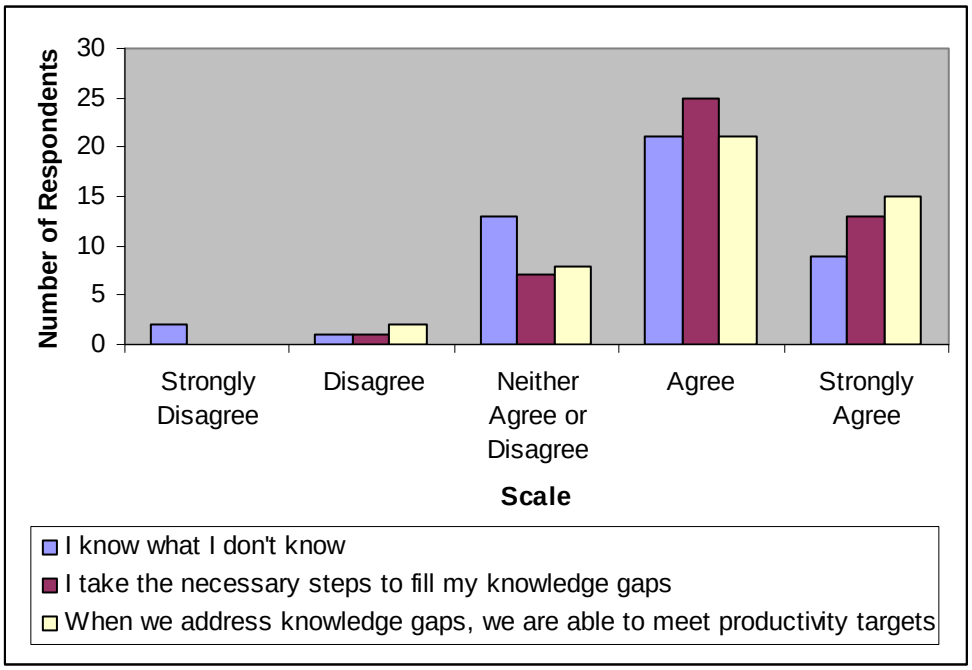
Management: The survey consisted of questions 10 through 14 (as per Appendix A), a mean score of 4.07 and a standard deviation of 0.612. Clients were asked the questions that relate directly to understanding productivity measures and goals as well as managements ability to clearly articulate these objectives with subordinates in the operation. Figure 4.4 provides a sample of how the respondents answered questions about their management skills.

Figure 4.4: Sample of Management Question Results



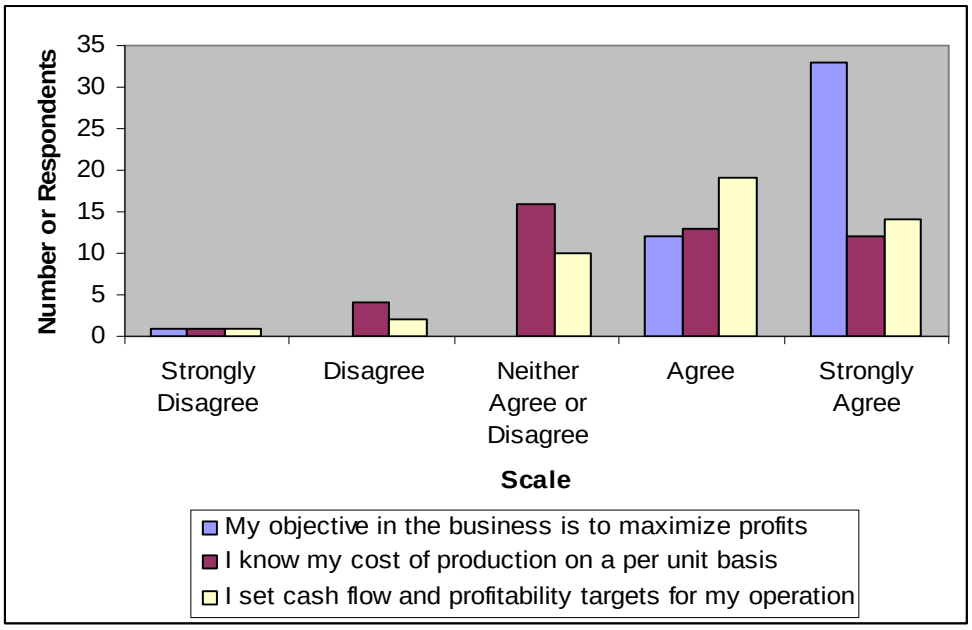
Continuous Improvement – the survey consisted of questions 15 through 20, a mean score of 4.03 and a standard deviation of 0.512. The main priority and intention of questioning revolved around a producer's willingness to understand weakness and seek and implement self improvement. Figure 4.5 demonstrate farmer's willingness to acknowledge weakness, seek learning opportunities and implement such change in the business.

