Staff Paper

AGRIBUSINESS COMPETITIVENESS:
FACTORS AFFECTING THE DEMAND STRUCTURE

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The competitiveness of any business can be examined from a number of perspectives, e.g., cost structure, product offerings, core competencies, strength of market position, economies of scale and scope, etc. The purpose of this paper is to examine how the characteristics and structure of customer demand affect the competitiveness of an agribusiness. Historically, the competitiveness of agribusinesses in the input supply, production, and first handler/processor sectors has been commodity based and thus focused on price and cost structure. In contrast, the food industry part of agribusiness long ago adopted a product orientation that defined competitiveness much less in terms of price and much more in terms of differentiation of quality and features. Differentiation, as a strategy for competitiveness, is inherently focused on consumers' demands and the ability of firms to meet these demands.

This paper explores how demand, reflected in customer value, impacts competitiveness. The first section of the paper will define both competitiveness and customer value as interrelated concepts. The next section will argue that agribusiness faces unusually strong forces favoring value-added competitiveness through the altering of the bundle of benefits offered by agricultural products. Finally, the paper will present some key elements of business strategy necessary for agribusiness firms to become competitive in the value-added sense.

Competitiveness and Customer Value

Competitiveness is a term often used but rarely defined with any precision. For the purposes of this paper, competitiveness will de defined in a manner that highlights the role of consumer demand:

> Competitiveness is the ability of a firm or industry segment to offer products and services that **meet or exceed the customer value** currently or potentially offered by the products and services of rivals, substitutes, and possible market entrants.

This is a sweeping definition in the sense that a firm must be competitive against many standards of comparison, both current and potential, including those established by customers, rivals, substitutes, and market entrants. But, the focus of this definition is the creation of customer value. If the firm can not generate customer value with its products and services than the other standards are immaterial. The creation of customer value is necessary, if not sufficient, for competitiveness.

What then is customer value? Customer value is determined by the relationship between the bundle of benefits that a product is perceived to provide a customer and the price that the customer must pay for that bundle of benefits. The relationship can be simply expressed as:

$$Customer\ Value = \frac{Perceived\ Benefits}{Price}$$

(Allen and Pierson). It follows form the expression and the competitiveness definition that any firm wanting to increase its competitiveness must create customer value by providing products whose perceived benefit/price tradeoff compares favorably to the products offered by all current rivals and substitutes and makes the new entry of rival products difficult. A firm that can do this will be competitive, in a pragmatic sense, for the short and long term.

The above expression of customer value makes clear why traditional commodity agriculture has always been price focused. By definition, every unit of a commodity offers the same bundle of customer benefits because the individual units of a commodity have the exact same attributes. Attributes do not vary. Therefore, perceived benefits can not vary and the only remaining basis for increasing customer value is to decrease the price. **Commodity competitiveness** is inherently price driven. Demand is not a very interesting thing in this commodity world. Since the attributes and thus the benefits can not be altered, the variety of benefits that customers may truly want is irrelevant. The only thing that arises from the demand structure is the quantity of the fixed attributes wanted by customers at the offering price. This is, after all, the market view of neoclassical economic theory.

Demand is a much more interesting thing in a product world where attributes and thus customer benefits can in fact be altered in a variety of ways. In a product world, the bundle of perceived benefits is up for grabs, and firms skillful at discerning desired customer benefits and designing products that deliver these benefits will have a competitive edge. Currently in agribusiness, value-added has become a popular phrase to describe product oriented as opposed to commodity oriented agriculture. The list of so-called value-added products is extensive, including such things as ethanol, high fructose corn syrup, industrialized hog production, Certified Agnus Beef, computer graded fresh-pack apples, starch-rich identity preserved corn destined for industrial uses, and on and on. Value-added carries with it the connotation of further processing and/or capturing the profits further out the market chain. In fact, value-added at its heart is based on the notion that transforming the raw agricultural commodity through some process can change its attributes in ways that create a different bundle of customer benefits. Value is added because the bundle of benefits has been changed. **Value-added competitiveness** is thus something very different from the commodity competitiveness of more traditional agribusiness. Value-added competitiveness is competitiveness that arises from increased customer value created by the deliberate alteration of perceived benefits. It is value-added competitiveness that is truly built on a complete knowledge of and response to the multifaceted nature of customer demand.

