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## **Do Market Oriented Firms Demonstrate Clarity on Their Value Discipline? Evidence from Illinois Beef Producers**

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### **Abstract**

A market orientation has been shown to lead to improved firm performance in a variety of industries (Narver and Slater, 1990; Deshpande et al., 1993). In previous research, it has been argued that performance benefits are a result of a greater awareness of the sources of value the product provides to the consumer, without specifically describing how value was created. Treacy and Wiersema (1993) developed the concept of value disciplines, which are three distinctive means of value provision, namely operational excellence, customer intimacy and product leadership. More recently, Narver et al. (1998) argued that market oriented firms have a clear understanding of how they provide value to customers, but this assertion has yet to be empirically tested. A new scale was developed and tested to measure the choice and clarity of value discipline. Using a sample of 343 Illinois beef producers, results show that organizational learning, innovativeness, and extreme levels of market orientation contribute to value discipline clarity while moderate levels of market orientation have the opposite effect.

**Keywords:** innovation, market orientation, organizational learning, value disciplines

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## Introduction

Over the past two decades the concept of a market orientation has been extensively developed and tested (Narver and Slater, 1990; Kohli and Jaworski, 1990; Day, 1994a). Findings suggest market oriented firms achieve superior performance driven by their superior ability to market products and services that more accurately match the expressed and latent needs of consumers (Narver and Slater, 1990). The degree of success in matching product to consumer is based on the distinct capability of the market oriented firm in transforming information into knowledge. Firm knowledge is leveraged to tailor the product in a manner which provides superior value relative to available alternatives. Extending this principle, Treacy and Wiersema (1993) argue that the choice of product and customer is not separable. Product choice, and the method of providing value, effectively limits the customer base to a specific group of customers with a harmonious value proposition. To be able to successfully market one's products and services, awareness of the target audience and their specific value proposition is vital.

A market orientation has been defined as a business culture which focuses on continuous value creation for the customer (Narver et al., 1998). In the search for opportunities to create value, it is extremely important to understand how the product in question fits into the buyer's value chain. Superior awareness allows the market oriented firm to focus on the specific attributes of the product the purchaser actually values (Anderson et al., 2006). Greater awareness has been argued to help market orientated firms express "clarity on their value discipline and its value proposition" (Narver et al., 1998; pg 243). Value discipline clarity enables the market oriented firm to more accurately determine specific attributes they can provide based on their own core competencies. This avoids the pitfall of trying to become all things to all customers. If the firm does not have clarity of focus on a specific value discipline, it could become "stuck in the middle," where the firm strives to compete on all possible sources of value rather than focusing on one specific area of value (Porter, 1985). Unfortunately, this often leads to the firm being mediocre in all sources of value rather than excellent in any.

Value is defined as "... the worth in monetary terms of the technical, economic, service, and social benefits a customer company receives in exchange for the price it pays for a market offering" (Anderson and Narus, 1998; pg. 54). Based on this definition, a firm could provide value to consumers in myriad of ways. Treacy and Wiersema (1993) clarified this discussion by developing the idea of separate value disciplines, which focus on the specific means of providing value. These disciplines include *Customer Intimacy*, *Product Leadership*, and *Operational Excellence*, and each value discipline can be thought of as relating to a singular component of the definition of value.

The choice of value discipline to follow is therefore vitally important as it will define both the market as well as the search for resources to build core competencies needed to succeed within the chosen discipline. This choice does not occur within a vacuum, however. While many firms within agriculture have focused on becoming the low-cost leader, strategy heterogeneity has important implications in terms of firm and industry performance. Traditionally, cattlemen as a whole have focused on improving performance through efficiency, and a possible consequence of this lack of diversity has been mediocre performance (see Jones, 2000). This is consistent with the theory that strategy imitation leads to weakened performance for the entire industry (Porter, 1991).

Outside of agriculture, strategy and marketing scholars have long argued knowing what customers value is an important resource. Leveraging this knowledge, a firm can build the specific core competencies needed to provide value, and speed of transforming information into knowledge may ultimately be a source of competitive advantage. Unfortunately, a dearth of research has been conducted examining the market orientation-clarity link put forth by Narver et al. (1998). To test this relationship, a scale has been developed to measure value discipline clarity. Using a sample of Illinois beef producers, we test our value discipline scale based on four components of the value proposition, specifically product quality, channel relationships, pricing and production.

The relationship between market orientation and value discipline clarity is important as the location of a firm on the value triangle (relative to competition) has serious implications concerning the ability of the firm to defend their strategy choice (i.e. how they provide value to the customer) long-term. Furthermore, awareness of value disciplines allows for investment in the specific resources needed to build core competencies required to sustain a strategic position within a specific value discipline. The objective of this paper, therefore, is to determine if market oriented firms are more focused on the means of providing value to their customers.

## **Foundations and Implications of a Market Orientation**

In order to continuously provide value the firm must be aware of the buyer's value chain and how the product actually provides value to the customer. Market oriented firms may be better equipped to discover and capitalize on this awareness. A market orientation has been defined as a corporate culture which stresses the continuous creation of customer value (Narver et al., 1998). Kohli and Jaworski (1990) go further in defining a market orientation as the managerial actions manifested in the search for market information, the spread of this information within the firm, and the managerial response to the market information. Upon closer examination, it would seem managerial actions are consequences of a market orientation culture within the firm. Firms which have in place a culture that stresses the need to consistently create superior value for the customer – through differentiated products, efficient production, or other means – will actively seek out information as to how to best meet the needs of the market.

Focusing on the search for customer value, Narver and Slater (1990) empirically measured market orientation as three singular, but equally important behavioral components, namely a customer orientation, a competitor orientation, and inter-functional coordination. A customer orientation enables the firm to determine what specifically is valued by the customer. While a customer focus allows market oriented firms to determine which products and services are currently valued by the market, a market orientation, however, is more than simply being customer-led (Slater and Narver, 1998). A competitor orientation allows the firm to analyze whether desired attributes are being adequately met by competitors. Taken together, this is akin to a traditional SWOT analysis. A decision on whether to compete directly for this market segment is based on market characteristics and the current capabilities of the firm.

Inter-functional coordination refers to the transfer of market knowledge between managerial groups within the firm. The interaction of the three behavioral components of a market orientation is integral to the firm's strategy formulation and implementation process (Homburg et al., 2004). Internalizing this valuable information leads highly market oriented firms to a clear

understanding of various means to provide value for customers, potentially in a less highly competitive market.

