The Impact of Alternative Market Orientation Strategies on Firm Performance: Customer versus Competitor Orientation

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Agricultural producers are often thought of as manufacturers of undifferentiated homogeneous products and thus, price takers. Within homogeneous markets, producers' often focus on improving production efficiency as they see this as their only means of improving financial performance. In these environments, where competition is based on the firm's ability to be the low-cost provider of undifferentiated goods and services, Porter (1985) posits sustained success will depend on cost drivers such as economies of size, capacity utilization, technology adoption and organizational learning. Within agricultural commodity markets, however, economies of size and scope are not easily achieved. Due to these facts, many firms may find themselves stuck in the middle, possibly caused by capital constraints that hinder the implementation of a low-cost strategy, and therefore weakening its effectiveness.

Conversely, within differentiated markets, firms strive to deliver superior value by providing augmented products and services more efficiently than rivals. Competitive advantage within such markets is based on the firm's capability in the discovery and delivery of value added products that support a specific consumer experience. Firms achieving a differentiation advantage are those that are able to create positive difference between the value of the augmented product and the costs associated in delivering it. Within these markets superior value can be provided in several ways. Treacy and Wiersema (1993; 1997) quantified these methods into three singular value disciplines, operational excellence, product leadership and customer intimacy.[1] Combined with

[1] The operational excellence value discipline is similar to the cost leadership strategy of Porter (1985) and is the dominant strategy in commodity markets such as agriculture. As producers are generally unable to affect the price they receive, increasing efficiency is seen as the only method to earn higher profits in this market. Customer intimacy and product leadership would seem to fall into the differentiation strategy of Porter (1985) with a customer intimacy value discipline focusing on providing the exact product to meet a specific customer's needs. A product leadership value discipline searches for sources of product innovations and markets them quickly to become the first-mover in the market.

commodity production, direct marketing of farm production and producer alliances, it appears all three value disciplines are present in the agricultural context.

Furthermore, it has been suggested that market oriented firms are better able to define their own value discipline, which allows them to allocate resources more efficiently and to focus on appropriate consumer segments (Narver et al., 1998). Recently, Micheels and Gow (2009) found that extreme levels of market orientation, along with organizational learning and innovation, led to increased value discipline clarity. Treacy and Wiersema (1993) posit that the choice of customers and value disciplines is simultaneous. That is, operationally excellent firms are likely going to have a hard time marketing their production to customers who value close relationships with suppliers and vice versa. If this suggestion is indeed the case, are the individual components of a market orientation equally important across value discipline strategies?

The objective of this study is to determine if the relative level of customer and competitor orientation affect firm performance across various value disciplines. Using a sample of Illinois beef producers, we empirically measure the farmer's choice of value discipline as well as their level of market orientation and relative emphasis on a customer or competitor orientation. While Slater and Narver (1994) have shown that a general market orientation is important determinant of firm performance in any business environment, this study will attempt to further define and clarify these findings. Specifically, we suggest that the means by which the market orientation resource is developed may affect firm performance across various value discipline strategies. If the ideas brought forward by Day and Wensley (1988) are correct, we hypothesize that the

relative importance of customer and competitor orientation will differ based on the chosen value discipline of the firm.

Theoretical Foundations

Porter (1985) argues that superior value can be created by being either the lowest cost producer of an undifferentiated product or the most efficient producer of a differentiated product. Within agricultural livestock markets, specifically the cow-calf sector, many firms have sought to become the low-cost producer, often by striving to achieve economies of scale, with varying rates of success (Jones, 2000). Confounding the analysis is the fact that within the U.S. cow-calf sector, economies of scale were observed as herd sizes approach 250 head (Lamb and Beshear, 1998), and while a majority of producers have herd sizes under this threshold, low cost producers were found among all size groups (Jones, 2000). Firms operating within such markets may find a market orientation to be a valuable resource in discovering market opportunities based on unexpressed needs or the failure of competitors to meet expressed needs, or both.

