REFEREED PAPER

Market orientation and firm performance across value disciplines in the Illinois beef sector

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ABSTRACT

Previous research studies have suggested market oriented firms achieve superior performance relative to their peers (Narver and Slater, 1990). Furthermore, researchers have suggested that firms that can clearly define their value discipline will also benefit. Recent studies have shown that highly market oriented and innovative firms are able to define more clearly their chosen value discipline. This study extends that research by examining firm performance across value disciplines. Using a sample of Illinois beef producers, we find that levels of market orientation and performance are not equal across value disciplines. Our results show the level of market orientation is lowest for firms with an operational excellence value discipline and highest for a customer intimacy/product leadership value discipline. Furthermore, our findings show that firms with high market orientation scores outperform firms with low market orientation scores regardless of degree of value discipline clarity.

KEYWORDS: Firm performance; market orientation; value chain; value discipline clarity

1. Introduction

Agricultural producers continually strive to improve performance. Farmers can improve performance through a combination of improved yields, lower costs of production or through higher marketing returns. Efficiency gains and increased yields may be a product of superior managerial ability, the control of more productive assets or by superior awareness of new technologies, which may put the firm at an advantage as other firms may be behind on the learning curve. Looking at profitability from the revenue side of the equation, superior performance may be a result of the firm's ability to sell their production at the higher prices or by their ability to provide products that more precisely meet the needs of the market. Buyers and consumers may reward firms that are able to more precisely meet their needs on a consistent basis, recognizing that needs are dynamic (Ravald and Gronroos, 1996).

Barbieri and Mshenga (2008) suggest that farmers can improve farm-gate receipts by selling value-added products. However, in order to succeed in the value-added marketplace, firms will need to be able to provide greater value than their rivals. Therefore, firms must be able to determine what the market values and how they can deliver products that provide more value than their rivals (Treacy and Wiersema, 1993). For this study, we are interested in the prevalence of clearly defined value disciplines in agriculture and if performance varies across value disciplines. Specifically, this study will examine the differences in market orientation and firm performance across several value disciplines within a sample of Illinois beef farms.

2. Literature Review

Factors affecting firm performance

Several literatures have examined the specific factors that contribute to superior performance. The agricultural economics literature has suggested that managerial ability has been shown to increase farm growth (Patrick and Eisgruber (1968) and farm performance (Ford and Shonkwiler, 1994). Recently, researchers have suggested improved performance of agricultural firms is driven by strategic management (Hansson, 2007), awareness of opportunities (Gow et al., 2003), superior financial management (Harrison, 2006; Purdy et al., 1997), firm size and rate of production (Gloy et al., 2002) increased asset turnover (Langemeier, 2010) and production type (Benson, 2008).

Evidence form the marketing literature also may shed some light on performance differences across agricultural firms. A market orientation is an organizational culture that focuses resources on the generation and dissemination of market intelligence in the search for products that deliver superior value to the market (Jaworski and Kohli, 1993). Empirical studies have shown market oriented firms are able to achieve superior performance relative to their peers (e.g. Kirca

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et al., 2005; Menguc et al., 2007). While a production orientation may be dominant in agricultural contexts, recent research studies have shown that a market orientation also contributes to superior performance within the agri-food sector (Grunert et al., 2005; Johnson et al., 2009).

Superior business performance has also been shown to be achievable if the firm's market focus is distinctive, measureable and sustainable (Anderson et al., 2006). Jaworski and Kohli (1993) posit that highly market orientated firms are able to more easily discover opportunity gaps and consequently are able to provide innovative solutions that deliver superior value to consumers more rapidly than their competitors do. Furthermore, Narver et al. (1998) suggests that market oriented firms are able to define specifically how they provide value to the market. By focusing on a specific means of value provision, and a singular customer segment (Treacy and Wiersema, 1993), market oriented firms may be able to provide products that deliver exceptional value to their consumers more efficiently and effectively than other firms in the industry can.

Innovative agricultural producers may discover new methods to improve farm performance utilizing a combination of the strategies outlined in the agricultural economics and marketing literatures. Producers may find that superior managerial ability in combination with increased market awareness and a focus on a specific value discipline, may deliver performance benefits that exceed a simple linear combination of the various schools of thought. This research study leverages previous work from the agricultural economics, strategy and marketing literatures by examining performance differences across value disciplines within the context of the Illinois beef industry. While scholars have advanced the discussion of value disciplines (e.g. Treacy and Wiersema, 1993; Narver et al., 1998), currently no empirical study to date has attempted to examine the level of market orientation or firm performance of firms *across* value discipline strategies. Using survey data from Illinois beef producers, we examine 1) the choice of value discipline and 2) differences in market orientation and performance across value discipline choice. This study fills an important gap in the literature by examining how market orientation and value discipline choice influences performance within an agricultural context.