Market orientated firms have been found to have superior performance across a wide range of industries and cultures (Narver and Slater, 1990; Deshpande et al., 1993; Pelham, 1997). By offering products which uniquely meet the specific needs of customers, firms have been able to see increased returns as well as improved success rates of new products. While Pelham (1997) questioned the performance implications of a market orientation in commodity industries, Narver and Slater (1990) found a U-shaped relationship between market orientation and performance. That is, firms with low and high levels of market orientation outperformed business units with average levels of market orientation. While this dichotomous relationship may provide short-term performance benefits to both extremes of market orientation; the benefits to highly market oriented firms may be more sustainable as their focus is not solely on the product, but rather on the specific needs of the market (Day, 1999).

More recently, Menguc and Auh (2006) found the dynamic capability of identifying opportunities to create value increased with both market orientation and innovation. The development of similar dynamic capabilities could be the reason underlying the results of Langerak (2003), who found the positional advantage (cost or differentiation advantage) of the firm increased with the level of market orientation. By the adoption of a customer and competitor orientation, market oriented firms were found to outperform less market oriented rivals. Dynamic capabilities developed through a market orientation have also been shown to improve new product advantage and launch success (Langerak et al., 2004). This success, however, may be limited to those firms with a proactive form of market orientation ( see Narver et al., 2004 and Atuahene-Gima et al., 2005).

The divergent forms of market orientation and the consequences of each have important ramifications in terms of value discipline clarity. As shown in the results of Atuahene-Gima et al. (2005) firms with a responsive market orientation need to be extremely market oriented to successfully develop and launch new products. Conversely, proactive market oriented firms may see performance and new product launch success at lower levels of market orientation. Further, proactive market oriented firms may be able to determine opportunities for discontinuous leaps in the customer's value proposition, thereby transforming the firm from one who is driven by the market to one that is driving the market (Jaworski et. al, 2000; Kumar et al., 2000; Tuominen et al., 2004).

While much research has been done on the subject of market orientation, unanswered questions remain. Many of these studies examine the market orientation-performance link and attribute success to providing superior value relative to that of rival firms. The question is how do market oriented firms provide superior value? Is their method of value provision clearly defined relative to rival firms? Secondly, are firms with a proactive market orientation more apt to be on the vanguard of value provision in a specific industry? This study hopes to enlighten the discussion regarding the clarity of value provision, while also examining if extreme levels of market orientation are necessary in order to perform the clarification task adequately.

## **Theoretical Foundations of Value Disciplines**

Treacy and Wiersema (1993) developed three distinct value disciplines firms can implement. Each value discipline is based on the specific value proposition for the product in question. This development is an extension of Porter's (1985) work on competitive advantage where firm strategies are grouped into two generic categories (low-cost and differentiation) in conjunction with two types of market focus (broad and narrow). Porter argues value creation must first begin with an assessment of how the product fits into the buyer's value-chain. Depending on several factors, buyers may prefer a product with standardized attributes at a lower cost or a product with augmented attributes which garner a premium price. Superior value is created when the difference between perceived value and the cost of acquisition is greater than the value created by alternative products.

Treacy and Wiersema (1997, pg xiii) point out that the choice of value discipline "...defines what a company does and therefore what it is." The question remains, what is value discipline clarity and why is it important? Value discipline clarity refers to a singular focus on a specific discipline the firm uses to provide value to the customer. Treacy and Wiersema (1993) argue firms should focus on one source of value provision for the customer while maintaining industry standards in the remaining components. With a clear focus on the means of providing value, the firm can begin to build the resources and competencies needed to meet this objective. Unfocused firms do not have a clear understanding of the 'how' underlying the concept of value creation. As such, they are not able to develop and strengthen important competencies and their disjointed efforts dilute the company's offering.

Amassing the core competencies needed to meet the minimum requirements of each customer through a singular product is either impossible or prohibitively expensive. Therefore, Treacy and Wiersema (1997) argue, firms should choose one value discipline and build core competencies around achieving that goal. They go on to develop four 'Rules of Competition' (1997, Ch 2).

**Rule 1:** Provide the best offering in the marketplace by excelling in a specific dimension of value.

**Rule 2:** Maintain threshold standards in other dimensions of value.

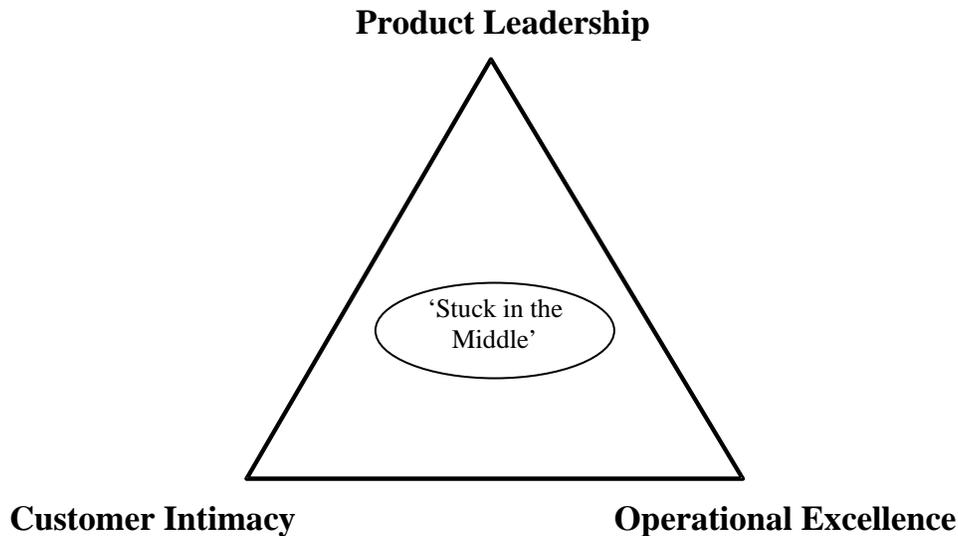
**Rule 3:** Dominate your market by improving value year after year.

**Rule 4:** Build a well-tuned operating model dedicated to delivering unmatched value.

## **The Development of a Valid Measure of Value Disciplines**

In order to measure value discipline clarity, a scale was developed as no existing scale could be found following a thorough search of the literature. Each value discipline is hypothesized to be a one-dimensional construct measuring the means in which a product's value proposition fits within the buyer's value chain. Four components of the value proposition were used, including pricing, product quality, production practices, and relationship building within the channel. This resulted in a multi-item scale measuring each value discipline.