A market orientation is broadly defined as the culture of the firm which focuses on the creation of superior value for customers (Narver, Slater and Tietje, 1998). Defining a market orientation within a behavioral context, Jaworski and Kohli (1993) identified several activities that are present within market oriented cultures, such as intelligence generation, intelligence dissemination, and finally the response to new information. Similarly, Narver and Slater (1990) suggest that a market orientation consists of three inter-related components, namely a customer orientation, a competitor

orientation, and interfunctional coordination. Through behaviors within the respective orientations, firms seek to gather and disseminate pertinent market information relating to customer needs and competitor actions in the search for opportunities to provide superior value to the market. Firms with a highly developed market orientation may be able to discover opportunities before rivals and thus establish customer loyalty and market share which may improve firm performance. Across a variety of markets and cultures, a market orientation has been found to be an important driver of firm performance (Narver and Slater, 1990; Hult and Ketchen, 2001; Micheels and Gow, 2008; Verhees and Meulenberg, 2004).

Within segmented and fragmented markets, Pelham (1997, 1999) found a market orientation was a significant contributor to superior firm performance. In commodity markets, however, the results regarding the importance of a market orientation in determining firm performance have thus far been mixed (see Narver and Slater, 1990; Pelham, 1997; Verhees and Meulenberg, 2004). While a market orientation may be an important resource for all firms regardless of competitive environment and competitive hostility (Slater and Narver, 1994), the relative emphasis of customer versus competitor orientation may be equally important depending on the choice of value discipline.

The relative emphasis on customers or competitors has been tested across a variety of industries and cultures with mixed results. Slater and Narver (1994) examined the importance of a market orientation and the relative emphasis using a sample of strategic business units (SBUs) in a forest products firm and a diversified manufacturing firm and found that a market orientation was a significant driver of performance, but relative importance was not significant, even when accounting for competitive intensity,

buyer power, and market growth. The results from Slater and Narver (1994) would seem to suggest that there is no benefit to being relatively more competitor or customer oriented; a market orientation is an important determinant of firm performance and changing the emphasis given market conditions may not be prudent. However, the results from Slater and Narver (1994) were observed using data from various SBUs of only two firms. This fact certainly limits the confidence researchers have in any generalizations that can be drawn from this research.

To that end, several published research reports have examined the importance of the relative emphasis of customer and competitor orientation within a market orientation across a wider spectrum of industries and settings. Using data from a sample of 393 marketing executives from a wide range of U.S. businesses, Gatignon and Xuereb (1997) found evidence to suggest for firms operating within uncertain markets a customer orientation may provide greater returns than would a competitor orientation and vice versa.

Furthermore, Tajeddini (2010) suggests that within the Switzerland hotel industry a customer orientation is an important contributor to firm performance, but not firm innovativeness. In a research study utilizing a sample of managers of hotels located in both developed and developing economies, Dev et al. (2009) found similar results. Lukas and Ferrell (2000) further suggest that the relative emphasis on customer (competitor) orientation leads to greater (less) innovativeness. Firms that are more acutely aware of unarticulated needs may be better positioned to develop more radical innovations as opposed to the incremental innovations which are developed following awareness of articulated needs.

Narver and Slater's (1990) description of a market orientation as a one-dimensional theoretical construct consisting of three behavioral components (customer orientation, competitor orientation and coordination) suggests that each component is equally important in determining firm performance. Some scholars have suggested this may not always be the case (Lukas and Ferrell, 2000). Day and Wensley (1988) posit that firms operating under different strategies (low-cost, differentiation) would likely develop different resources to succeed within their chosen strategy. Therefore, when developing a market orientation, should firms develop a customer orientation at the same rate as they develop their competitor orientation? The answer to this question likely depends on their choice of value discipline.

Testable Hypothesis

Market orientation

Market oriented firms are thought to achieve superior performance vis-à-vis their less market oriented rivals as a market orientation allows the firm to become aware of opportunities to provide superior value to consumers. As a firm discovers consumers' latent needs and translates this knowledge into new products, performance measures should improve as revenues increase due to premium prices and/or increased sales. In either commodity or non-commodity channels, higher beef prices can be earned by providing downstream users with the specific product attributes they value. A market orientation has been found to be a significant driver of firm performance across a variety of industries and cultures (Deshpande et al., 1993; Narver and Slater, 1990; Verhees and Meulenberg, 2004).

While not a traditional agricultural market, Slater and Narver (1994) found a statistically significant relationship between market orientation and performance in their research on several SBU's of a forest product firm, even when accounting for competition. Similar results displaying the performance implications were found in several business environments including large UK firms (Greenley, 1995), small to medium sized enterprises in the UK food sector (Tregear, 2003), UK manufacturing firms (Liu, 1995) as well as in buyer-supplier relationships (Bigne and Blesa, 2003).