Value disciplines

The concept of value disciplines developed was first developed by Treacy and Wiersema (1993) and has been used in empirical studies to explain aspects of firm performance (for example, see Bick, Brown and Abratt, 2004). Value disciplines can be thought of as specific strategies that firms can employ which allow them to be more efficient at providing value to customers in a specific manner. The three value disciplines developed by Treacy and Wiersema (1993) are operational excellence, product leadership and customer intimacy.[3] Firms within a specific value discipline will have different operating and reporting structures that allow them to discover products that provide value in different ways to different buyer segments.

Specifically, firms with an *operational excellence* value discipline try to develop products that have low costs of acquisition and ownership. Firms that develop a *customer intimacy* value discipline provide value by delivering products to the market that meet a specific need while also building long-term relationships with buyers and customers. *Product leadership* firms focus on delivering value through innovativeness and by being the first to market or adopt a new technology.

Value delivery in agriculture

Agricultural firms employ a variety of strategies to provide superior value to their customers. Generic strategies for creating value revolve around the firm becoming either the low-cost producer or a provider of a differentiated product (Porter, 1985). Within the agri-food sector, the first input of the value chain is often an undifferentiated product (e.g. corn, soybeans, beef and pork) which may make product differentiation more difficult. Therefore, in highly competitive markets such as agricultural commodities, many firms attempt to be the 'low-cost' producer as managers are unable to influence the prices they receive. This leads the manager to focus internally toward reducing costs and improving efficiency in order to improve farm performance (Smyth et al., 2009). The allocation of resources towards efficiency effectively reduces the amount of resources (e.g. time) that the manager can direct to becoming more aware of consumers and changing market conditions. Whether by choice or by default, these firms are operating under an operational efficiency value discipline.

More recently, entrepreneurial commodity producers have begun to form differentiated value chains (e.g., alliances, direct marketing) that offer additional product and service attributes in an attempt to increase the value of production. An example within the context of the U.S. beef industry would be the shift to vertically coordinated production alliances. Since the 1990s, the amount of beef produced through production alliances has steadily increased (Drovers, 2008; Lamb and Beshear, 1998). Entrepreneurial beef producers form alliances to take advantage of valuable information and to leverage this information to provide a differentiable product to consumers (Schroeder and Kovanda, 2003). As providers of differentiated – and often branded – products, alliance producers have benefited from premium prices over the commodity offering. By moving away from commodity production, these entrepreneurial firms are also moving away from an operational efficiency value discipline. Some of the first movers and innovators may be operating under a product leadership value discipline (e.g. Power Genetics; Ishmael, 2008) while firms that focus on relationship development may be operating under a customer intimacy value discipline (e.g. direct marketers).

Even though entrepreneurial firms are beginning to respond to heterogeneous consumers by producing less homogeneous products, for many producers, eschewing the status quo is no guarantee of success. That is, in order to achieve and sustain success, firms must be able to express *how* they provide value to customers, and how this

[3] There may be other value disciplines, but the value disciplines developed by Treacy and Wiersema (1993) are the most cited in the literature.

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method of provision is different from competitor offerings. Anderson and Narus (1998) suggest that in order to understand what customer's value, one must first understand the customer. That is, the value creation process begins from the consumer's perspective and continues upstream to the producers of the raw materials used in the manufacture of the product or service offering. It is important that firms are cognizant of the fact that customers are heterogeneous; consequently, the value disciplines of some firms will be incompatible with the value model of certain consumers. Heterogeneity might occur both across consumers and across products. In certain instances, consumers may wish to purchase a low-cost, low-fail product while in other situations a product more specifically tailored to the consumer would provide additional value. For instance, commodity ground beef might be preferred when preparing a meal during the week but branded steaks might be preferred when entertaining guests on the weekend. Within this framework, firms may be able to create value more efficiently through a demand-pull system where production occurs specifically to meet demand as opposed to a supply-push system where firms use minimum grades and standards to sort production to meet existing demand.

Aside from becoming more efficient in the allocation of resources, firms that use a market orientation to develop a clear value discipline may also become more effective marketers of their production. An increased awareness of the market, combined with an appropriate internal organization, may allow market oriented firms to develop a distinct value discipline that enables the firm to achieve higher prices or greater access to markets than before. Further, by specializing in one value discipline per product category or brand, market oriented firms may be able to increase the probability that their product creates superior value for the customer when compared to products of rival firms. This, in turn, may allow the firm to become more competitive in pricing the differentiated product. Firms without a clear value discipline may find themselves 'stuck in the middle' with average or even below average returns (Porter, 1985). Firms that are stuck in the middle may have higher costs of production relative to operationally excellent firms or may have similar products but higher prices relative to product leaders or customer intimacy firms.