Figure 4.5: Sample of Continuous Improvement Question Results



Performance – the survey consisted of questions 21 through 30, a mean score of 4.05 and a standard deviation of 0.577. These performance oriented questions sought to clearly identify producers ability to understand their costs of production, to know their farm strength within the industry and set clear targets for cash flow and profitability (see Figure 4.6 for sample of responses). This section of questioning sought to identify the participants' response to the variables that the literature presented as the most valuable performance indicators of planning.

Figure 4.6: Sample of Performance Question Results



Following the compilation of data, the Planning Index was developed. As discussed in the methods, a weighting of 16.7 percent was assigned to each of Production, Management, Continuous Improvement, with Performance being weighted 50 percent. Thus an overall planning index was developed with a scale of 0 to 100.

Because assumptions were made with regard to the weightings, two additional testing indexes were developed where the Performance mechanism had a weighting as low as 40 percent (Index 1) and high as 60 percent (Index 3), with the 50 percent index being labelled Index 2. Table 4.2 presents the results of testing the difference between the means of the three planning indexes that were developed. The results show that there was no statistical significant difference between any of the pairs. Thus, using any of the planning indexes to complete the rest of the study was acceptable.

Table 4.2: Strength of Planning Index Development

Paired Differences	Mean	Std. Deviation	T-statistic	Sig. (2-tailed)
Index 1 - Index 2	0.24	1.42	1.15	0.26
Index 1 - Index 3	0.12	2.11	0.39	0.70
Index 2 - Index 3	-0.12	0.92	-0.88	0.38

4.3 Hypothesis Testing

Planning Index was utilized to measure the level of planning. Hypothesis 1 sought to assess whether farms that planned had higher profits compared to those that did not plan. Net Income and EBITDA were the measure of profits for the farms. Net income is used to test profit, however EBITDA is also considered, it accounts for the difference between gross revenues generated by the farm less its operating costs before interest, taxes, depreciation and amortization, as this is a measure of repayment capacity at a financial institution.

To test this hypothesis, Net Income (Table 4.3) and EBITDA (Table 4.4) were tested as function of the Planning Index. They show that for every unit increase in the Planning Index, Net Income increased by $5,471 and EBITDA increased by $11,648, values that were statistically significant at the 5 percent level.

The R-square for the model was 22.7 percent for the Net Income model and 21.4 percent for the EBITDA model, which suggests that only about 22 percent of the income is explained by they Planning Index. This is expected for at least two reasons. First, the data is cross-sectional, and therefore R-squares are traditionally low; and second, the planning index is a complex variable developed from other variables beyond the model itself. Yet,

the important thing emanating from the regression analysis is that increases in planning leads to increasing profits, implying that we cannot reject the hypothesis.

Table 4.3: Planning Index as a function of Net Income

Net Income = - 326075 + 5471 Index, 50%				
Predictor	Coefficient	Standard Error	T Statistic	P Value
Constant	-326,075	122,907	-2.65	0.011
Planning Index	5471	1520	3.60	0.001
S = 94550.9		R^2= 0.227		Adj. R^2= 0.21

Table 4.4: Planning Index as a function of EBITDA

EBITDA = - 627973 + 11648 Planning Index				
Predictor	Coefficient	Standard Error	T Statistic	P Value
Constant	-627,973	272,192	-2.31	0.026
Planning Index	11648	3366	3.46	0.001
S = 209393		R^2= 0.214		Adj. R^2= 0.196

Does efficiency influence planning? This is the question elicited by the foregoing results. Hence, should we expect to see higher levels of planning as the efficiency of the business, measured as Net Income per unit of assets, increases? This efficiency measure focuses on asset utilization. To answer this question, a linear regression model was run with the efficiency measure as the independent variable. The outcome (Table 4.5) shows that efficiency is positively affected by planning intensity, and it is significant at the 10 percent level. In other word, asset utilization efficiency depends on level of planning that was done by farm businesses.

