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Abstract

Subsector, or industry strategic planning is a potentially useful tool that can be designed to enhance the overall performance and competitiveness of a commodity industry across the industry's inter-dependent vertical segments. Industry strategic planning provides a framework for industry stakeholders to consider future strategic directions and to facilitate needed adjustments and progress on certain issues of common interest.

Industry strategic planning is particularly well suited for facilitating efforts by regional and national commodity industries to enhance their competitiveness in today's business setting, including global markets — a major objective of industries throughout the world. The paper discusses possible relationships between strategic management objectives and the desirability of subsector coordination and performance. It concludes by presenting ten planning components modified to fit the context of a commodity subsector that need to be considered by those involved in the strategic planning process.

Introduction

Shaffer (1973, 1980) has emphasized the importance of the evaluation of interlinked subsectors and food systems by researchers and participants. There is a continuing need to better understand the nature of economic interactions within the system and how these contribute to various performance outcomes. The complexity of the interactions within a subsector system can be very challenging for comprehensive evaluation, and therefore a more general understanding of key driving forces needs to be pursued as well as firm and segment relationships.

General conceptual and methodological approaches need to be developed for strategic planning and action for the firms together in the subsector that are facing common economic conditions with respect to their business operations, the resources of their competitors, and the market. The impact of a strategy-orienting system developed and implemented at the subsector level needs to ultimately be evaluated for its contribution to system performance - its generation of value and efficient use of resources. Research capital also needs to be expended to better understand and improve joint decision making processes among firms and organizations together in a commodity subsector.

This paper attempts to extend emerging principles of strategic management, formerly applied mostly to the firm, to the long-standing problems of intersectoral planning and coordination often seen in regional agricultural subsectors, particularly those associated with perennial crops. This effort considers the broad mission of the land grant university toward agriculture: to fill the gap in public research and development, extend information and technology for the betterment of the agriculture community, and basically serve as a resource that would enhance the long range capabilities of agriculture through research, extension, and education. The prioritization of publicly funded research and extension activities corresponding to derived subsector strategies can be an important component to improved coordination and ultimately performance (Ricks and Woods, 1995).

Strategic management, the firm, and the subsector

Strategic management is a concept that, although originally crafted for individual competitive firms, is finding its place into more broadly defined organizations within agriculture. A great deal of research capital has been expended in the direction of firm-level strategic management, attempting to better understand and improve decision making processes and developing prescriptions for the strategic action taken by firms facing various economic conditions with respect to their own resources, the resources of their competitors, and the market. The relevance of and approaches to a strategic management process for a regional commodity subsector, which includes a diverse set of horizontally and vertically related firms and organizations has been addressed to a much more limited degree.

Several reasons may be behind this analytical gap. The organization that is the firm, while exhibiting certain similarities, is quite different from the diverse set of firms and organizations that make up a vertically and horizontally linked subsector. There is typically little or no managerial or central administrative hierarchy in a subsector to parallel that in a firm. Furthermore, there is explicit, and often fierce, competition among subsector firms that are rivals with each other in quite different ways than divisions within a large, diversified firm. The fragmented, or atomistic, organization of firms as they create value in the transformation and trade of products through the subsector rarely has explicitly stated, unified goals in contrast to divisions vertically integrated under a single firm.

Separation between firms within a subsector leads to inherent limitations for firms in the subsector to recognize certain kinds of potential joint actions for mutual benefit. There also exist legal bounds that are imposed on inter-firm conduct in the U.S., particularly among those outside of agriculture, as laws attempt to regulate market power than might arise out of collusion and undue price enhancement.

Ronald Coase (1988) expressed a concern for the narrow scope of industrial organization pre-occupied with the study of monopoly, the control of monopoly, and anti-trust policy. His conclusion was that the negative and suspicious view ascribed (in some cases prematurely) to cooperation precluded meaningful investigation into ways in which healthy cooperation could be encouraged. This paper seeks to advance economic arguments supporting a healthy cooperation for improved performance in a commodity subsector.

Conceptually, the strategic management process for the firm is relatively straight forward compared to a complex subsector which is composed of many different types of firms. The strategic management of the firm involves the coalignment of the internal capabilities of that firm with its external market environment. The key decision makers of the firm are perpetually seeking (ideally) ways to appropriately refine, develop, and enhance the firm's capabilities with a view toward the goals of the firm. Capabilities are developed and strategic courses are chosen, furthermore, with a view toward the rivals of the firm and the associated buyers and suppliers. The investment activities of the firm are evaluated by management with a view toward pre-defined (explicitly or otherwise) goals which are in turn consistent with a unified mission of the organization. This general understanding of the concept of strategic management is accepted on a fairly wide basis among those in the business academy and the corporate world.