3. Theoretical foundations and testable hypotheses

Porter (1985) discusses several generic strategies firms deploy within competitive markets, namely cost leadership and differentiation. Firms may also combine a focus strategy with either cost leadership or differentiation to "narrow the competitive scope within an industry" (Porter 1985, p. 15). By focusing on a specific group of consumers, firms may be better able to gather pertinent information and thus tailor products to a specific market. In the language of Day (1994), through a focus strategy the firm may be better positioned to establish (and protect from erosion by competitors) channel bonds and customer linkages. Customer value and satisfaction would increase when firms are able to focus on the specific measures that contribute to the value proposition of consumers. Furthermore, by focusing on developing one specific value discipline, market oriented firms would be able to deploy scarce resources more efficiently in the development of the capabilities needed for success.

A market orientation takes both an internal and external view of the firm (Narver and Slater, 1990). The external focus rooted in a market orientation emphasizes factors occurring outside the boundaries of the firm such as changes in customer needs and competitor actions. Conversely, the internal component of a market orientation examines the firm's motivation and capability to provide appropriate solutions to meet the needs of the market. White (1986) labelled the external processes the corporate strategy problem (i.e. 'where should we compete?') and the internal processes the business strategy problem (i.e. 'how do we compete?'). The order in which firms answer these questions is dependent on whether the firm is choosing a market dependent on its current capabilities or choosing to build capabilities needed to compete in a specific market (Homburg et al., 2004). The bifurcated characterization of a market orientation supports the suggestion by Chen (1996) that for behaviour to change, the firm must be aware of a need to change, be motivated to change and be capable of change. Market oriented firms may find themselves moving away from the status quo to develop a strategy that allows the firm to succeed within their specific market by developing systems and processes to gather information on customer needs and to utilize the knowledge gained from superior information into exploitable opportunities to meet these needs.

A market orientation would also lead to a clearer focus on value provision. By becoming more aware of customer needs and competitor offerings, firms can better position themselves to take advantage when opportunities present themselves. Narver et al. (1998) suggest that market oriented firms are able to more clearly articulate their value discipline, that is, they are more likely to operate along the boundary of the value triangle (Figure 1). Research studies have shown that a market orientation is associated with both low-cost and differentiation strategies (Slater and Narver, 1996), while Menguc et al. (2007) find a market orientation leads to the implementation of innovation and marketing strategies, but find no evidence suggesting a market orientation leads to the implementation of a low-cost strategy.

H1: Firms with a 'pure' value discipline are more market oriented than those in the middle of the value triangle.
H1a: Operationally excellent firms have lower market orientation scores than customer intimacy firms.
H1b: Operationally excellent firms have lower market orientation scores than product leadership firms.
H2: Firms with a 'hybrid' value discipline are more market oriented than those in the middle of the value triangle.

Success within a particular value discipline may depend on several factors including the amount and intensity of competition. Some firms may choose to adjust their value discipline to take advantage of emerging markets or to avoid competing in highly competitive markets (Kim and Mauborgne, 2005). While alertness enables firms to adopt more rapidly the required cultural and behavioural changes needed to

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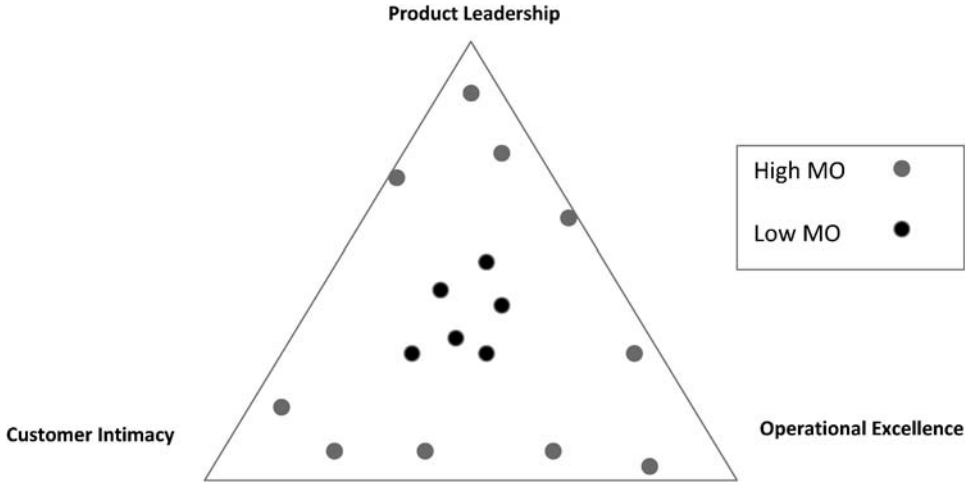