Table 4.5: Planning Index as a function of Net Income/Assets

Net Income/Assets= - 0.0135 + 0.000445 Planning Index				
Predictor	Coefficient	Standard Error	T Statistic	P Value
Constant	-0.01350	0.02115	-0.64	0.527
Planning Index	0.0004450	0.0002615	1.70	0.0096
S = 0.0162695		R^2= 0.062		Adj. R^2= 0.04

Subsequently, the Planning Index was tested as a function of EBITDA/Assets and found to be positive but not significant. The varied results show the importance of using the appropriate efficiency measures that is relevant to the target audience, in this case farm producers. If the EBITDA/Assets is used as a benchmark efficiency ratio, it leads to the suggestion that these businesses are seeking to enhance their profits with planning but not necessarily improving their efficiency. This is an example when farmers consider investments in particular assets, their net profits are most likely to increase, and maximize profits of the operation. However, with the investment, it may negatively affect their efficiency, but with a goal of profit maximization, the investment may well be warranted.

Farmers plan and engage in strategic development as proven by accepting hypothesis one. The second hypothesis seeks to show the effect of the characteristics of the farm business and the principal operator on the level of planning done on the farm. The variables here are in ownership structure, age, and number of people involved in the farm.

For the purpose of this study, business structure is scored on a scale of (1) being the most simplified or that of a sole proprietor, (2) being that of a partnership involving two or more persons, and (3) being that of a corporation, which is considered the most complex form of business structure in the study. Age has been represented on a scale of 1 through 7 (each

number representing a decade) based on the data collected from the original questionnaire, the age was that of the person responding in the interview, considered to be the primary decision maker in the business. The number of people involved in the operation includes all individuals from owners, spouses, children, full and part time labour (Table 4.6).

Table 4.6: Planning Index as a function of Business Ownership, Age, and Number of people involved in the operation

Planning Index =63.9 + 1.88 Ownership Structure + 2.10 Age + 0.845 Number of People				
Predictor	Coefficient	Standard Error	T Statistic	P Value
Constant	63.916	7.066	9.05	0.000
Ownership Structure	1.884	2.126	0.89	0.381
Age	2.096	1.292	1.62	0.112
Number of People	0.8451	0.7971	1.06	0.295
S = 8.99628		R^2= 0.122		Adj. R^2= 0.059

When the results are tested at the 5 percent level of significance, it was discovered that none of the variables was significantly different from zero, leading us to reject the hypothesis. However, this led to the need to investigate which parts of the planning index were influenced by the business and principal decision-maker characteristics. Therefore, the foregoing model was run on the four different types of planning identified in this study.

Table 4.7, shows the results for production planning, indicating that both age and number of people were significant at the 10 percent level of significance. However, business ownership structure was not. For management planning, only age was significant and that is explainable by the fact that the father was frequently the principal decision-maker in these firms and hence age is expected to be a factor (Table 4.8). Continuous improvement

and performance were unresponsive to all the three variables even at 10 percent level of significance (Table 4.9 and Table 4.10).

Table 4.7: Production Planning as a function of Business Ownership, Age, and Number of people involved in the operation

Production Planning =2.91 + 0.037 Ownership Structure + 0.119 Age + 0.0913 Number of People				
Predictor	Coefficient	Standard Error	T Statistic	P Value
Constant	2.9069	0.3773	7.70	0.000
Ownership Structure	0.0371	0.1135	0.33	0.745
Age	0.11880	0.06898	1.72	0.092
Number of People	0.09133	0.04256	2.15	0.038
S = 0.480377		R^2= 0.175		Adj. R^2= 0.116

Table 4.8: Management Planning as a function of Business Ownership, Age, and Number of people involved in the operation

Management Planning =2.65 + 0.055 Ownership Structure + 0.236 Age + 0.0821 Number of People				
Predictor	Coefficient	Standard Error	T Statistic	P Value
Constant	2.6535	0.4357	6.09	0.000
Ownership Structure	0.0546	0.1311	0.42	0.679
Age	0.23618	0.07965	2.97	0.005
Number of People	0.08211	0.04915	1.67	0.102