How the capabilities and environment are assessed, how coalignment takes place, and how mission and goals are best established by the firm remain the subject of some debate. Much of what is currently practiced as strategic management by business practitioners, however, is undertaken within firm organizations that are characterized by a hierarchical autonomy over internal resources; the upper echelons of management serve as a center of strategic command and control. Firm strategies, however they may be derived through this management system, are typically planned and implemented in a top-down manner and are intended to support an articulated mission of the individual firm.

Firms are themselves organizations of individuals that emerge to internally organize what would otherwise be market transactions under conditions where the firm costs are less than the costs of carrying out the transaction through the market.¹ Coase (1988) concedes the nature of the firm, a basic unit of analysis in modern economics, to be "shadowy", but suggests that the efficiency of the whole economic system depends to a very considerable extent on what happens within these "economic molecules".

The subsector can be conceived of, extending the chemistry analogy, as an economic compound made up or defined by the complex interrelationships between these molecules. Firms find themselves, much like the individuals organized under them, often in need of pursuing various coalitions to advance or preserve their common interests. The economic "system" alluded to by Coase illustrates the interdependence of action and strategy employed by these economic molecules. Together they generate a system performance of value creation, transforming and distributing scarce resources between and among competing outlets.

The nature of trade and the conflict of firm-to-firm goals within a subsector may present significant barriers to implementing higher subsector-level strategy, even on widely recognized issues for improved subsector performance and competitiveness. This is particularly the case where there are a large number of

¹ Following the conception of the firm as presented by Ronald Coase (1937), and later Cyert and March (1963) and Leibenstein (1979).

different firms, products, channels, supporting institutions, and distinct value-adding stages associated in varying degrees with each other. At the very least, subsector systems of varying complexity may require different conceptual and/or methodological approaches for strategic planning and implementation from those taken by the individual firm or less complex organizations. The development of certain key resources, for example, that would be widely valued and employed by subsector firms, may be constrained by problems of free-ridership; high exclusion cost goods from which all attending firms would benefit but no individual firm has incentive to develop on their own.

There are many positive potentials from joint inter-subsector efforts that are demonstrated in agriculture that can lead to general improvements in subsector performance. Trade associations, commodity commissions, cooperatives, Land Grant universities, and even government agencies, all provide (in principle) institutional support for certain selected types of cooperative efforts of firms seeking to enhance general performance measures related to their productivity, responsiveness, value, and ultimately, competitiveness. Selective operation on certain aspects can lead to improved coordination of value-generating activities. Pooling certain types of resources can lead to system-wide economizing on inputs shared by all, such as market information and certain kinds of research and development. Cooperation and coordination also have the potential to lead to improved system-wide responsiveness to shared opportunities and threats. An introspective system-wide search and identification of weak internal linkages critical to the overall value-adding process and identification of new strategies to enhance overall performance can help subsector member firms to clarify the extent and nature of their interdependencies, identify mutually beneficial projects and strategic directions, and evaluate their own firm-level activities.

Despite the inherent difficulties found in balancing competition and cooperation within a subsector, firms sometimes seek to engage in a wide variety of strategic behavior that may depend on certain kinds of cooperation from other firms. Some varying levels of cooperation and coordination often exist between rival firms seeking to identify synergies through various forms of joint activity or partnership. As Douglass North states in making the distinction between institutions (the rules) and organizations (the players): *"The purpose of the rules is to define the way the game is played. But the objective of the team within that set of rules is to win the game - by a combination of skills, strategy, and coordination...[m]odeling the strategies and the skills of the team as it develops is a separate process."*² The conception considered here is that the "team" can be thought of more broadly than the individuals within a firm competing against other firms. A team can be made up of a group of related firms, such as those together in a regional commodity subsector, facing a common threat or acting together to develop a certain opportunity to their mutual benefit.

Commodity subsector research has traditionally devoted considerable attention to issues of cooperation and coordination as they lead to measures of improved subsector performance. Subsector firms often share certain resources within the system (location, public R&D, infrastructure, promotion), compete with common advantages and encumbrances toward often similar customers or markets, and are often threatened together by outside forces.

It is perhaps a modest first endeavor here to focus on key trends, forces for change, unexploited economic opportunities, and anticipated problems leading to performance with a systems orientation to the strategic planning initiatives that may be adopted by a subsector. Examples of this, such as those within the Michigan apple subsector, are perhaps characteristic of what may be useful or descriptive of other agricultural commodity subsectors. This can include an attempt to identify, understand, and communicate interdependencies of alternative strategic actions that may not be, as Shaffer suggests, immediate or obvious.