> ***H1a****: An increase in the market orientation of the firm will lead to an increase in firm performance.*
>
> ***H1b****: An increase in the market orientation of the firm will lead to an increase in firm performance for customer intimacy producers.*
>
> ***H1c****: An increase in the market orientation of the firm will lead to an increase in firm performance for operational excellence producers.*

Relative emphasis

While a low-cost strategy is widely deployed in production agriculture systems, it does have its limitations. One major limitation is its lack of ex post barriers to competition (Peteraf, 1993). That is, the use of a low-cost strategy does not preclude other firms from employing the same strategy. Kim and Mauborgne (2005) deem these competitive environments 'red oceans' as many firms are competing based on similar strategies and a war of attrition ensues. Perhaps not surprisingly, strategy imitation has been shown to lead to mediocre performance for many firms (Porter, 1991; Teece, Pisano, and Shuen, 1997). Perhaps as a result, an increasing number of innovative and entrepreneurial producers are forgoing the commodity route, and are instead attempting to produce a non-

commodity product based on the various attributes demanded by heterogeneous consumers.

Within such segmented markets, the decision regarding how the firm actually chooses to provide value is especially important. Porter (1985) has posited that firms who fail to focus on one specific strategy, either low-cost provision or differentiation, risk becoming 'stuck in the middle' which can lead to mediocre performance vis-à-vis rivals with a clear vision of their value discipline. To be sure, the specific strategic choice would likely depend on the opportunities available to the firm as well as the specific resources and capabilities available internally and externally to the firm. Extending the work of Porter (1985), Treacy and Wiersema (1993) developed three value disciplines, operational excellence, customer intimacy, and product leadership, to explain different strategies firms can use to provide value for the consumer. Within an agricultural context, commodity producers may be better served by focusing on buyers or consumers as the sheer number of competitors puts a limit on the accuracy and the amount of competitor monitoring that can be conducted.

> ***H2****: An increase in the relative emphasis of a customer orientation will lead to an increase in firm performance for firms within a customer intimacy value discipline.*
>
> ***H 3****: An increase in the relative emphasis of a customer orientation will lead to a decrease in firm performance for firms within an operational excellence value discipline.*

Organizational learning

Using a survey of business executives of both large and small firms, Baker and Sinkula (1999a) find support for a learning orientation to directly affect both innovation and firm performance. In a similar study, Baker and Sinkula (1999b) found support for

direct affects of market orientation and learning orientation on performance, but no significant affect for the mediating relationship of learning on market orientation. In the beef industry, we feel market sensing capabilities brought about by organizational learning would increase a firm's ability to innovate as well as increasing their market orientation while also allowing for an improved cost focus of the firm. Being efficient is a superior quality in many industries, but is of great importance for firms who participate in commodity markets. In this case, firms who are participating in a commodity marketing channel would increase their efficiency through their learning orientation.

> ***H4****: An increase in the firm's learning orientation will lead to an increase in firm performance.*

Innovativeness

Market oriented firms are thought to gather information concerning consumer's current and future needs, but what happens following the gathering and dissemination of this information? Provided a firm has the capacity to innovate, it is likely this market information is transformed into product innovations to meet consumer needs. These innovations do not need to be frame-breaking, however. Increased communication with downstream partners would be considered an innovation if communication is not typical of the business relationship. While meeting a goal of the 2005 NBQA, increased channel communication can aid producers in modifying production practices or in altering the genetic make-up of the herd as a means of improving quality and efficiency.

In our study we conceptualize innovation as the willingness to use new ideas to improve the cattle operation, but leave what exactly that new idea is to the respondent. In this instance, the innovation could be a means of improving efficiency through a

technological innovation or by improving the product offering though an externally focused innovation. In their study of a sector of the U.S. government, Hurley and Hult (1998) found innovation to be an important driver of performance. Similar results were found in studies using large Japanese firms (Deshpande, Farley, and Webster, 1993), U.S. banks (Han, Kim, and Srivastava, 1998), and New Zealand firms, (Darroch and McNaughton, 2003). In all cases market knowledge was the primary driver of the innovation. Increased market knowledge allows firms to modify routines in a way that provides the consumer with the attributes which they desire.

> ***H5****: An increase in the level of innovativeness will lead to an increase in firm performance.*

Cost focus

A market orientation is an inherently external view of the current environment in which the manager operates. Market information is gathered, processed and implemented to modify routines in order to improve the product offering and, in turn, earn a premium price for doing so. However, it is still important to maintain a balance between the external and internal focus of the firm. In fact, once an innovation has caught on in the marketplace, the entrepreneurial rent from the innovation is likely to have already disappeared as increased competition has removed the premium price. Therefore, we also model the manager's cost focus as a determinant of firm profitability.