Figure 1: Hypothesized relationship between market orientation (MO) and the value triangle

be successful, moving to a new value discipline requires firms to be cognizant of consumer demands within a particular value discipline as well as their own capabilities. Following Chen (1996), firms may choose a value discipline based on the market orientation of the firm (awareness), the ability to achieve superior performance and potential competitive advantages (motivation) and the ability of the firm to develop and maintain that position (capability). Conversely, firms may develop strategies based on their current capabilities. The development of the vital capabilities within each value discipline may occur at varying rates across firms.

Firms with a clearly defined value discipline and the time to develop the appropriate capabilities may exhibit a 'pure' value discipline, exemplified by a position at or near one of the corners of the value triangle (Figure 2). Other firms may see an opportunity to provide value based on a 'hybrid' of two value disciplines, such as low-cost product leadership (fast second movers), or efficient customer relationship building (production alliances in the beef industry). A hybrid strategy could result from the firm moving from one value discipline to another, or it could be the manifestation of the actual strategic choice of the firm. Firms with a hybrid value discipline position themselves on the value triangle based on the level of importance they place on two competing value disciplines. Firms that lack a clearly defined value discipline may find themselves clustered in the middle of the value triangle.

H3: Firms with a 'pure' value discipline have higher performance than those in the middle of the value triangle.
H4: Firms with a 'hybrid' value discipline have higher performance than those in the middle of the value triangle.

4. Methodology

Data

We used a mailing list from the Illinois Beef Association containing the names and addresses of 1,568 beef producers located across the state. Respondents returned 343 usable surveys over two waves of surveying during May and November 2007, resulting in a response rate of 22.1%. For the purposes of this study, we limited

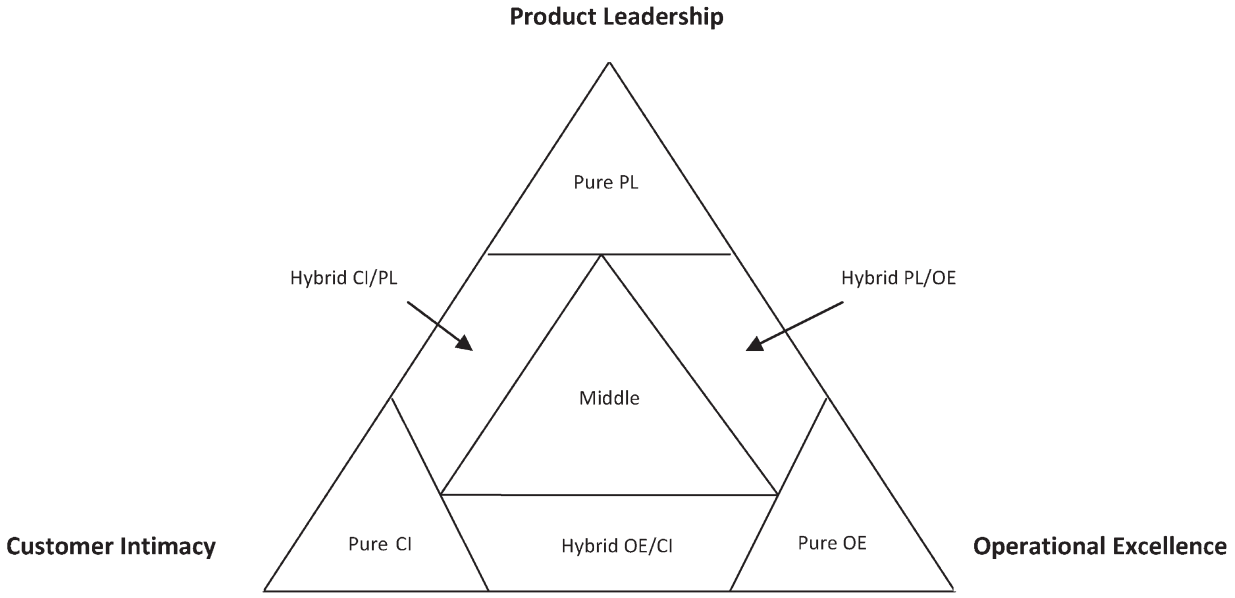

Figure 2: Stylized Strategic Choices within the Value Triangle

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Table 1: Descriptive statistics of survey respondents

	Mean	Number	Percentage
Herd Size	225.91		
0–50		115	36.6
51–100		69	22.0
101–150		43	13.7
151–200		27	8.6
200 +		60	19.1
Corn Hectares[a]	215.38		
0–50.00		110	35
50.01–100.00		40	12.7
100.01–150.00		32	10.2
150.01 – 200.00		29	9.2
200.01		100	31.8
Experience (years)	32.41		
0–10		35	11.1
11–20		53	16.9
21–30		75	23.9
30 +		151	48.1

[a]n=311 as 3 respondents did not enter information on corn hectares.

analysis to firms with greater than 10 head to limit the influence of lifestyle farms or youth projects. After imposing this cut-off, 314 data points remained for analysis. Survey 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.[4] Respondents had, on average, 32 years of experience.