Uni-dimensionality of each specific value discipline measure is necessary in order to properly ensure that the scale is clearly measuring a specific value discipline. Uni-dimensionality is further important as it is hypothesized value discipline clarity is analogous to closeness to the border of the value triangle developed by Treacy and Wiersema (1993). It is important to note, however, that the firm's choice of value discipline is not binding as it can differ across product lines or regions. As firms can employ strategies for long-term profit within each individual value discipline, we present *Operational Excellence*, *Customer Intimacy*, and *Product Leadership* as an equilateral value triangle (Figure 1) similar to Treacy and Wiersema (1997, pg 45).



**Figure 1.** The Value Triangle

Choice of value discipline was measured using a framework similar to Miles and Snow (1987) in their development of strategy typologies. Specifically, producers were shown three statements relating to a particular value discipline. Each statement was framed in a manner that removed any ambiguities about which value discipline it was referring to, stopping short of identifying the value discipline by name (See Appendix 2). Within each component of value, producers were asked to assign a total of 100 points among the three statements depending on which statement fit their operation best.

The livestock industry was chosen as a setting for this study as there is growing evidence, anecdotally at least, that all three value disciplines are employed by U.S. cattlemen. Historically, commodity beef producers operated with a strategy focused increasing production efficiency. This was driven by firms not possessing much, if any, control over prices received. Success within this value discipline may be driven by economies of size or scope while providing a standardized product for downstream channel partners. In search of improved financial performance, a growing number of cattlemen are moving towards more aligned production channels (Mulroney and Chaddad, 2005). This growth of production and marketing alliances, along with direct marketing via farmer's markets points to a shift away from an operational

excellence (OE) value discipline to one with an increasing focus on customer intimacy (CI). Producers operating within the CI value discipline focus on discovering unmet customer needs and delivering tailored solutions leveraging close relationships built through repeated transactions. Channel relationships can be valuable sources of information and could allow producers to rapidly meet the specific requirements of consumers and potentially earn premium prices<sup>1</sup> for doing so. The value of relationships can also be seen at the aggregate level as various production alliances endeavor to market products using in-store promotions where actual producers interact with consumers or through the provision of producer profiles on alliance websites.

A product leadership (PL) value discipline is demonstrated through the rapid development or adoption of new technologies (i.e. genetics, tenderness EPDs<sup>2</sup>, traceability) that aid in the successful implementation of new and innovative production strategies. Some alliances may operate within a product leadership value discipline as they continually search for new products to market containing various attributes ranging from grass-fed to natural, to sustainable.<sup>3</sup> Even with the increasing segmentation of the beef market, there are still a considerable amount of producers who operate anonymously through the commodity market and an operational excellence value discipline.

#### *Sampling Frame and Data Collection*

The sampling frame for this study consists of producing members of the Illinois Beef Association in 2007. The membership list was examined and obvious commercial businesses not directly involved in beef production were removed from the population. A total of 1,570 informants received a mailing which included a letter from the researchers outlining the study and a questionnaire. A reminder card followed two weeks after the initial mailing. A second questionnaire was mailed to non-respondents after a subsequent two weeks. A total of 343 usable responses were received after two waves of mailings, yielding a response rate of 21.8%. Respondents were active in both the cow-calf and feedlot segments of the production channel with an average of 77 calves raised and 495 head of cattle fed out in each respective group. Survey respondents had, on average, 32 years of experience in the cattle business. Nearly 25% of respondents (80 out of 343) indicated that they participate in some form of alliance production.

#### *Construct Validity and Reliability*

Following the development of the value discipline scale, it was tested for both validity and reliability. Content validity is a qualitative measure used to assess the clearness of the scale as well as the ability of the scale to measure the concept in question. This was assessed using both academics and practitioners who read and commented on the clearness of the scales. Construct validity was measured through a Confirmatory Factor Analysis (EFA) approach. In this method, the goal is to explain the correlation between the observed variables and the underlying latent

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<sup>1</sup> A price differential that reflects the value of the business relationship or the information transferred in the transaction.

<sup>2</sup> Expected Progeny Differences (EPDs) are utilized by producers to predict probable differences in specific characteristics of future offspring from a specific animal.

<sup>3</sup> For example, see the case of Country Natural Beef described in Campbell, D. (2006).

structures (Bollen, 1989). In this case, the underlying latent variables are the specific value disciplines.

$$1) \quad x = \Lambda_x \xi + \delta$$

The structural equation depicted in (1) can further be described in matrix form as:

$$2) \quad \begin{bmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \\ x_5 \\ x_6 \\ x_7 \\ x_8 \\ x_9 \\ x_{10} \\ x_{11} \\ x_{12} \end{bmatrix} = \begin{bmatrix} \lambda_{11} & 0 & 0 \\ \lambda_{21} & 0 & 0 \\ \lambda_{31} & 0 & 0 \\ \lambda_{41} & 0 & 0 \\ 0 & \lambda_{52} & 0 \\ 0 & \lambda_{62} & 0 \\ 0 & \lambda_{72} & 0 \\ 0 & \lambda_{82} & 0 \\ 0 & 0 & \lambda_{93} \\ 0 & 0 & \lambda_{103} \\ 0 & 0 & \lambda_{113} \\ 0 & 0 & \lambda_{123} \end{bmatrix} \begin{bmatrix} \xi_1 \\ \xi_2 \\ \xi_3 \end{bmatrix} + \begin{bmatrix} \delta_1 \\ \delta_2 \\ \delta_3 \\ \delta_4 \\ \delta_5 \\ \delta_6 \\ \delta_7 \\ \delta_8 \\ \delta_9 \\ \delta_{10} \\ \delta_{11} \\ \delta_{12} \end{bmatrix}$$

The reason underlying these measures is that if a survey item ( $x_i$ ) measures a specific construct ( $\xi_i$ ) it is reasonable to assume a change in the latent construct would lead to a change in the measurement item. Factor loadings which represent these relationships ( $\lambda$ ) are shown to be greater than 0.618 which would signify that the items are measuring the scale intended (Table 1).

Variance extracted for all value disciplines is greater than 50% indicating that the variance explained by the scale is greater than the variance that is attributed to measurement error (Fornell and Larcker, 1981).

Internal consistency for the value discipline scale was tested using a split-sample method suggested by Churchill (1979). Reliability analysis was conducted on the first sample and was repeated on the second sample. Following initial purification of the scales, construct reliability was tested on the full sample. The items measuring production practices did not have item-to-total correlations exceeding the threshold recommended by Streiner and Norman (1995) and were removed from the scales. From the remaining items, coefficient alphas for each value discipline exceed 0.60, the threshold suggested by Nunnally (1978) for exploratory research (Table 2).