Ritchie (2000) argued increased efficiency in beef production is a necessary condition for high net income. Ritchie (2000) suggests that in order to increase income, the producer needs to increase output efficiency or increase prices received. Higher prices could be earned by producing products with desired attributes, but being able to

efficiently provide an augmented product may be more important in the long-run. In some sectors of the beef industry, efficiency may be more important than a market orientation in the short-run, provided the market is stable and not undergoing rapid change. A producer operating in the commodity beef sector may still feel increasing efficiency is their only method of improving performance. Support for this mind-set is given in Narver and Slater's (1990) study of the commodity SBUs of the forest product firm they studied in their seminal article. They found performance to have a U-shaped relationship to the level of market orientation in the commodity SBUs; that is, on average an SBU with a low level of market orientation outperformed those with a medium level of market orientation.

> ***H6****: An increase in the cost focus of a firm will lead to an increase in firm performance for firms within the operational excellence value discipline.*
>
> ***H7****: An increase in the cost focus of the firm will lead to a decrease in firm performance for firms within the customer intimacy value discipline.*

Data

Utilizing a sample of 269 Illinois cow-calf producers, we empirically measure the level of market orientation and subjective performance. A questionnaire was designed to ask Illinois beef producers for their responses on various latent constructs, including market orientation and innovativeness. The questionnaire also asked producers to determine their value discipline by allocating points among various phrases relating to production, pricing, relationships, and quality. Before the survey was mailed, questions were examined by University of Illinois extension specialists to verify question clarity and scale relevance. Following slight rephrasing, the survey instrument was mailed to a small sample of Farm Business Farm Management Association (FBFM) cooperators to allow

them to comment on question clarity and relevance. Following the instrument pilot testing, changes were made to the survey to improve the readability while also increasing the response rate relative to a less user-friendly survey.

A mailing list was obtained from the Illinois Beef Association containing names and addresses of 1569 beef producers in the state. An initial wave of the survey was mailed out to half of the survey population in June 2007 with a reminder card following 2 weeks later. Four weeks after the initial mailing, a second survey was sent to non-respondents. Respondents were asked to provide answers to survey questions using a 6-point Likert scale. A neutral choice was omitted in order to force respondents to either agree/disagree with the statement in question. Previous studies have shown 6-point scales to be of similar quality to 5-point and 7-point scales (Chang, 1994; Green and Rao, 1970; Preston and Colman, 2000).

Following the first wave of mailings, a total of 170 completed surveys were returned. In November 2007, the survey was sent to the second half of the mailing list in an attempt to increase the sample size. In total, 347, complete usable surveys were returned resulting in a 22.1% response rate[2]. However, this analysis will be conducted using a sample of 269 cow-calf producers.

As late respondents have been shown to be similar to non-respondents, the sample was tested for differences as outlined in Armstrong and Overton (1977). No significant differences were found between early and late respondents.

[2] In surveys where only a few responses were missing, responses were imputed through a regression. This method attenuated the loss of sample size that would otherwise occur had listwise deletion been employed.

Respondent characteristics

Table 1 provides some information about the demographic characteristics of the respondents, as well as other pertinent characteristics. The results presented here refer to the 269 cow-calf producers who participated in the 2007 survey of Illinois beef producers conducted by the authors. In general, the respondents are over 41 years of age, have greater than 16 years experience in the beef industry and are highly educated.

The most respondents fell between the ages of 41-50, with a distinct majority over the age of 41. Furthermore, a plurality of respondents had a college degree, while a majority had attended some post secondary schooling. The majority of the producers operate herds with fewer than 75 head of brood cows, which is similar to the results from Illinois in the most recent (2007) Census of Agriculture (USDA-NASS).

Table 1. Characteristics of Illinois cow-calf producers (n=269)

Characteristics	Relative Frequency (%)	Frequency
Age[a]		
< 30	3.3	9
31-40	7.8	21
41-50	24.9	67
51-60	35.7	96
> 60	27.5	74
Experience		
< 10	11.2	30
11-15	8.6	23
16-20	7.8	21
21-25	6.7	17
> 25	65.8	177
Education		
Some HS	0.7	2
HS Grad	22.3	60
Some College	17.8	48
Tech Grad	12.6	34
College Grad	39.8	107
Post graduate degree	6.7	18
Size of herd		
< 30	35.7	96
31-75	36.8	99
76-150	16.4	44
> 150	11.2	30

[a] For the age category, n=267 as two respondents did not complete this section of the survey.