We would classify the respondents as specialized beef producers judging by the average herd size and experience in raising beef on their farm (Table 1). While a plurality of respondents produce and market fewer than 50 head of cattle per year, over 41 per cent produce and market over 100 head of cattle per year. Furthermore, the majority of survey respondents grow fewer than 500 acres of corn. In addition, a clear majority of respondents have been producing beef on their farm for more than 20 years.

Common method variance and non-response bias

The use of single informants may introduce some bias due to 'halo effects,' which occur when indicators measuring dependent constructs are biased by the independent variables. However, we could not eliminate this bias through changes in sampling methodology, as agricultural firms are owner/manager operations where the person who determines the allocation of productive resources is often the same person that determines the level of satisfaction with financial performance. We checked for single method bias ex ante using Harmon's single factor test where we combined all variables in the analysis into a single factor and conducted a confirmatory factor analysis. Single informant bias is present when a single factor accounts for a significant amount of explained variance. Upon examination, the combined factor analysis resulted in seven factors with eigenvalues greater than 1.0, which accounted for 65.10% of the variance. The largest factor accounted for only 27.20% of the explained variance, therefore single informant bias is unlikely to be an issue with our data. We also tested for non-response bias using the procedures outlined in Armstrong and Overton (1977). As late respondents display similar characteristics to non-respondents, we tested for differences between early and late respondents in each wave of the survey. We did not observe any significant differences between early and late respondents suggesting non-response bias may not be an issue with the data.

Measurement Scales

We used previously tested and validated scales to assess the respondents' level of market orientation and self-identified performance. The measurement items asked respondents to rate their level of agreement with each item using a 6-point likert scale anchored with strongly disagree and strongly agree. We used the MKTOR scale developed by Narver and Slater (1990) to measure market orientation as it has shown consistent reliability across sample contexts (Farrell and Oczkowski, 1997). We measured the self-identified performance using a scale developed by Jaworski and Kohli (1993) along with several new items. The actual items used to measure market orientation and self-identified performance can be seen in Table 2. While objective performance measures would be preferred, researchers have shown self-identified performance to be highly correlated with objective performance measures (Dess and Robinson, 1984; Venkatraman and Remanujam, 1987). This is important as our sample is comprised of owner-managers of privately held firms who are generally unwilling to share personal financial information.

We used principal component factor analysis to arrive at measures for market orientation and subjective performance of the respondents. We retained measurement factors according to the criteria that they 1) possessed eigenvalues greater than one, and 2) when multiple factors were present, we retained only the three highest factors. Following the analysis, we observed three factors for the 15-item market orientation scale. The three factors corresponded to the components of a market orientation: customer focus, competitor focus and inter-functional coordination. Average variance extracted for each market orientation component is over 50%, indicating the scale accounts for more explained variance than random error. The seven-item performance scale reduced to two factors, measuring individual and comparative performance. These two factors accounted for 68.9% of the variation of the scale. Finally, we summed factor scores of market orientation and subjective performance for use in the subsequent analysis.

We measured the firm's choice of value discipline was measured using a scale developed by Micheels and Gow (2009).[5] In the survey, respondents allocated points to phrases that represented the various value disciplines across pricing, production, relationship building and quality (see Appendix).[6] We operationalize the choice of value discipline using a ternary plot where the combina-

[4] Some producers operate in both segments. Averages were taken from firms who feed out at least 50 head of cattle and who raise at least 20 calves.

[5] Detailed statistical properties of the scale are available in Micheels and Gow (2009).

[6] Customer intimacy score was the average score from Pricing S1, Production S2, Relationships S1, and Quality S1. Product leadership was the average score from Pricing S2, Production S1, Relationships S3, and Quality S3. Operational excellence was the average score from Pricing S3, Production S3, Relationships S2, and Quality S2.