Methodological approaches to implementing some type of strategic planning and management "system" for a subsector need to be developed more explicitly, based on a better understanding of the relevance of this conceptual approach. Prescriptive measures for a subsector-level approach to strategic planning and management are offered in later sections of this paper with a recognition that the opportunities and limitations at this level should be viewed with an understanding that much remains to be learned. It is unreasonable to expect one methodological approach to be universally applicable with equal results to all

3 North, Douglass, *Institutions, Institutional Change and Economic Performance*, pp.4-5, Cambridge University Press, 1990.

regional commodity subsectors. There exist, however, some basic principles that may be generally applied to many commonly faced situations.

There are a number of firm-level concepts which may be useful when extended to subsector strategic planning and implementation. Sustainable advantage through perpetuating superior organizational decision making in relatively efficient markets (Oster:1994), and superior problem sensing as a component to adaptability (Kiesler and Sproull:1982), and first-mover advantages (Chandler:1990) are among the well developed firm-level concepts that may be extended in a meaningful way to subsector-level strategic management.

Relative subsector strategic mobility, or responsiveness, is a capability that perhaps can be developed to improve subsector performance: reducing severe dislocations in factors of production, improving allocative efficiencies, and improving anticipation of consumer needs. Improving subsector responsiveness may take the form of improving issue sensing so that the firms within the subsector are not “caught asleep at the switch”, or it may involve developing mechanisms necessary to develop an effective response or initiative.

Firms understandably maintain their own strategies often with little regard for the collective effect of all firm strategies in a subsector. There is a further need to understand and evaluate the relationship and dynamics of individual firm strategies as they affect system-wide performance. The firm provides primary focus to its micro-strategy and attending stream of actions, but these must also be considered in the context of broader macro-strategies of the subsector and their attending actions. The effectiveness of a strategy-orienting activity within the subsector must include initiative to develop firm-level incentives to cooperate or engage in conduct consistent with what is necessary to improve overall subsector performance. The collective problem in this case involves at least two points of micro-macro tension: (1) individual firms may be unable to sense a need for collective strategic reorientation at the subsector level and (2) individual firms may not have the wherewithal to respond to a threat or opportunity adequately even if it is sensed in a timely way.

There is often a complex system of ancillary private and public organizations that contribute to the collective capability and competitiveness of certain commodity subsectors. It is with a view toward better understanding not only the inter-firm issues and relationships but the nature of subsector strategic orientation as it is influenced or guided by the support activities provided by these ancillary organizations, particularly as they interact and provide solutions for the a commodity sector, that research in this area needs to proceed. Subsector demand expansion organizations such as the Michigan Apple Committee have their own strategic planning initiatives for their particular organizations that can be aligned in some way with the (explicit or implicit) broader mission and strategies of their respective subsectors.

On subsector performance

Improved subsector performance that can serve as the guiding criteria for the effectiveness of a subsector strategic orientation system includes the improved profitability and competitiveness of a subsector as realized by the firms that comprise it. The broader concept of subsector performance, however, is considered here in a similar fashion as Stephen Sosnick. There is a need to recognize explicitly the existence of such social conflicts as the food-price dilemma and other such conflicting performance criteria are dependent on various interest groups (Sosnick, 1964). No single performance standard, such as grower profit, will be universally acceptable to all subsector member firms, the participants within markets they serve, and firms outside the subsector that are still in some way interdependent as they are competing for scarce resources. The pursuit of strictly defined Pareto improvements can be futile and the system participants and researcher must content themselves to pursue initiatives that help many as much as possible and harm few as little as possible.

The premise of this paper is to suggest that industry or subsector strategic management (strategic planning, action, and evaluation) may in some circumstances be effective in improving industry competitiveness, progressiveness, and vertical coordination among the various segments, and thus improve performance within the regional agricultural sector. Performance might include, among other things, improving the subsector's effectiveness in supplying products best corresponding to consumer preferences, a reduction in sustained periods of chronic losses, and reducing firm-level uncertainty with respect to its local

environment and thus facilitating appropriate long-term investments.

Improved vertical coordination toward improved subsector performance has long been an objective of subsector research.³ A number of firms and organizations will often conduct activities supporting the individual business activities of participant firms by providing certain public goods of various types. The priority with which these goods are developed and implemented is generally established by some mechanism other than market price. Orienting the individual members and organizations toward collective strategic planning and implementation potentially provides a means for better signaling priorities in developing resources that can contribute to subsector competitiveness between private firms and supporting organizations.⁴

Bernsten and Staatz (1992) underscore the importance of both the process and outcome of vertical coordination and the contribution made toward improving understanding of subsector needs leading to improved coordination through the use of subsector analysis. They argue for broadening research approaches to include systems of production to better understand the interaction between technologies, institutions, and policies, and further, to identify major information gaps, recognize inappropriate technical options, highlight access and equity issues, refine technical options, specify technology characteristics, and identify institutional and policy constraints.