Measures

Whenever possible, measurement scales were drawn from previously published research. A new scale was developed to measure value discipline clarity.[3] The concept of a firm's *market orientation* was measured using the scale first developed by Narver and Slater

[3] See Micheels and Gow (2009) for a discussion of scale development and reliability estimates of the value discipline scale.

(1990). In this manner, a firm's market orientation is comprised of their customer and competitor focus as well as the coordination of market knowledge within the firm. As with all the measures we used, we modified the verbiage to fit with production agriculture and pre-tested the scales with extension personnel so construct meaning was not lost in translation. To measure *organizational learning*, four items from Farrell and Oczkowski (2002) were used. These items sought to measure the 'learning culture' of the farm business. *Innovation* was measured using a 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. This was measured using a combination of scales developed by Homburg, Workman and Krohmer (1999) and Kotha and Valdamani (1995). The scale measured the manager's focus on production efficiency and cost reduction as a means of improving performance.

The independent latent variables were used to measure subjective performance on beef farms in Illinois. Seven subjective performance indicators were included in this study to measure both the producers' satisfaction with individual and comparative performance. Respondents were asked, using a 6-point Likert scale, to rate their satisfaction with their return on assets, cash flow, production and marketing investments, and overall performance. To assess comparative performance, respondents were asked to rate the overall performance of the farm business as well as prices received relative to their competitors. Subjective performance was used as our sample consisted of small, privately held businesses which are generally unwilling to share confidential financial data, even in an anonymous setting. While objective measures of performance would be

preferred, Dess and Robinson (1984) showed a strong correlation between subjective and objective measures of performance.

Controls

Age of operator, experience, and farm size were all included as control variables. Experience was measured as the number of years that the producer has been producing beef cattle. Farm size was indicated by the number of brood cows on the farm.

Common method variance

Single informants were used in this study, so some bias may be introduced due to 'halo effects,' which occur when indicators measuring dependent constructs are biased by the independent variables (Liu et al., 2002). However, this bias could not be eliminated as these firms are generally one-farmer operations. To check for common method variance, all variables used in the analysis examined using an unrotated factor analysis. If a significant amount of explained variance can be attributed to one factor, common method variance may be a problem. In the study, the combined factor analysis resulted in 11 factors with eigenvalues greater than 1.0, which accounted for 65.71% of the variance. Factor one accounted for 20.70% of the explained variance, therefore common method variance is unlikely to be an issue with our data.

Methodology

Construct reliability

Reliability is an important concept in the development of accurate and valid measurement scales. When testing for unobservable theoretical constructs, it is important that the scales reliably measure what they are intended to measure. Specifically reliability refers to the repeatability of individual test performance described by the individual propensity distribution (Lord and Novick, 1968). Sitjsma (2009) suggests using λ_2 proposed by Guttman (1945) as well as the more stringent measure of reliability, greatest lower bound (glb). Sitjsma (2009) goes on to show that for a given glb, the true reliability can be found on the interval [glb, 1], while alpha lies outside of this interval. For the purposes of this dissertation, construct reliability will be measured using two different measures, Cronbach's alpha (1951) and Guttman's λ_2 (1945). While the glb has been shown to provide a more accurate estimate of reliability, Socan (2000) suggests that the glb only exhibits these qualities when sample sizes are large. Further, it is important to note that reliability is a necessary, but not sufficient condition for validity.

The purified measurement scales along with their means, standard deviations, item-to-total correlations, factor loadings, extracted variances, and coefficient alphas are shown in Appendix A. Cronbach alphas and Guttman λ_2 are all shown to be greater than 0.70 cutoff recommended by Nunnally (1978), showing that construct reliability is present in our sample.

Construct validity

Construct validity was examined using factor analytic techniques available through SPSS 16.0, a statistical software package. Objective measures of validity include internal consistency, inter-item correlation, as well as discriminant validity. Fornell and Larcker (1981) suggest that if the average variance extracted (AVE) of the scale is greater than 50 percent, internal validity is present as a greater portion of variance is explained by the scale than by random error. Inter-item correlation examines whether items within a scale are correlated with each other. Worthington and Whittaker (2006) suggest to only retain those items where factor loadings are greater than 0.32, as these scales are likely not measuring what they are intended to measure. Streiner and Norman (1995) find that items which do not have inter-item correlations greater than 0.20 are likely measuring a different construct from the rest of the items. This cutoff ensures that items which remain are highly correlated with each other as uncorrelated items could suggest an attenuation of scale validity.