## The Effect of Market Orientation on Value Discipline Clarity

### *Drivers of Value Discipline Clarity*

It is hypothesized that a market orientation could lead the firm to a specific means of providing value to the market. A customer orientation generates market intelligence as it relates to buyers and the value proposition of the product in question. Armed with this knowledge, firms can

begin to improve the value the product provides. A competitor orientation focuses resources to assess the value proposition being provided by rival firms, and whether the firm should compete directly with a similar product offering based on market conditions, core competencies, and other factors. As firms become more market oriented, or as the culture of market orientation becomes more ingrained in the day-to-day activities of the firm, we would expect increased clarity on how the product offering provides value to the customer. As such, the following hypotheses are presented:

**H1a:** *Market Oriented firms express clarity on their value discipline.*

**Hb:** *As market orientation increases exponentially, value discipline clarity increases.*

Innovation can be seen through a variety of prisms. It is often thought that innovative firms continuously develop new products and services, but this is only one method to create superior value for the customer. Combined with a market orientation, firms can utilize innovation to create products and services that are currently not being offered by rival firms (Han et al, 1996). Less technological, Nelson and Winter (1982) characterize innovations simply as a change in routines. Within this characterization, any number of innovations can be used to create value for buyers. Increased communication between segments in the beef industry was an issue that was singled out in the 2005 National Beef Quality Audit (NCBA, 2005). Increased communication could lead to increased value for downstream partners if the communication leads to superior value relative to the traditional, anonymous transactions between segments. A move to direct marketing could also be seen as an innovation as there was a shift from arms length transactions to one based more on relationship development between the parties of the transaction.

Therefore, we present the following hypotheses:

**H2:** *Innovative firms express clarity on their value discipline.*

Entrepreneurial firms have long been in search of opportunities to create value where others see none. To create profit opportunities, entrepreneurial firms recombine resources to capture unrealized value. Alvarez and Businetz (2001), in describing entrepreneurship within the framework of the resource based view, indicate that "...entrepreneurship is about cognition, discovery, pursuing market opportunities, and coordinating knowledge that lead to heterogeneous outputs" (pg 757). This definition is strikingly similar to the behavioral definition of market orientation developed by Jaworski and Kohli (1993) who state that a market orientation is comprised of intelligence generation, intelligence dissemination, and the firm's response to the market intelligence.

Entrepreneurship within agriculture has focused on the ability for agropreneurs to recognize and react to profit opportunities. Using a simulation model, Ross and Westgren (2006) were able to find positive and significant returns to entrepreneurs in the pork industry. These excess rents were based on the firm's ability to recombine resources in such a manner to create a product which was valued by the market. Firms that are able to determine where opportunities for value creation lie will be better able to focus their attention on the means for providing continuous value for the market in the future. As such, we hypothesize the following:

**H3:** *Entrepreneurial firms express clarity on their value discipline.*

Slater and Narver (1995) argued that the firm's ability to learn faster than their competition may be their only source of competitive advantage. This may be especially true in agriculture where the majority of innovations put into practice by producers are either easily imitated or substituted. The lack of ex post limits to competition eliminates the ability of the firm to extract rents from the implementation of new technologies. Furthermore, organizational learning has been found to be an antecedent to the development of a market orientation (Day, 1994). A culture which values learning and questions the status quo of the firm will be one that continually searches for the creation of superior value. This culture is likely related to the level of education the manager has attained. The search for superior value and the firm's commitment to learning lead us to our next hypotheses, namely:

**H4a:** *Firms with a learning orientation express clarity on their value discipline.*

**H4b:** *As the education level of management increases, so does value discipline clarity.*

Traditionally, agricultural firms focused on increasing production efficiency as a means of increasing profits. As producers of standardized products subject to homogeneous grades and standards, the only way to improve profits and increase buyer value is to produce the undifferentiated product at the lowest possible price. This is a natural fit for an OE value discipline. Furthermore, producers can increase the perceived value by augmenting the standardized product to decrease the cost of ownership. Preconditioning cattle for the feedlot is one method cattlemen can use to increase downstream buyer value within an OE value discipline. However, these opportunities are generally dependent on the speed of imitation by rivals. If the pricing mechanism shifts from price premiums for the provision of the attribute to a price discount for non-provision, then value will again be measured solely on acquisition costs. Hence, we hypothesize:

**H5:** *Managers with a cost focus experience clarity on their value discipline.*

Along with the behavioral and cultural components, the length of time a firm has been present in the market may also contribute to value discipline clarity. As firms grow and mature, how the product offering fits into the buyer's value chain may become clearer. This clarity can be useful in developing new products or services which can continue to provide superior value for consumers. Firms in their infancy may chase the latest trends in the hopes of earning premium prices without fully understanding the reason for the price premium. While experience may overcome this pitfall, it could also be a hindrance if it leads to a single-minded focus on the current needs of the market as opposed to identifying latent needs. A tunnel vision approach to current customers may provide short-term benefits, while hamstringing the firm's future opportunities as limited attention has been paid to develop the capabilities needed to meet future needs of the market (Hamel and Prahalad, 1991; Leonard-Barton, 1992). These shortcomings, while severe, may not necessarily cause the firm to be unclear on how its current product provides value for the customer. What social embeddedness may cause, however, is the potential of a product in the future to no longer meet the threshold standards of the market.

Therefore, we present the following hypothesis:

**H6:** *Managers with more experience express clarity on their value discipline.*

*Independent Variable Measure Development*

Measurement scales from previously published research in the marketing literature were identified and used to construct the independent variables used in this study. These measurement scales were previously intended for management teams of large corporations so the wording of items was modified to fit an agricultural audience. Following modification, the measurement scales were pre-tested by two distinct groups. First, University of Illinois Extension personnel were asked to read through the questionnaire and identify any potentially difficult items and provide comments for their improvement. Following the initial pre-test, a group of beef producers participating in the Illinois Farm Business Farm Management association were sent a questionnaire and asked to read through the survey and comment on any remaining ambiguities. Following this informative feedback, items that were most problematic were revised or removed from the questionnaire.