Table 4.9: Continuous Improvement Planning as a function of Business Ownership, Age, and Number of people involved in the operation

Continuous Improvement Planning =3.97 – 0.038 Ownership Structure + 0.0387 Age + 0.0008 Number of People				
Predictor	Coefficient	Standard Error	T Statistic	P Value
Constant	3.9690	0.4143	9.58	0.000
Ownership Structure	-0.0382	0.1246	-0.31	0.761
Age	0.03869	0.07575	0.51	0.612
Number of People	0.00078	0.04674	0.02	0.987
S = 0.527545		R^2= 0.008		Adj. R^2= 0.000

Table 4.10: Performance Planning as a Function of Business Ownership, Age, and Number of people involved in the operation

Performance Planning =3.22 + 0.171 Ownership Structure + 0.0783 Age + 0.0264 Number of People				
Predictor	Coefficient	Standard Error	T Statistic	P Value
Constant	3.2152	0.4493	7.16	0.000
Ownership Structure	0.1706	0.1352	1.26	0.214
Age	0.07834	0.08214	0.95	0.346
Number of People	0.02644	0.05068	0.52	0.605
S = 0.572022		R^2= 0.084		Adj. R^2= 0.018

Could it be that these farmers put the most weight on their production planning instead of the presumption that firms maximized profits and thus focused on planning for profit? After all, by focusing on production, they can increase their yield, reduce their market risks and production costs, thereby increasing their profits. To this, the weights on the different planning types were revised as follows: 40 percent each on Production and Management, and 10 percent each on Continuous Improvement and Performance. Using this new variable as the dependent variable, the effect of firm characteristics and the age of the principal decision-maker was investigated once more (Table 4.11). The table shows that doing this caused the hypothesis to be accepted at the 10 percent level since the variables were all significant.

Table 4.11 provides a foundation for planning that is directly affected by Age and Number of People involved in the operation. Each one unit increase in the number of people directly involved in the operation, resulted in an increase of 1.44 points in the planning

index. The coefficient of variation indicates that almost 21 percent of the variability in the new planning index is explained by the variability in the model's variables.

Table 4.11: Revised Planning Index as a function of Ownership Structure, Age and Number of people involved in the operation

Revised Planning Index = 58.9 + 1.00 Ownership Structure + 3.07 Age + 1.44 Number of People				
Predictor	Coefficient	Standard Error	T Statistic	P Value
Constant	58.851	6.891	8.54	0.000
Ownership Structure	0.999	2.073	0.48	0.633
Age	3.074	1.260	2.44	0.019
Number of People	1.4419	0.7774	1.85	0.071
S = 8.77442		R^2= 0.207		Adj. R^2= 0.15

To confirm that the revised planning index still supported the direct relationship to profits, the regression of Net Income as a function of the revised Planning Index. Table 4.12 shows that the original results remain valid: i.e., there is a significant positive relationship between planning and profit as measured by EBITDA.

Table 4.12: Revised Planning Index as a function of Net Income

Net Income = -285,520 + 5013 Revised Planning Index				
Predictor	Coefficient	Standard Error	T Statistic	P Value
Constant	-285,520	120,686	-2.37	0.022
Planning Index	5,013	1560	3.33	0.004
S = 96,145.3		R^2= 0.201		Adj. R^2= 0.183

The summary of the results have concluded that planning supports increased profits of operations and that planning is directly affected by age and number of people involved in

the operation, as expressed through results in the reweighing an increased emphasis on the production and management dimensions of planning.

CHAPTER 5: CONCLUSIONS

5.1 Summary

Strategic planning has been encouraged by practitioners over many years, with the end goal of enhancing organizational performance. This research sought to determine the types, extent and effect of planning in farm businesses. Through the use of a detailed interview questionnaire, it was evident that farmers do indeed plan within their farm business. All the planning indicators were found to be statistically different from zero at the 1 percent level.

The questionnaire evaluated four categories of planning: production, management, continuous improvement, and performance planning. Measuring planning based these categories provided an understanding that when farmers hear about "planning" that they do not automatically assume that it is only about a structured plan for the purpose of change; but in fact includes other intangible values.