In addition, Table 2 reports the pair-wise correlations between latent factor scores and the square root of average variance extracted along the diagonal. This is done to test for discriminant validity as suggested by Fornell and Larcker, 1981). Discriminant validity is shown as the square root of average variance extracted is higher than all the pair-wise correlations. Therefore, discriminant validity is shown, and multi-collinearity does not seem to pose any significant problems within our sample.

Table 2. Correlations among latent and observed variables

Construct/Variable	1	2	3	4	5	6	7	8	9
1. Market orientation	**0.724**								
2. Innovation	0.162	**0.851**							
3. Organizational learning	0.325	0.427	**0.729**						
4. Cost focus	0.326	0.455	0.403	**0.714**					
5. Performance	0.346	0.217	0.244	0.198	**0.831**				
6. Relative emphasis	-0.045	0.001	-0.176	-0.056	-0.055				
7. Herd size	0.146	0.083	0.064	0.196	-0.019	0.065			
8. Experience	0.078	-0.093	-0.145	0.104	0.052	0.076	0.049		
9. Producer age	0.032	0.017	0.053	0.085	0.119	-0.014	-0.011	0.000	

Note: Diagonal shows square root of average variance extracted for latent variables.

Results

Hypothesis testing

Using SPSS 16.0, retained measurement items from Appendix A were used to develop factor scores that were subsequently used in the analysis. Specifically, the retained factor scores were used as variables in the ordinary least squares (OLS) regressions conducted to test the hypotheses presented earlier. Several models are tested to assess the performance implications of a market orientation and its component development within various value disciplines. Using factor scores, we measure relative orientation as the ratio of customer orientation to competitor orientation. First, the model is tested using the entire sample of 269 cow-calf firms, while subsequent models are tested using firms operating within different value discipline strategies. Firm performance within each value discipline strategy is modeled in the following manner.

Performance = f (Market orientation, Relative customer orientation, Innovation, Organizational learning, Cost focus, Size, Experience, Age)

Using a scale developed by Micheels and Gow (2009) firms were placed into a customer intimacy, operational excellence, or mixed value discipline strategy. Placement was dependent on their average score for the value discipline scale. Firms with an average of 50.0 or greater for the customer intimacy (operational excellence) statements were categorized as customer intimacy (operational excellence) producers. Producers who did not meet either of these criteria were placed in the mixed value discipline strategy category.

Standard OLS regressions were used to measure the impact independent variables had on subjective performance. The effects of a market orientation, relative emphasis, innovation, and organizational learning were examined using a sequence of OLS regression models (Table 3.). Results indicate that a market orientation is an important determinant of firm performance, while the importance of other variables changes depending on the choice of value discipline strategy.

Table 3. Results of regression analysis.

	Full Sample (n=269)		Customer Intimacy (n=82)		Operational Excellence (n=86)		Mixed Strategy (n=102)	
	Beta	t-value	Beta	t-value	Beta	t-value	Beta	t-value
Intercept	-0.15	-0.62	-0.77	-1.00	-1.59	-1.55	0.65	0.16
Market orientation	0.162***	4.80	0.201***	2.94	1.67***	2.68	0.70	1.01
Relative emphasis	0.00	-0.40	-0.08	-1.07	0.21	0.60	0.00	-0.31
Innovation	0.137**	2.00	0.12	1.16	0.15	1.03	0.04	0.29
Organizational learning	0.15	1.27	0.15	0.70	0.09	0.37	0.18	1.01
Cost focus	0.00	0.05	-0.07	-0.60	0.07	0.50	0.10	0.79
Herd size	0.00	-1.38	0.00	-0.27	0.00	0.16	-0.005**	-2.05
Experience	0.01	1.01	-0.01	-0.62	0.00	0.06	0.01	0.52
Age	0.001*	1.78	0.02	1.39	0.03	1.29	0.00	1.62
F	6.573		2.644		1.803		1.938	
Adjusted R^2	0.144		0.140		0.070		0.070	

Note: ***, $p < 0.01$; **, $p < 0.05$; *, $p < 0.10$ (two-tailed test).