All independent variables were constructed using multiple-item scales on a six-point Likert scale. The scale used to measure market orientation included items used in the original MKTOR scale first developed by Narver and Slater (1990) as well as the scale used in Narver, Slater and MacLachlan (2004). In this 19-item scale, a firm's market orientation is comprised of their customer and competitor focus as well as the coordination of market knowledge within the firm. The market orientation scale is a hybrid scale as it measures both the reactive and proactive forms of market orientation. To measure organizational learning, 11 items from Farrell and Oczkowski (2002) were used. These items sought to measure the 'learning culture' of the farm business. The entrepreneurial tendency was measured with a 5-item scale used in Matsuno, Mentzer and Oszomer (2002). The indicators measured the inclination of managers to use innovative marketing strategies to improve performance or whether they chose to 'play it safe' when it comes to forming solutions to management problems. Innovation was measured using a 5-item scale tested by Hurley and Hult (1998). Similar to the entrepreneurship scale, the innovation scale measured the penchant for managers to utilize innovative strategies to solve problems on the farm. The final independent variable measures the cost focus of the firm. A cost focus was measured using a combination of scales developed by Homburg, Workman and Krohmer (1999) and Kotha and Valdamani (1995) and consisted of 5 items. The scale measured the manager's focus on production efficiency and cost reduction as a means of improving performance.

Internal consistency of the independent variables was tested using factor analysis with varimax rotation in SPSS to ensure the scales were measuring a distinct construct within the sampling frame of this study. Factor loadings and item-to-total correlations were used to purify the scales. Worthington and Whittaker (2006) suggest to only retain those items where factor loadings are greater than 0.32. Factor loadings can be thought of as regression coefficients. That is, the amount by which the indicator variable will change for a one unit change in the underlying latent variable. Indicators below the threshold were removed from further study. Item-to-total correlations less than 0.2 were also removed in accordance to Streiner and Norman (1995) as they are likely to be measuring a different construct from the other items in the scale.

The lowest factor loading reported is 0.547 for the fourth question in the cost focus scale is shown in Table 3 (see Appendix 1). Further, all item-to-total correlations and factor loadings are well above established thresholds. Cronbach alphas are all shown to be above 0.70, the cutoff for confirmatory research (Nunnally, 1978). Variance extracted for each scale is also shown to be above 50% for all latent constructs. As the extracted variances are above 50%, this demonstrates the variance accounted for by the scale is larger than the variance due to measurement error (Fornell and Larcker, 1981).

### *Discriminant Validity*

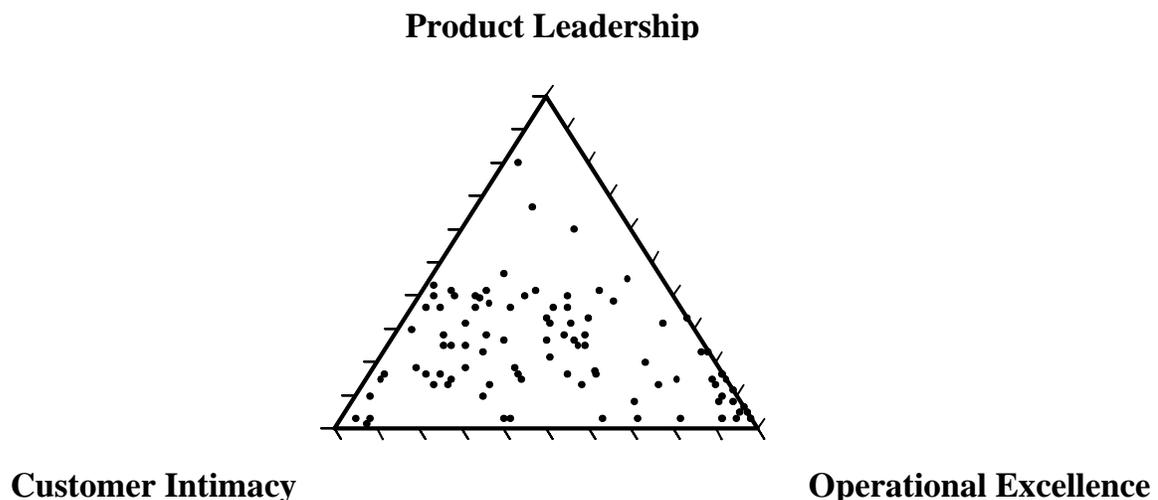
Discriminant validity was checked to ensure items were measuring only one distinct construct. Discriminant validity was examined using a method outlined by Fornell and Larcker (1981). They argue discriminant validity is present when the variance extracted of the scale is greater than the square of the correlation between constructs (Table 1).

Together, the results offered in Tables 1-4 (See Appendix 1.) demonstrate that each construct is measuring only one concept as it relates to value disciplines and the factors which may contribute to how clearly a firm expresses their value discipline.

## **Results**

### *Empirical Model*

Following validity checks, a ternary plot (Figure 2) was created using an Excel program (Graham and Midgley, 2000) to show the strategy choice of Illinois producers. Ternary plots are commonly used when analyzing the components of a 3-item mixture when the sum of the components must equal 1. To obtain the coordinates for the ternary plot, the averages across value disciplines were used (e.g., the average customer intimacy score for quality, pricing, and relationship building was used to obtain the customer intimacy coordinate). Value discipline clarity was calculated as the minimum distance from the coordinate to a boundary of the value triangle employing a half-taxi metric (Miller, 2002).



**Figure 2.** The Value Disciplines of Illinois Beef Producers

The sum of retained items for each measurement scale was used to comprise the independent variables. Scales were centered by subtracting the mean from each item. This was done to prevent multicollinearity when both the individual scale and the square of the scale were used. It was hypothesized that the firm's clarity on their chosen value discipline would be a function of their market orientation (MKTOR), the square of their level of market orientation (SQRMKTOR), their innovativeness (INNOV), their focus on learning (LEARN), their level of entrepreneurship (ENTRE), as well as their cost focus (COST). Experience as measured by years involved in producing beef and a dummy variable where 0 = no college degree and 1 = college degree were also included as control variables.

*Empirical Results*

An ordinary least squares (OLS) regression analysis was applied to test the stated hypotheses. Similar to the sample for reliability analysis, the OLS regression utilized a sample of 344 Illinois beef producers. While the sample includes producers within the cow-calf and feedlot segments, as well as alliance and non-alliance production practices, a pooled sample was initially tested. The results are presented in Table 5.

Six of the eight independent variables have significant coefficients, with four of the six significant at the 0.05 level. Neither education nor the level of entrepreneurship had any discernable effect on value discipline clarity, or lack thereof, as shown by the insignificance of the coefficient. The insignificance of these variables could be caused by many factors. As this sample covers only one year firms could be in various stages of an entrepreneurial shift in value discipline, clouding the ability to ascertain the effect of entrepreneurship on clarity.