The planning index, developed for the purpose of the study, demonstrated that significant variation among producers do exist, however the index itself may not be relevant beyond the confines of this particular study. The first objective of determining if farmers do in fact plan was proven positive.

Going to the next step of evaluating the factors which contribute to planning provided an insight from a broad planning perspective. As suggested by literature, the Planning Index was initially not statistically supported by testing demographics of business ownership structure, age, and number of people involved in the farm operation. When each of the four

components of planning were evaluated against the same conditions, the production and management types of planning were influenced by the number of people on farm and principal decision-maker's age.

The redistribution of weighting for the four dimensions of planning to 40% on production, 40% on management and 10% each on continuous improvement and performance provided an index which shows planning is affected by age and number of employees on farm and that farmers do plan for production and management.

This should be no surprise that producers in fact plan for production. This study suggests that producers that invest time in planning for production and management will perform better in terms of increasing profits.

Using the data from this study, there is a clear connection to the level of planning on farm as it relates to the overall profits of businesses. As the level of planning increases, so does the level of profits. This suggests that size is relevant, indicating that larger farms, tend to plan and have more gain by doing so. When the model was re-tested using a profitability measure on a per unit basis, such as Net Income/Assets, the results showed a positive relationship between planning were significant. The results confirm the fact that farmers seek to maximize profits.

5.2 Strategic Initiatives

The importance of this thesis is in the application of such knowledge, where it may be transferred to clients for greater profits and to bank managers for coaching and assisting profitable clientele.

1. The research shows that planning is multifaceted and multidimensional. Therefore, in conversing with producers about planning, it is important to recognize these characteristics and bring them into the conversations. While farmers may not have formal strategic plans, they may have decision-making processes that do suggest some level of planning.

2. Farmers plan for production, thus one would expect to easily learn about their production planning measures and if not, given this can be highly influential on planning, probing questions must be used.

3. The management component, which emphasized communication, is directly related to planning and profits. As the number of employees and people involved in the farm operation increases, one should evaluate the communication skill of the farm manager.

4. Despite the intuition to probe for performance based planning measures, one assumes that a farmer who plans is also one that fully understands their drivers such as cost of production. Beyond this they must understand and articulate how these

cost factors are integrated into their plan, in particular how it relates to the profitability of their farm.

5. Recognizing that age (experience) and number of employees positively influence planning, we should expect producers with these attributes to easily identify the means to obtain their end goals. Should a producer be younger and perhaps involved with fewer people on farm, a banker may want to spend more time coaching the farmer.

6. The larger the farm operation, the greater the need for planning. In other words large farms, which are businesses seeking to maximize profits, should be able to demonstrate their ability to plan all aspects of their farm. Should a larger farm fail to plan their profits will significantly be reduced.

7. Because the majority of respondents are engaged in supply management, their focus on performance is limited because emphasis of market pricing for products and inputs is fixed by way of a cost of production mechanism, thus we should expect producers to plan for production, in effort to minimize cost and maximize profit.

5.3 Limitations of the Study

The limitations and challenges of this study may be similar to other studies completed in the past with regards to determining a link between strategic planning and performance. Although an interesting concept, the style of planning which each farmer uses may be unique. It is difficult to compare a producer who engages formal as well as documented

planning strategy to that of a producer who only uses informal planning, perhaps a 'Cognitive School' where planning is strongly influenced by bias or the environment.

Not to suggest that farmers are not realistic, but the method of data collection limits the amount of variation among respondents. Because all producers had the option of responding by strongly disagreeing to strongly agreeing to the interview questionnaire, farmers may have knowledge of key planning aspects of their business, but application of such information may vary over a wise range. What farmers said they did may in fact be different from what they actually do. A further refinement of the method of data collection would be essential or perhaps the interview process should involve questioning followed by testing and verification of the answer to confirm their belief in understanding and application of the planning initiatives.

A final limitation of the study was its relationship in a broader context of the agricultural sector. All of the participants were clientele of a large financial institution. That meant they met a minimum level of profit, thus minimizing the variation among respondents.

5.3 Future Research

Future research opportunities relate to categorically determining if a farmer uses formal or informal planning methods. By adding information about the planning dimension such that it relates to performance, it would be feasible to test between formal and informal planning in relation to performance.