As shown in Table 3, within the full sample of 269 cow-calf producers, a market orientation (H1a supported: $b = 0.162$, $p < 0.01$), innovation (H5 supported: $b = 0.137$, p

< 0.05), and producer age (b = 0.001, p < 0.10) positively contribute to firm performance. These results are similar to previous findings (Han, Kim, and Srivastava, 1998; Micheels and Gow, 2008). It seems that within the cow-calf sector of the Illinois beef industry, a market orientation and innovativeness are important managerial resources which can be developed and subsequently deployed to improve firm performance. Interestingly, producer age, not experience in the beef industry, was shown to lead to improved performance. This may be due to the fact that as producers age, they become more risk averse and thus develop management strategies with a more narrow range of performance, but a higher likelihood of success.

Within the customer intimacy sub-sample, a market orientation is again shown to lead to increased firm performance (H1b supported: b = 0.201, p < 0.01). An emphasis on developing a customer orientation was not shown to lead to improved performance (H2 not supported), which corroborates the findings of Slater and Narver (1994), and is contrary to the findings of Tajeddini (2010). Similarly, within the operational excellence sub-sample, a market orientation is the only significant contributor to firm performance (H1c supported: b = 1.67, p < 0.01). Within the operational excellence strategy, the relative emphasis was not shown to contribute significantly to firm performance (H3 not supported). Further, a focus on costs was also not shown to contribute to improved performance (H6 not supported).

For firms operating with a mixed value discipline strategy, a market orientation was not shown to contribute to firm performance, which is contrary to earlier findings (Micheels and Gow, 2008, Narver and Slater, 1990). Interestingly, an increase in herd size actually led to a decrease in firm performance (b = -0.005, p < 0.05). This result

does not corroborate previous results from the agricultural economics literature (Ramsey et al., 2005). These contrary findings may be driven more so by the mixed value discipline strategy than by a lack of economies of scale. If firms are not able to clearly define how they provide value for downstream channel partners, an increase in herd size may not be the appropriate strategic response. In situations such as these, firms that are unable to focus on one singular value discipline and are therefore unable to efficiently develop the appropriate resources and capabilities, are going to find it difficult to improve performance simply by increasing herd size.

In general, our results indicate that a market orientation and innovation are important determinants of firm performance in this sample of Illinois beef producers. These important results corroborate and clarify earlier studies which examined the relationship between market orientation and performance within food and agriculture settings (Slater and Narver, 1994; Tregear, 2003; Verhees and Meulenberg, 2004; Micheels and Gow, 2008). When examining these relationships within separate value disciplines, we find a customer focus to not be important in terms of its impact on profitability. This result corroborates the findings of Slater and Narver (1994) who find that a market orientation is an important resource in any environment.

Conclusions

Implications

The purpose of this research was to examine the importance of a market orientation and the relative emphasis of a customer orientation across various value discipline strategies within the Illinois beef industry. Overall, our findings support previous research which

found that a market orientation and innovativeness contributed to firm performance (Han, Kim, and Srivastava, 1998; Narver and Slater, 1990; Slater and Narver, 1994). We were not able to find evidence to suggest that the relative emphasis on a customer or competitor orientation was an important determinant of firm performance.

These findings are important as an increasing number of innovative and entrepreneurial agricultural firms are operating outside of the traditional commodity framework. Within such markets, a market orientation is a powerful resource as it enables the firm to become aware of opportunities to provide superior value for consumers. These findings further show that within different value disciplines, the specific manner by which resources are allocated in the development of the market orientation is important. These results are similar to the findings of Slater and Narver (1994) who suggest that continually changing the relative emphasis of customer versus competitor orientation may not be prudent given the time and financial resources used in the development of a market orientation. That is, the development of a market orientation or customer orientation is not instantaneous so by the time the orientation is adjusted to the competitive environment, the conditions may have already changed.

While the results of Tajeddini (2010) suggest that the relative emphasis on the components of a market orientation is important, those results were found using Swiss hotel data. It may be that the Illinois beef industry is more comparable to SBUs of a forest products firm (Slater and Narver, 1994) than that of Swiss hotels (Tajeddini, 2010). Cow-calf producers often do not sell their production directly to the consumer, which would be drastically different than the situation faced by hotel managers, but may be similar to forest products firms. As firms move closer to the consumer interface,

modifying the relative emphasis may be an important strategic decision, but for firms located further upstream in the value chain, a focus on developing a balanced market orientation might be the more prudent decision.