Many of the approaches employed by organizations to address these issues within the system bounded by the firm under the rubric of strategic management are suggested here to be feasibly extended, with some modification, to improving certain aspects of coordination and performance within a subsector. This may be particularly effective where there are mechanisms other than prices needed to carry information and incentives to those allocating public good-type resources in support of the subsector.

The firm-level inability or inertia to alter its strategic course may be facilitated by certain types of coordinated efforts. Inadequate incentives for the firm to alone pursue the course for the common good of the subsector may be present and thus require some type of joint activities, particularly when investments in high exclusion cost and joint impact goods are required. The absence of any mechanism to provide such goods can have a profoundly negative bearing on subsector-level performance as it may lead to overall subsector inertia - the whole system is unresponsive to developing a key resource.

Strategic planning and management: objectives and approaches

Strategic planning refers to the activity within an organization to derive and evaluate alternative strategies. It is therefore process and administratively oriented. For the firm, it is an internal activity with a view toward the firm's resources and distinctive capabilities as well as the market and competitive environment. Galbraith (1967) considered the nature of industrial planning and concluded that because of the increasing requirements of time and capital to recover the development of industrial technology, the needs of the consumer must therefore be anticipated by months or years. Planning is the firm's response to see that what it provided would be purchased by the customer at a remunerative price, and that key inputs would be

3 See, for example, French (1974), Marion (1986), Marion and Ward (1986), Shaffer (1973, 1980), Bernsten and Staatz (1992).

4 Arrow (1974) suggests that organizations are a means of achieving the benefits of collective action in situations where the price system fails (p.33). Organizations supporting the commodity subsector may be the result of focused collective action, such as in trade associations providing promotion support, or through more dispersed collective action, which represent a collective action of a much broader interest.

available at a cost consistent with that price.⁵ Galbraith goes on to define planning in the following way:

*"Planning consists in foreseeing the actions required between the initiation of production and its completion and preparing for the accomplishment of these actions. And it consists also offoreseeing, and having a design for meeting, any unscheduled developments, favorable or otherwise, that may occur along the way."*⁶

The direct customer for any individual firm changes as one moves vertically through a subsector. Derived demand, however, is ultimately dependent on the end user. Applying the concept of strategic planning to the subsector suggests that there may be a collective subsector response to see that what was provided through the value-adding process would be purchased at a remunerative price distributed over the vertically related activities conducted by different firms. Furthermore, strategic planning by the related subsector organizations would contribute to insuring that key inputs would be available at a cost consistent with that price.

Many attempts have been made to formalize the firm's planning process. The elements of formal planning systems such as those of Quinn (1980) are presented in Table 1.

Table 1. QUINN'S ELEMENTS OF A FORMAL CORPORATE PLANNING PROGRAM

| | |
|-----|---|
| 1. | Analyzing one's own internal situation: strengths, weaknesses, competencies, problems. |
| 2. | Projecting current product lines' profits, sales, investment needs, etc., into the future. |
| 3. | Analyzing selected external environments and opponents' actions for opportunities and threats. |
| 4. | Establishing broad goals as targets for subordinate groups' plans. |
| 5. | Identifying the gaps between expected and desired results. |
| 6. | Communicating planning assumptions, goals, and policies to lower echelons. |
| 7. | Requesting proposed plans from subordinate groups with more specific target goals, resource needs, and supporting action plans. |
| 8. | Occasionally asking for special studies of alternatives, contingencies, or longer term opportunities. |
| 9. | Reviewing and approving divisional plans and summing these for corporate needs. |
| 10. | Developing long-term budgets presumably related to plans. |
| 11. | Assigning implementation plans. |
| 12. | Monitoring and evaluating performance for emphasis presumably against plans, but usually against budgets. |

Source: J.B. Quinn, Strategies for Change: Logical Incrementalism, (1980:168-169).

Formal firm-oriented planning in the business school and many larger corporations has tended to be dominated by financial analysis techniques and thus has been inclined to omit or drive out or overlook important goals and programs not easily quantifiable. Quoting Quinn on the limitations of these procedures:

"One would expect the adherence to such procedures would lead to a finely honed strategy, but this rarely happens. ...[L]ogic, politics, and events do not lend themselves well to the process in detail. But more insidiously, within the structure itself, mechanics often begin to overwhelm thought

⁵ J.K. Galbraith, The New Industrial State, pp.23-24.