Opportunities exist to determine profitability where size is not a factor. Although this research showed a link between planning and profit, increasing the size of samples to test between large farms and small farms would provide knowledge applicable to all sizes and scope of farms involved in Canadian agriculture.

Because of the large emphasis of supply managed industry in Canada, research comparing strategy development for individual sectors, to learn if the planning process is different compared to producers in a free market environment.

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APPENDIX A

NAME:_____

	Section 1: Production	Strongly Strongly Agree				Disagree
		1	2	3	4	5
1	I forward contract input costs					
2	I participate in price protection measures					
3	I minimize production variability					
4	I utilize profit protection measures					
5	I know the best producers in my region/industry					
6	I include price risk in my production projections					
7	I anticipate downstream industry risks for my production					
8	I incorporate safety enhancing practices in my production					
9	I incorporate protocols to minimize risk in my production					

	Section 2: Management	Strongly Diagree				Strongly Agree
		1	2	3	4	5
10	I have clear productivity measures I aim for					
11	The people I work with know the productivity measures we aim for					
12	The people I work with know what our customers need from us					
13	The people I work with know what they have to do to meet our customers needs					
14	The people I work with know where to find information about what they need to satisfy the customer					

	Section 3: Continuous Improvement	Strongly Disagree				Strongly Agree
		1	2	3	4	5
15	We strive to improve our operations					
16	Continuous improvement is not rewarded in this business					
17	I know what I don't know					
18	I take the necessary steps to fill the gaps in my knowledge					
19	I help my employees to meet their knowledge gaps					
20	When we address knowledge gaps, we are able to meet productivity targets					

	Section 4: Performance	Strongly Disagree				Strongly Agree
		1	2	3	4	5
21	My objective is to keep the business going					
22	My objective in the business is to maximize profits					
23	My objective in the business is to be one of the largest producers					
24	I know my cost of production on a per unit basis					
25	I know my production on a per unit basis					
26	I know my strength within my industry and region					
27	I have consistently achieved my business objectives					
28	I think about my historical profitability in setting targets for future objectives					
29	I set production targets for my operation					
30	I set cash flow and profitability targets for my operation					

Please indicate to the best of your ability and rate the following in relation to your local area

		Top 10% (1)	Top 20% (2)	Top 50% (3)	Bottom 50% (4)
31	Profits				
32	Size of Operation				
33	Profitability				

34 Total number of people involved in the farm:_____

35 Exit Strategy

1 Continue farming until I die
2 Sell and retired
3 Sell part and live off the remainder
4 Transfer part and live off the remainder
5 Transfer to offspring or family
6 I have no exit strategy
7 Other, please specify

36 Please indicate the type of ownership structure

1 Sole Proprietorship
2 Partnership
3 Limited Liability Company
4 Corporation
5 Cooperative

37 Age 1 less than 20
2 20 to 30
3 31 to 40
4 41 to 50

5 51 to 60
6 61 to 70
7 70 +

38 Marital Status

1 Single
2 Married
3 Separated
4 Common law
5 Divorced
6 Widowed

Please provide the majority source of your revenue:

	Industry	< 25% (1)	26-50% (2)	51-75% (3)	>75% (4)
39	Dairy				
40	Poultry				
41	Hogs				
42	Crops				
43	Off Farm Revenue				
44	Other				

45 Financial Statement Quality:

1 Tax Returns
2 Notice to Readers
3 Review Engagements
4 Audited

Year End Date		
46	Gross Farm Income	$
47	Net Farm Income	$
48	EBITDA	$
49	Market Value of Farm Assets	$
50	Total Liabilities	$
51	Market Value of Equity	$
52	NBC Risk Rating	

APPENDIX B

Production Questions and Weighting:

Question	1	2	3	4	5	6	7	8	9
Weighting	10%	10%	10%	15%	10%	15%	10%	10%	10%

Management Questions and Weighting:

Question	10	11	12	13	14
Weighting	30%	20%	15%	15%	20%

Continuous Improvement Questions and Weighting:

Question	15	16	17	18	19	20
Weighting	0%	16.67%	13.33%	33.33%	20.00%	16.67%

Performance Questions and Weighting:

Question	21	22	23	24	25	26	27	28	29	30
Weighting	0%	12.5%	0%	37.5%	12.5%	5.0%	5.0%	7.5%	10.0%	10.0%