Furthermore, Slater and Narver (1998) suggest that a customer orientation and a market orientation are two vastly different constructs. Firms who focus solely on consumers run the risk of developing competitive blind spots as they are focusing only on the needs of current expressed needs of consumers and not scanning the competitive landscape to determine consumers' underlying latent needs. Hamel and Prahalad (1991) term this condition the 'tyranny of the served market'. By focusing only on current consumers (or current competitors) firms may turn the core competencies of market awareness and responsiveness into core rigidities (Leonard-Barton, 1992).

Limitations and future research

While our results point to some interesting implications for agricultural managers, the nature of our sample may limit the ability to generalize the results. Our sample focused on the Illinois beef industry, so further research could examine these results across beef producing areas and across both crops and livestock producers. Further, the use of cross sectional data only allows us to see that the variables are related, not necessarily the direction of causation. Finally, the use of subjective performance limits the ability to interpret the results. Future research could use panel data to overcome some of these limitations.

Previous findings have shown that a market orientation is an important resource in agricultural markets (Grunert et al., 2005; Micheels and Gow, 2008; Verhees and

Meulenberg, 2004). This research study found a market orientation to be an important determinant of firm performance across value discipline strategies in the Illinois cow-calf sector. Future research could examine the relationships between market orientation, relative emphasis, and innovation across crops and livestock and across cultures to clarify these results. Also, other variables could be incorporated into future models to account for channel trust and commitment as well as perceived environmental turbulence. As channel choices for agricultural and other producers continue to expand, further research is needed to determine the appropriate managerial responses for each strategic choice.

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Appendix A. Scale reliability and validity

Measurement Items (only retained items are displayed)	Guttman's λ_2	Cronbach's Alpha	Variance Extracted	Factor Loadings	Corrected Item-to-Total Correlation
Customer Orientation (based on Narver, Slater, and MacLachlan, 2004)	0.769	0.762	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 own products obsolete.				0.527	0.332
We work closely with lead customers who try to recognize their needs months or even years before the majority of the market may recognize them.				0.794	0.580
Competitor Orientation (based on Narver and Slater, 1990)	0.865	0.861	52.44%		
Employees on our farm share information concerning competitor's activities.				0.656	0.536
Top management regularly discusses 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 the key competitors have succeeded or failed.				0.758	0.633
We evaluate the strengths and weaknesses of key competitors.				0.797	0.679
Interfunctional Coordination (based on Narver and Slater, 1990)	0.758	0.757	57.57%		
We generally regularly visit our current and prospective customers.				0.718	0.503
We freely communicate information about our successful and unsuccessful customer experiences across all business functions.				0.725	0.509
All of our business units (marketing, production, research, finance/accounting) are integrated in serving the needs of our target markets				0.817	0.616
People on our farm understand how everyone in our business can contribute to creating customer value.				0.772	0.557
Learning Orientation (based on Farrel and Oczkowski, 2002)	0.778	0.77	53.15%		
The basic values of this farm include learning as key to improvement				0.786	0.596
Our take is that learning is an investment, not an expense				0.844	0.653
Learning on my farm is seen as a key commodity necessary to guarantee survival.				0.840	0.661
There is little commonality of purpose in my farm/marketing channel.*				0.619	0.452
Personnel in this farm realize that the very way they perceive the marketplace must be continually questioned				0.487	0.339
Innovation Orientation (based on Hurley and Hult, 1998)	0.747	0.736	72.43%		
Technical innovation based on research results is readily accepted.				0.852	0.480
We seldom seek innovative ideas.*				0.753	0.565
Innovation is readily accepted in project management.				0.842	0.554
Individuals are penalized for new ideas that don't work.				0.887	0.342
Innovation in our organization is perceived as too risky and is resisted.				0.840	0.567
Cost Focus/Internal Orientation (based on Homburg, Workman and Krohmer (1999) and Kotha and Valdamanni (1995))	0.734	0.726	50.99%		
Improving the operating efficiency of the business is a top priority.				0.847	0.653
We have a continuing goal to lower operating costs.				0.808	0.581
We hardly ever seek to improve production practices so that we can lower costs.				0.621	0.389
Achievement of economies of scale or scope is an important element of our strategy.				0.516	0.333
We closely monitor the effectiveness of key production practices.				0.727	0.573
Overall Firm Performance (based on Jaworski and Kohli, 1993)	0.832	0.818	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