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Table 2: Reliability and Validity for Market Orientation and Firm Performance Scales

	Alpha	Variance Extracted	Factor Loadings	Corrected Item-to-total correlation
CUSTOMER ORIENTATION	0.744	57.63%		
We continuously try to discover additional needs of our customers of which they are unaware.			0.846	0.634
We incorporate solutions to unarticulated customer needs in our new products and services.			0.826	0.614
We innovate even at the risk of making our previous farming practices obsolete.			0.527	0.332
We work closely with lead customers to try to recognize their needs months or even years before the majority of the market may recognize them.			0.794	0.580
COORDINATION	0.753	57.57%		
We regularly visit our current and prospective customers.			0.718	0.503
We freely discuss our successful and unsuccessful customer experiences with our partners.			0.725	0.509
All of our business units (marketing**, production, research, finance and** accounting) are integrated in serving the needs of our target markets.			0.817	0.616
People on our farm understand how everyone can contribute to creating customer value.			0.772	0.557
COMPETITOR ORIENTATION	0.846	52.44%		
Employees on our farm share information concerning competitor's activities.			0.656	0.536
We regularly discuss competitor's strengths and weaknesses.			0.660	0.543
We target customers where we have an opportunity for competitive advantage.			0.615	0.494
Members of our farm collect information concerning competitor's activities.			0.758	0.643
We diagnose competitor's goals.			0.802	0.699
We identify the areas where key competitors have succeeded or failed.			0.758	0.633
We evaluate the strengths and weaknesses of key competitors.			0.797	0.679
OVERALL FIRM PERFORMANCE	0.834	68.98%		
The return on farm assets did not meet expectations last year*			0.819	0.637
We were very satisfied with the overall performance of the farm last year.			0.827	0.688
The return on production investments met expectations last year.			0.849	0.753
The cash flow situation of the farm was not satisfactory.*			0.779	0.553
The return on marketing investments met expectations last year.			0.712	0.657
The prices we receive for our product is higher than that of our competitors.			0.863	0.285
The overall performance of the farm last year exceeded that of our major competitors.			0.802	0.524

*Items were reverse coded.

tion of three components must equal 100. The new scale allows for the positioning of the farm onto a value triangle using an Excel program developed by Graham and Midgley (2000). Figure 3 shows the choice of value disciplines of survey respondents.

Classification into value disciplines

We categorized firms into stylized value disciplines based on their positioning within the value triangle. We placed firms who scored greater than or equal to 70 on any value discipline into the 'pure' form of that specific value discipline. Firms with a score of less than or equal to 15 on a singular value discipline, while simultaneously having a score less than 70 in the remaining value disciplines, were assigned a 'hybrid' value discipline. We categorized firms that expressed no clear value discipline as being 'stuck in the middle.'

5. Results

We used the Tukey-Kramer test to examine differences in market orientation and firm performance across value disciplines, as this test is robust when sample sizes across groups are unequal. The results of this study presented in Table 3 show levels of market orientation and performance across value discipline strategies. An examination of the results suggests that the data fail to show a clear pattern of market orientation and the degree of value discipline clarity leading us to reject hypotheses H1 and H2. Some interesting results do emerge, however. Market orientated firms choose not to operate within a pure operational excellence value discipline (or conversely that operationally excellent firms are not market oriented). Furthermore, firms operating with a hybrid value discipline that includes a significant portion of operational excellence character-

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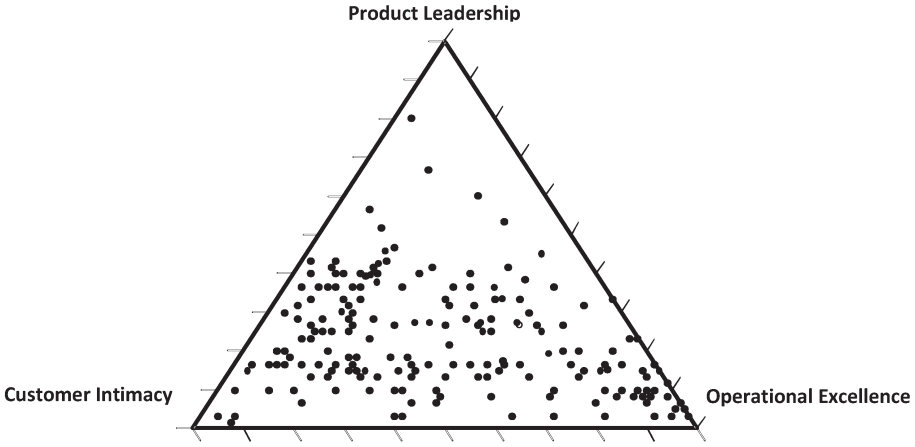