Value-added competitiveness does not mean that price and cost are ignored, or that only increasing the bundle of benefits matters. Rather the customer value expression shows that being

competitive in a world where benefits can be altered is a potentially diverse world strategically. One strategy is classic differentiation where the focus is on increasing the available bundle of benefits for a broad class of consumers. However, niche strategies also arise from the expression. Niche strategies involve a firm becoming so knowledgeable of a particular narrow market segment that the firm's products are designed to offer the precise benefit/price tradeoff desired by the niche. This tradeoff can emphasis enhanced benefits but it can also focus on tailored price. Finally, as new bundles of benefits prove to be popular in the demand sense, certain firms will take on the task of producing these benefits in a more efficient, lower cost, lower price manner. These firms will return to price as a major source of competitiveness.

The variety of these strategies is not new to the product world of the major food firms and food wholesaling/retailing. Michael Porter articulated the above taxonomy of strategy some time ago. But this world of value-added competitiveness is still new to many in agribusiness. I see this as I work with small and medium sized input supply, grain handling, and processor firms and with the growing ranks of commercial sized producers. Getting past price to consider customer benefits fully is not easy for these firms.

Market Forces Favoring Value-added Competitiveness

Why after all these years has value-added competitiveness finally become an issue in agriculture? The forces driving this have become well articulated recently. A long series of *Choices* articles, for example, have spoken to various aspects of these forces including Urban (1991), Peterson and Swinton (1992), and Mark Brabenstott (1994) to name a few. Only a brief description of these forces will be summarized here.

First, consumers are pickier about what they want as benefits than they have ever been. They want their individual wants and needs met by products offered in the market place. Income levels, family and work arrangements, cultural diversity, population maturity, and live style issues have all worked together to create this turbulent world of consumer demand.

Second, technology has allowed agriculture to respond to this diversity of demands in new and exciting ways. Consumers have probably always had the diversity of demands that they currently exhibit, but until recently industry, particularly basic agriculture, could not easily respond to these demands even if they were known. The rise of biotechnology has meant that product attributes, e.g., leanness, starch content, protein content, pest resistance, can be engineered into the genetics of the agricultural product. Traditional genetic processes also allowed for some of this, but traditional processes were limited and often took much longer periods of time to develop the needed traits through multiple generations. Biotechnology allows for greater range in traits engineered and in faster development time. Agriculture can now alter the attributes of seemingly unalterable commodities and thus alter the potential benefits from the very origin of the food chain. In addition to biotechnology, information technology has allowed firms to understand and track the diversity of consumer wants in ways previously unheard of. Information technology has also allowed for process controls and manufacturing processes that (1) can efficiently produce diverse consumer products, and (2) demand new levels of quality and consistency from the agricultural inputs going into them.

Even with the power of technology, the ability to respond to the diversity of consumer demand would not be possible without the third force, strengthened coordination throughout the food system. For example, it would not be possible to produce the type of pork demanded by consumers without the combined efforts of geneticists, producers, processors, wholesalers, and retailers. The benefits that consumers want, particular in the convenience, health consciousness, and food safety areas, can not be delivered unless all stages of the food system work together to deliver them. The explosion of contracted production, strategic alliances, and related forms of tighter vertical coordination are in response to the need for benefits and attributes that are assured by their managed flow through the entire food system.

Collectively, these three forces--the diversity of consumer demand, the technological ability to respond to this demand, and the tighter vertical coordination in the food system--suggest that value-added competitiveness, as opposed to commodity competitiveness, is now a potential (if not essential) alternative for every firm in the food chain and not just for food industry firms. Input suppliers, producers, and first processor/handlers must all examine their ability to be competitive in the value-added sense.

Strategies Necessary for Value-added Competitiveness

In his book *Competitive Advantage*, Michael Porter laid out the strategic steps necessary to achieve a differentiation strategy, i.e., a strategy built upon enhanced customer benefits. These steps are essentially the ones that value-added competitors in agribusiness now need to pursue. Table 1 provides a summary of these key steps and readers are encouraged to seek Porter's book for a complete elaboration on them. However, three points need to be highlighted here.

First, value-added competitiveness must begin with the consumer and what bundle of benefits the consumer wants. Firms that are to be value-added competitive must have the capacity either internally or through food system partners to access knowledge about consumers. Market research and product development capabilities are key.

Second, firms must not only be capable of actually producing the benefits that consumers want, they must be able to communicate to consumers that the benefits are in the product. The customer value expression has as its numerator *perceived* benefits. Firms can not fool themselves that just because they believe the benefits have been engineered into the product that consumers will believe the benefits are there. Price is after all an easy thing to observe. It has an objectivity that benefits simply do not have. Benefits arise from use after purchase. Until the consumer actually experiences the product, the benefits are merely a promise. Porter's emphasis on signaling criteria (Step 3, Table 1) is critically important in this regard. Every agribusiness that is to be value-added competitive must address how they will signal key customers that the bundle of desired benefits is there. The signal may be as diverse as a certified organic label, ISO 9000 certification, or the investment in a $2 million computerized apple sorter that scans every apple individually. The potential signals are as diverse as the benefits desired for delivery and the processes necessary to produce these benefits.