**Table 5.** The Effect of Market Orientation on Value Discipline Clarity

	MKTOR	SQRMKTOR	LEARN	ENTRE	INNOV	COST	Experience	College	Constant
Expected Sign	-	-	-	-	-	-	-	-	
Unstandardized Coefficients	0.190*** (.044)	-0.006 ** (.002)	-0.378* (.201)	0.219 (.197)	-0.363** (.173)	0.361** (.172)	0.055* (.030)	-1.007 (1.036)	15.05*** (1.661)
Standardized Coefficients	.241	-.142	-.119	.062	-.140	.137	.097	-.052	
t-statistic	4.305	-2.704	-1.882	1.111	-2.102	2.098	1.851	-.972	9.060
Significance	.000	.007	.061	.267	.036	.037	.065	.332	.000
N = 343, r-squared = .129, adjusted r-squared = .108									

The effect of a market orientation on value discipline clarity is opposite of the proposed hypothesis. The positive sign indicates that as firms' increase their market orientation, their focus on a single value discipline lessens. Again, this could be caused by having only one year of data. A plausible explanation could be that firms who have just begun to develop their market orientation have shifted their focus, possibly to an entirely different value discipline. The square of market orientation, however, has a negative coefficient, as hypothesized. Here, highly market oriented firms are able to increase their focus on a specific value discipline.

Firms with a learning orientation were also shown to express clarity on their value discipline as shown by the negative coefficient. This fits with the statement by Slater and Narver (1995) who challenged that a firm's only true source of competitive advantage is their ability to learn faster than their competitors. Conversely, experience seemed to make unclear the specific value discipline of the firm. This is contrary to the stated hypothesis but may provide preliminary evidence to demonstrate the adverse effects of social embeddedness within changing markets.

The negative coefficient on firm innovation confirms hypothesis 2. The results indicate innovative firms are able to modify routines and practices in order provide products which more closely fit into the buyer's value chain. Innovation does not have to be technological, however, as can be seen through the positive coefficient on the cost focus variable. Similar to the experience results, a cost focus has long been the dominant strategy in agriculture. Firms who are focused solely on cost efficiency may, as Day (1999) argues become oblivious to the market and lose sight of their product's ability to maintain industry standards, thereby decreasing the value the buyer places on this product.

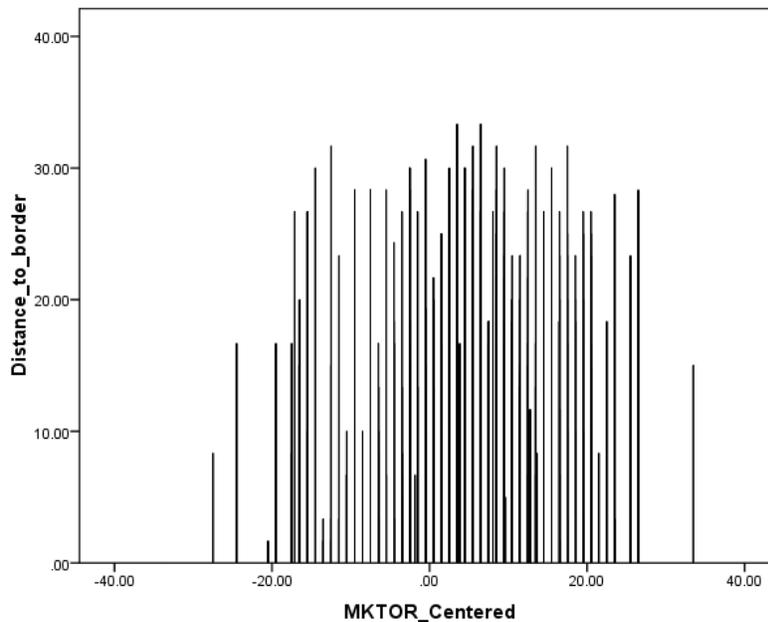
## **Discussion**

The objectives of this study were to develop a value discipline scale and to determine if market oriented firms were more explicit in how they provided value to customers. Findings were mixed, leading to a need for careful discussion as to the importance of a market orientation in determining value discipline clarity. Results indicate moderately market oriented firms are not explicit in their self assessment of how they provided value to downstream partners or customers. In fact value discipline clarity decreased, as interpreted by the positive coefficient, as market orientation increased. This result contradicts our hypothesis as well as that of Narver et al (1998). An important consideration is that our measure of market orientation measures only the quantity, *not the quality*, of the market oriented behaviors of the firm (Day 1994b). Furthermore, as this is the first attempt to measure the market orientation-value discipline relationship, additional research is warranted.

The square of market orientation was found to influence value discipline clarity. As market orientation was measured using a centered scale, careful interpretation is needed. High squared market orientation values are associated with firms with extreme levels of market orientation. In this case, producers with both extremely high and extremely low levels of market orientation were shown to clearly express their choice of value discipline. A possible explanation may be that firms with extremely low levels of market orientation may operate within the operational excellence value discipline, and through social embeddedness, focus solely on producing a low-cost product. Almost by default, they express clarity on their value discipline as they feel controlling costs is their only means of increasing profit.

In combination, these results seem to be consistent with the U-shaped relationship between market orientation and performance found by Narver and Slater (1990) as well as the market orientation-new product success results from Atuahene-Gima et al (2005). In these studies, researchers observed initially that an increased market orientation led to decreasing performance up to some point. Only after a firm achieved a high level of market orientation did increased

performance or launch success result. The relationship between market orientation and value discipline clarity may be explained similarly (Figure 3).



**Figure 3.** Market Orientation and Value Discipline Clarity

Narver and Slater (1990) argue highly market oriented firms should focus on determining customer needs, and the most efficient method to meet these needs. Beef producers with extremely high levels of market orientation may be displaying the characteristics presented by Narver et al (1998) such as value discipline clarity, market leading as opposed to following, and seeing themselves as service providers. By focusing on current and future customer needs, highly market oriented firms may be able to effectively remove themselves from the ‘commodity’ market even while participating in it. Through a market orientation, they are able to alter their specific product offering to provide attributes which are a source of value for downstream partners as well as final customers.