Figure 3: The Value Disciplines of Illinois Beef Producers

Table 3: Market orientation and subjective performance across value disciplines

Value Discipline	Market Orientation	Performance	N
Pure CI	0.7804^{A} (0.4210)	0.3122 (0.2915)	23
Pure OE	-2.3357^{ABD} (0.3616)	-0.5008^{E} (0.2005)	56
Hybrid OE/CI	-0.6538^{BC} (0.4719)	−0.2568 (0.2537)	32
Hybrid PL/OE	0.3031 (1.1208)	0.9250 (0.6570)	6
Hybrid CI/PL	1.5763^{C} (0.3245)	0.4340 (0.2203)	34
Middle	0.4691^{D} (0.1648)	0.0433^{E} (0.1063)	162

Note: Table displays scale mean (standard error in parentheses). No Pure PL strategy is analyzed as there was only one firm employing this strategy. Means sharing superscripts are significantly different from each other (Tukey-Kramer, $p < 0.05$).

istics have lower levels of market orientation than do firms without an operational excellence component. These results support hypothesis 1a. The low number of firms operating within a Pure PL value discipline does not allow us to answer hypothesis 1b. Results also show firms with a customer intimacy/product leadership value discipline have a significantly higher market orientation than firms utilizing an operational excellence value discipline. These results corroborate the findings of Menguc et al. (2007), who find a market orientation contributes to innovation or customer-based strategies, but does not lead to cost leadership strategies.

The results show firms within the operational excellence value discipline achieve significantly lower performance than firms operating in the middle of the value triangle. We are unable to observe any other statistically significant differences in subjective performance across value disciplines; therefore, we must reject hypotheses H3 and H4. Nevertheless, this is a surprising result given the theoretical arguments brought forward by Porter (1985) and Treacy and Wiersema (1993). However, when considering that firms within an operational excellence value discipline also have the lowest market orientation, the performance result is less surprising given the multitude of research studies linking market orientation and performance (Johnson et al., 2009; Narver and Slater, 1990).

While the above results do not show many significant differences in performance across value discipline strategies, we can observe a relationship between market orientation and performance. Our findings do show the value discipline choice with the lowest market orientation corresponds with the value discipline choice with the lowest level of performance. These levels are significantly different from other value discipline strategies. Operationally excellent firms have the lowest levels of performance and this is significantly different from those firms operating in the middle of the value triangle. Issues with the size of value discipline subsamples may have limited the significance of differences between OE firms with other value disciplines.

To attempt to provide some more clarity to these results, and to mitigate the issues with the small size of some of the sub-samples, we conducted a similar analysis using only four sub-samples of market orientation and value discipline choice. To give us larger subsamples, we split firms at the median level of market orientation and broadly on value discipline clarity. We classified those firms with market orientation scores above the median as having a high market orientation and those firms below the median as having a low market orientation. We characterized firms operating in the middle of the value triangle as having an unclear value discipline while we categorized all others as possessing a clear choice of value discipline. Theory would suggest firms having a low level of market orientation in combination with a lack of clarity on value discipline would have poor performance. Conversely, a high degree of market orientation in combination with a clearly defined value discipline should lead to superior performance. The question remains, however, does less market oriented firm with a clearly defined value discipline outperform a highly market oriented firm that has not clearly defined their

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Table 4: Performance matrix between market orientation and value discipline clarity.[a]

Level of Value Discipline Clarity	Level of Market Orientation	
	Low	High
Low Clarity (Middle)	-0.4371^{AC} (0.1743) N=70	0.4088^{AB} (0.1194) N=92
High Clarity (Edge)	-0.5626^{BD} (0.1631) N=87	0.6450^{CD} (0.1365) N=65

[a.] Values are means of performance factor scores. Standard errors are in parentheses.
[b.] Means sharing superscripts are significantly different from each other (Tukey-Kramer, $p < 0.05$).

value discipline? Table 4 displays the means of performance factor scores across a matrix of market orientation and degree of value discipline clarity.

These results indicate that highly market-oriented firms outperform firms with an underdeveloped market orientation, irrespective of the degree of value discipline clarity. While self-identified performance differed between firms depending on their level of market orientation, our results show that performance is not significantly different across level of value discipline clarity. This is an interesting result as it is contrary to the suggestion by Treacy and Wiersema (1993) that firms with clearly articulated value disciplines will outperform those that are not able to define the specific means by which they provide value to the market.

6. Discussion

Treacy and Wiersema (1993) have suggested that when a firm chooses a value discipline they are simultaneously choosing their customers. It is for this reason that Treacy and Wiersema (1993) and Porter (1985) have posited that the ability to define ones value discipline could lead to superior performance. Consequently, firms are encouraged to search for opportunities to provide value for consumers in a manner that is congruent with both their value proposition and current capabilities. A market orientation may enable firms to develop innovative methods to provide products and services to meet the changing needs of heterogeneous consumers.