Table 1: Porter's Steps for Implementing a Differentiation Strategy

Step 1:	Determine who the real buyer is.
Step 2:	Identify the buyer's value chain and the firm's impact on it.
Step 3:	Determine ranked buyer purchasing criteria, including: (1) Use criteria that sem from how the product will create customer value. (2) Signaling criteria used to help the buyer know that the use criteria are actually met by the product.
Step 4:	Assess the existing and potential sources of uniqueness within the firm, including improved control over the uniqueness drivers: Discretionary policies — Linkages Timing — Location Interrelationships — Learning and spillover Integration — Scale Institutional Factors
Step 5:	Identify the cost of differentiation.
Step 6:	Choose the configuration of value activities that creates the most valuable differentiation for the buyer relative to the cost of differentiation.
Step 7:	Test the chosen differentiation strategy for sustainability. Are buyer preferences stable? Can the differentiation be easily copied by others?
Step 8:	Reduce cost in activities that do not affect the chosen form of differentiation.

Source: Adapted from Michael Porter, *Competitive Advantage.*

Third, the uniqueness of the benefit bundle delivered by a particular firm's products is also central to value-added competitiveness. Porter articulates a list of factors internal to a firm that are uniqueness drivers (Step 4, Table 1). The lead driver is discretionary policies. The unique competencies of a firm as articulated and implemented by its discretionary policies on processing, procurement, customer service, employee involvement, etc., all work together to produce a holistic strategy that truly produces customer benefits and is sustainable in no small part because it is a strategy that others can not easily copy. Firms can not merely do the same thing better in a product sense; they must do unique things that deliver a unique bundle of benefits and/or a unique benefits/price relationship.

In addition to Porter's steps, agribusinesses must also choose their vertical coordination strategy with great care. They may work individually to create a unique bundle of benefits but if it does not translate well through the rest of the food system it will not be successful. Table 2 presents

a schematic way of thinking about the vertical coordination options open to agribusinesses. At times, spot markets may still be acceptable, but increasingly vertical coordination needs to be achieved through some managed form that can help assure control, limit risk, and provide for a reasonable sharing of returns. More research needs to be done as to when and why certain of these options should be used over others, but clearly we already know that spot markets are losing out to managed forms of coordination as the food system has evolved over recent years. This indicates that the fierce independence long nurtured by many agribusiness must give way to contract relationships, strategic partnerships, and other forms of group action. The decision about when and with whom to ally will thus be increasingly crucial to value-added competitiveness.

Some Concluding Thoughts

Competitiveness of any form must first and foremost arise from creating customer value, a relationship between the perceived benefits offered by a product and its price. In traditional commodity competitiveness, the bundle of benefits is largely fixed across firms and thus price becomes the key to being competitive. In value-added competitiveness, the bundle of benefits is viewed as alterable in a variety of ways. Innumerable specific strategies thus arise to vary the benefits and the benefits/price tradeoff to increase customer value. The forces of consumer diversity, bio and information technology, and the tightening of coordination links in the food system collectively create an unusual set of opportunities for agribusiness firms to be competitive in the value-added sense. To respond to these opportunities, agribusiness must make deliberate strategic decisions to know the customers, develop unique ways to serve them, signal their uniqueness, and choose their vertical coordination methods.

Can traditional commodity competitive firms become value-added competitive? Can cost/price focused firms become truly demand driven? Anecdotal evidence certainly suggests that some of the best firms are making the transition. However, the number of firms who will not make it and the actual success of those who do remain an open and challenging question.

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Table 2: THE VERTICAL COORDINATION CONTINUUM*

Characteristics of "Arms-length" Coordination	Spot/Cash Market	Contract	Strategic Alliance	Co-op/ Mkt.Order	Vertical Integration	Characteristics of "Managed" Coordination
Self Interest Short-term Relationship Opportunism Limited Information Flexibility Independence						Mutual Interest Long-term Relationship Risk Management Open Information Control Interdependence

*The diagonal line represents the mix of arms-length and managed coordination characteristics found in each of the five alternative strategies for vertical coordination. The area above the diagonal line indicates the relative level of arms-length coordination characteristics while below the diagonal line indicates the relative level of managed coordination characteristics.