#### *Managerial Implications*

Slater (1997) said “...superior performance accrues to firms that have a customer value-based organizational culture (i.e., a market orientation), complemented by being skilled at learning about customers and their changing needs and at managing the innovation process, and that organize themselves around customer value delivery processes” (pg. 164). Firm profit is therefore a function of market knowledge, customer awareness, and the innovation needed to capitalize on this knowledge, which has been shown in empirical studies (see Narver and Slater, 1990; Baker and Sinkula, 1999; Farrell and Oczkowski, 2002). Firms with improved information sources may find opportunities to leverage superior information into improved market knowledge which eventually may become a source of sustainable competitive advantage.

Earlier research examining the market orientation-performance link focused on the broad definition of 'value' without specifically answering 'how' the firm created value for the customer. This paper presents opportunities to begin answering the question of 'how' a firm might provide superior value and thus achieve superior performance. Without awareness of the 'how' of value creation, the strategy of creating value is at risk of becoming a generic strategy similar to Porter's (1985) differentiation and low-cost strategies. Specifically, the firm needs to focus on how value is created, not an abstract concept of value. Through improved awareness of the specific of value discipline vis-à-vis rival firms, highly market oriented and innovative firms will be able to determine the appropriate strategic response.

Results point to opportunities for highly market oriented and innovative firms. Given superior knowledge of how value is provided vis-à-vis rival firms, highly market oriented firms may be able to focus on improving the means of value provision by increasing core competencies. Further, highly market oriented firms may be able to not only map how they fit into the value triangle, but how their close competitors fit as well. Competitor mapping may be invaluable if the firm is considering an investment in resources which could be leveraged in the creation of further value.

These results also provide opportunities for underperforming firms which find themselves in the middle of the value triangle. With improved information, underperforming firms can determine the proper method for competing in the chosen market based on their current capabilities. This may entail further investment in, or refinement of, their core competencies and the degree that these match the chosen strategy. Strategy refinement may allow the firm to remain on (or move toward) the vanguard of value provision within a specific value discipline. Conversely, increased awareness may signal an opportunity for improved performance through a shift to a less competitive landscape (Kim and Mauborgne, 2005).

Within the beef industry specifically, and agriculture in general, awareness of one's own value discipline as well as the value discipline of close competitors may be important as more and more alliances are formed in search of improved performance. For independent producers, awareness of their value provision may allow them to select the appropriate value chain based on shared values. Value discipline awareness may also have strategic benefits for new entrants. Depending on the characteristics of the market, new entrants may choose to compete by providing products which are not in direct competition (in a value discipline sense) with those of already established firms. Rather than competing directly on innovation capability, for instance, new entrants may see better opportunities through the provision of more direct relationships via a customer intimacy framework.

## **Theoretical Implications**

Value discipline clarity, therefore, may be a moderating factor in the ability to transform a market orientation into firm performance. Firms with increased clarity may be better able to generate information relating to new sources of value for consumers. This information may lead to the more rapid development of new offerings which deliver attributes which more closely meet the latent and expressed needs of the market. Furthermore, a high market orientation combined with elevated levels of entrepreneurship and innovation may enable the firm to

migrate from a highly competitive position (i.e. commodity beef) to a niche where market size and customer relationships, once established, provide significant barriers to entry.

While the performance benefits of becoming more market oriented are well established even in commodity markets (see Micheels and Gow, 2008), there may be other benefits as well. If market oriented firms are able to move to a less competitive market, or closer to the border of the value triangle in highly competitive markets, they may benefit from occupying a more 'defendable' position relative to rival firms. Firms along the border of the value triangle may be what Kohli et al (2000) describe as market-driving, whereas market oriented firms not on the border of the value may be market-driven. Market driving firms are characterized by their ability to anticipate changes in the market ahead of their competitors or simply creating market changes themselves. Market driven firms, however, are more reactive in nature and are thus not able to achieve any first-mover advantages which may accrue to their market driving counterparts. This perceived disadvantage may be potentially offset by second-mover advantages such as lower search and implementation costs.

### *Limitations and Future Research*

This study, while being the first to test the relationship between market orientation and value discipline clarity, has some limitations. First, the sample includes only one year of data on market orientation and value disciplines for Illinois beef producers. As the creation of a market orientation and the choice of value discipline is a dynamic process, a longitudinal study may elucidate the relationship between market orientation and the choice of value discipline. Internal consistency and reliability of the value discipline scale exceeded the thresholds for exploratory research, but further refinement of the scale is warranted. Purification of the value discipline scales, as well as the inclusion of other components of the producer value proposition would be worthwhile endeavors for future research.

This preliminary research contributed to the market orientation literature as well as the agricultural economics literature by developing a scale to quantify a firm's choice of value discipline. Future research may examine differences in relative importance of innovation, entrepreneurship and market orientation across value disciplines, as well as determining whether there are differences in performance across value disciplines. These potential research agendas have broad policy and managerial implications as agriculture moves forward in an ever-changing customer-driven marketplace.

## **Conclusions**

The objectives of this study were 1) to develop a measure to quantify value discipline choice and clarity, and 2) to determine if a market orientation increased value discipline clarity. A scale to measure a firm's choice of value discipline was developed and tested using a sample of 343 Illinois beef producers. Results indicate highly market oriented firms are clearer in their means of value provision. Firms which can clearly define how they provide value may be more precise in their development of the specific capabilities needed to provide continuous superior value for customers.

Results show that highly market oriented beef producers express clarity on their value discipline, partially confirming the hypothesis of Narver et al (1998). In doing so, a new scale was developed to measure the firm's choice of value discipline. This scale was constructed in a manner similar to Miles and Snow's (1987) strategy typologies. Following the development of their scale, much research was done on the differences between *analyzers*, *prospectors*, *reactors*, and *defenders*. Research examining the cultural differences and performance outcomes of firms within the different value disciplines could provide fruitful opportunities for other scholars. As a growing number of firms eschew the commodity market in favor of a more differentiated approach, it will become increasingly important to know exactly how to provide the most value relative to the competition. The search for value within these highly competitive markets may lead to dramatically different methods of sustaining superior value creation. The choice of appropriate methods and the requisite core competencies will depend on the specific value discipline of the firm. As channels of communication evolve within once adversarial value-chains, market oriented firms will be better positioned to create a valuable product based on specific relationships, product innovations, or low cost of acquisition and ownership.

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## Appendix 1.