Understanding the means of providing superior value is important in order for firms to achieve increased performance. However, a clear idea of the firm's value discipline may provide other benefits as well. Porter (1985) posits that firms which are 'stuck in the middle' for an extended time may eventually go out of business as the product they offer evolves to one that is inconsistent with customer needs. However, our results from a cross-section of Illinois beef producers show performance is driven more by market orientation rather than the magnitude of value discipline clarity. Contradictory to previous theory, market oriented firms with no clear value discipline have performance measures that are not statistically significantly different from firms with a clearly articulated value discipline. Another interesting result is the lack of a statistically significant difference in performance across hybrid value disciplines, especially considering observed differences in market orientation across hybrid forms. Further analysis with larger datasets may help clarify these results.

While this research is not able to show evidence of a market orientation-clarity-performance link, it does show clarity alone does not lead to superior performance. There are several interesting implications of this result. First, our results corroborate previous research studies by showing market orientation to be an important driver of firm performance, even within the context of production agriculture. Second, these results show value discipline clarity is not a prerequisite for superior performance. Our results show that firms with a clearly defined value discipline and low level of market orientation had the worst performance, although not significantly different from other firms with a low market orientation. Firms that merely choose a value discipline (or choose one by default) may not be satisfied with their performance as the choice of market in and of itself provides few sustainable competitive advantages. Sustainable competitive advantages may only accrue to those firms that are able to leverage a clear value discipline with the organizational structure to develop and deliver products that provide value in a manner consistent with the chosen value discipline. Therefore, a necessary condition for improved performance may be the presence of a market orientation, which allows firms to more fully understand the fundamental drivers of the customer's value proposition.

One limitation of this paper is the cross-sectional nature of the study. As we use survey data from only one year to analyse value discipline choice and firm performance, we are not able to determine how changes in market orientation and value discipline clarity affect self-identified performance. Longitudinal data would be preferred as this would allow researchers to track the value discipline and the market orientation of the firm and determine if it was consistent through time. It may be that superior performance accrues to firms with a consistent value discipline (as measured year-to-year) and increased variability in both the choice of value discipline and level of market orientation contributes to poor performance. This could potentially explain how firms supposedly 'stuck in the middle' are more highly market oriented than those with an operational excellence value discipline, and how firms in the middle of the value triangle have similar performance to firms with a pure customer intimacy value discipline.

7. Conclusions and Implications

The goal of this paper was to analyse market orientation and performance across value disciplines. Previous research studies have suggested that firms who have a clearly defined value discipline are able to achieve superior performance. Surprisingly, there has been little research examining the relationship between value discipline clarity and firm performance. Using survey data, we measure the market orientation, subjective performance, and choice of value discipline of Illinois beef producers. We used Tukey-Kramer tests of differences in means to examine differences in market orientation and performance across value disciplines.

Our findings indicate that the average level of market orientation is lower for firms with an operational excellence value discipline (both pure and hybrid forms)

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relative to other value disciplines. Furthermore, our results show that firms with a hybrid product leadership value discipline have higher performance measures than firms using an operational excellence value discipline. While this paper lends some credence to the market orientation-performance relationship, it does not provide clear answers to the value discipline clarity-performance link. However, our results do show that firms with higher levels of market orientation report greater satisfaction with their performance than firms with lower levels of market orientation. Our results would suggest that firms should first work on improving their market orientation and then leverage their market awareness to develop a clearly defined value discipline.

Within the context of the Illinois beef industry, our findings show the magnitude of market orientation within firms is a more important determinant of firm performance than value discipline clarity. Future research will elucidate these results by conducting similar studies across a variety of industrial and cultural contexts. Additionally, future research could examine the market orientation-clarity-performance question in a longitudinal study to assess how consistency of market orientation and consistency of choice of value discipline contributes to firm performance.

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Appendix: Value discipline scale

These questions relate to different strategies 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.

Pricing	
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.	
We are continuously developing or adopting new technology that provides us a short-term competitive market and price advantage.	
Due to being unable to influence current market prices, we strive to continually become more efficient in an effort to reduce costs.	
	100
Production	
We are continuously developing new and innovative technologies that provide our farm with product, production, or marketing advantages.	
We willingly modify production practices to meet our customers' specific product requirements, even if it increases our costs.	
We are seen as a leader in production efficiency by our neighbors and peers due to our continuous efforts to produce efficiency gains.	
	100
Relationship building	
We try to develop individual business relationships with each of our customers and attempt to produce products that meet each of their specific requirements.	
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.	
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
Quality	
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.	
We only invest in meeting the minimum required level of certification and process control systems that are signaled through the pricing mechanism or mandated by regulatory agencies.	
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 quality in the market.	
	100

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