**Table 1.** Value Discipline Construct Validity

Item	Factor Loadings			
	Variance Extracted	Customer Intimacy	Product Leadership	Operational Excellence
<b>Customer Intimacy</b>	68.98%			
We are able to set or negotiate above market prices due to our close relationships		0.803		
We try to develop individual business relationships		0.872		
Through our close relationships with customers, we adopt practices to ensure our product meets customer specs		0.814		
<b>Product Leadership</b>	55.65 %			
We are continuously developing new technology that provides us a price advantage			0.618	
We are recognized as a leader in innovation of new beef production technologies and are able to establish product differentiation			0.801	
Innovative technologies allow for the screening and selection of animals through the production process to ensure quality			0.803	
<b>Operational Excellence</b>	73.52%			
We are unable to influence prices we received so we rely on increasing efficiency				0.800
We are generally not aware of exactly who our customers are and do not establish relationships with them				0.906
We only invest in minimum process control systems				0.863

**Table 2.** Value Discipline Reliability Analysis

Item	Sample 1 N1= 195		Sample 2 N= 148		Combined Sample N = 343	
	Cronbach Alpha %	Item-to-total Correlation	Cronbach Alpha	Cronbach Alpha	Item-to-total Correlation	Item-to-total Correlation
<b>Customer Intimacy</b>	0.729		0.794	0.761		
We are able to set or negotiate above market prices due to our close relationships		0.498			0.558	
We try to develop individual business relationships		0.599			0.657	
Through our close relationships with customers, we adopt practices to ensure our product meets customer specs		0.563			0.572	
<b>Product Leadership</b>	0.573		0.650	0.604		
We are continuously developing new technology that provides us a price advantage		0.276			0.313	
We are recognized as a leader in innovation of new beef production technologies and are able to establish product differentiation		0.422			0.474	
Innovative technologies allow for the screening and selection of animals through the production process to ensure quality		0.451			0.472	
<b>Operational Excellence</b>	0.792		0.822	0.805		
We are unable to influence prices we received so we rely on increasing efficiency		0.525			0.576	
We are generally not aware of exactly who our customers are and do not establish relationships with them		0.718			0.738	
We only invest in minimum process control systems		0.677			0.656	

**Table 3.** Independent Variable Reliability Analysis

Scale	Items	Alpha	Variance Extracted	Mean	Std Dev	Corrected Item-to-Total Correlation	Factor Loadings
<i>Customer Focus</i>		0.756	0.5872				
	Cust1			3.94	1.202	0.650	0.849
	Cust2			3.78	1.103	0.614	0.820
	Cust4			3.92	1.252	0.360	0.556
	Cust5			3.74	1.268	0.600	0.803
<i>Coordination</i>		0.756	0.5847				
	Coord1			3.38	1.486	0.523	0.731
	Coord2			3.94	1.312	0.523	0.732
	Coord3			3.85	1.227	0.619	0.810
	Coord4			4.16	1.117	0.576	0.782
<i>Competitor Focus</i>		0.857	0.5422				
	Comp1			3.74	1.391	0.548	0.664
	Comp3			3.78	1.267	0.581	0.693
	Comp4			4.13	1.279	0.522	0.639
	Comp5			3.14	1.359	0.664	0.772
	Comp6			2.99	1.289	0.707	0.805
	Comp8			3.96	1.234	0.628	0.748
	Comp9			3.80	1.270	0.709	0.814
	<i>Learning</i>		0.782	0.6169			
Learn2				4.83	0.906	0.617	0.807
Learn3				4.92	0.965	0.692	0.867
Learn4				4.91	0.965	0.673	0.851
Learn5				4.31	1.058	0.403	0.593
<i>Entrepreneurship</i>		0.704	0.6304				
	Ent2R			3.29	1.106	0.513	0.791
	Ent4R			3.27	1.164	0.596	0.846
	Ent5R			3.74	1.192	0.462	0.742
<i>Innovation</i>		0.740	0.7183				
	Innov1			4.55	1.020	0.502	0.865
	Innov2R			4.69	1.180	0.567	0.721
	Innov3			4.58	0.925	0.552	0.817
	Innov4R			5.23	1.049	0.350	0.898
	Innov5R			4.86	1.129	0.560	0.786
<i>Cost Focus</i>		0.728	0.5106				
	Cost1			5.01	0.896	0.649	0.845
	Cost2			4.98	0.938	0.580	0.806
	Cost3R			4.88	1.128	0.377	0.598
	Cost4			4.01	1.288	0.358	0.547
	Cost5			4.59	0.990	0.575	0.730

## Appendix 2. The Value Discipline Scale

These questions relate to different components of your beef operation. Each item contains three descriptions of marketing strategies. Please distribute 100 points among the three descriptions depending on how similar the description is to your beef operation. There is no one right answer and please use all 100 points. Most beef producers will be a mixture of those described.

For example...

Marketing	Strategy 1	15
	Strategy 2	60
	Strategy 3	25
		<u>100</u>

### 15 Pricing

**S1** We are able to set or negotiate above market prices for our cattle as we have established close relationships with our customers and fully understand their specific requirements.

\_\_\_\_\_

**S2** We are continuously developing or adopting new technology that provides us a short term competitive market and price advantage.

\_\_\_\_\_

**S3** Due to being unable to influence current market prices, we strive to continually become more efficient in an effort to reduce costs.

\_\_\_\_\_

100

### 16 Production

**S1** We are continuously developing new and innovative technologies that provide our farm with product, production or marketing advantages.

\_\_\_\_\_

**S2** We willingly modify production practices to meet our customers specific product requirements, even if it increases our costs.

\_\_\_\_\_

**S3** We are seen as a leader in production efficiency by our neighbors and peers due to our continuous efforts to produce efficiency gains.

\_\_\_\_\_

100

### 17 Relationship building

**S1** We try to develop individual business relationships with each of our customers and attempt to produce products that meet each of their specific requirements.

\_\_\_\_\_

**S2** As producers and marketers of commodity beef through independent auctions, we are generally unaware of exactly who our customers and buyers are and see little value in establishing relationships with them.

\_\_\_\_\_

**S3** As we are recognized as a leader in innovation and early adoption of new beef production technologies, we are able to gain access to valuable customer markets and establish product differentiation.

\_\_\_\_\_

100

### 18 Quality

**S1** Through our close relationships with lead customers, we willingly adopt production practices, processes and certification systems to ensure our product meets customer specifications and supports their marketing brand.

\_\_\_\_\_

**S2** We only invest in meeting the minimum required level of certification and process control systems that are signalled through the pricing mechanism or mandated by regulatory agencies.

\_\_\_\_\_

**S3** Through the adoption and use of innovative technologies, we are able to screen and select animals while tracking them through the production process to ensure optimal final product quality in the market.

\_\_\_\_\_

100