⁶ J.K. Galbraith, The New Industrial State, p.25

*processes. And unconsciously, certain analytical procedures undermine the very strategies they are supposed to create."*⁷

Explicit application of formal strategic planning, such as that proposed by Quinn for a corporation, to the much more complex set of firms and organizations in a commodity subsector is apt to be regarded, at least by some participants, as a "foreign antibody" (Ansoff, et al, 1976). It may be dismissed as unworkable, unneeded, bureaucratic meddling, unnecessary centralized control, coercive, and perhaps compromising the right to independent decision making held by each individual organization.

The failures associated with the formal corporate planning process, with its focus on budgets, financial accounting performance measures, and concentrated managerial decision making has required a reconsideration of how to make this a meaningful exercise for the firm. Certainly different planning approaches and measurements are even more so required in the context of a commodity subsector beyond those of the formal corporate planning process.

The practice and objectives of strategic planning for the firm have evolved toward a more qualitative and behavioral process. Strategic planning, for example, is viewed by Ansoff as only a component of the broader task of strategic management, representing a means (planning and problem solving rather than implementation and control) by which management evaluates and acts upon external linkages with respect to techno-economic-informational variables.

Systematic patterns of strategy can be observed as having been employed by a subsector, whether by emergent or deliberate action. Firms in a regional subsector often have similar bases for competitive advantage with respect to other regions producing the same commodity or competing commodities, whether they explicitly recognize it and develop their strategies around them or not. The aggregation of firm-level strategies within a commodity subsector produces a mosaic of strategies, a mix of collective and independent approaches, deliberately pursued or otherwise, that may or may not be effective in matching the internal environment of the subsector to its external markets and environment in such ways as to yield the desired performance of the individual subsector members. It is proposed here that certain approaches to collective strategy for the subsector may be employed by certain related participant firms to improve the means by which they identify strategic alternatives, choose among them, and implement them to the benefit of many.

Firms and organizations within a subsector share, to a significant degree, certain kinds of resources and capabilities (strengths and weaknesses) that may be organized to create an environment that emphasizes the commonalities among firms within the subsector. Firms organize these resources with a view toward a common economic environment (opportunities and threats) that are often to a substantial degree external to the subsector. There is a certain transitivity in the influences meted out to subsector organizations by higher level economic environmental factors. The competitiveness of subsector firms is influenced, often in a similar way, by exogenous factors beyond the scope of influence by any individual participant. Furthermore, some strategic alternatives available to subsector firms can be considered as requiring varying degrees of inter-firm or, even more broadly, inter-sectoral coordination in order to take the greatest advantage of these alternatives.

For some purposes it may be a useful theoretical aggregation to consider a subsector to be in and of itself an organization. Kenneth Arrow (1974) argues that the term "organization" should be treated quite broadly. Participants in organizations, he suggests, may be themselves organizations as well as individuals. He argues that the market system itself can be regarded as an organization with elaborate means for communication and joint decision-making. Commodity subsector participants, particularly within a given region, will often think of each other as industry (subsector) "members" and often cooperate to address certain kinds of industry-wide issues or challenges with certain like or nearly related firms.

The choice set available to individual firms in the face of economic change may be significantly constrained when opportunity for cooperation is limited. Certain strategic choices available to the individual firm acting alone may be inadequate to meet the opportunities or threats facing the firm or not as effective as certain collective or coordinated stage-setting strategies. Strategies requiring greater coordination,

however, have implicit additional costs relating to information search, communications, consensus building, resource monitoring, and administration in comparison to those that can be implemented by an individual firm.

Relevance of strategic management for the subsector should be considered more broadly than expanding the set of strategic choices available to the individual firm. There is often opportunity to reduce the search, implementation, and monitoring costs associated with various coordinating-intensive business strategies, especially compared to each firm doing these things individually.

Proponents of firm-level strategic management argue that the costs of certain kinds of decision making internal to the firm are reduced when effective strategy development takes place. A clear vision or mission can be crafted based on firm goals and provide a basis for renewed competitive advantage. Such an organizational strategy can be prominently integrated into the activities of the organization and placed before management and employees as a sort of "guiding star". Resources can therefore be marshalled, focused, and allocated with a view toward firm goals, and activities that are at odds with these priorities or objectives can be weeded out.

To the extent a group of related firms within a subsector can identify similar goals and co-align individual activities in such a way as to improve overall performance on selected common goals (or work toward a common subsector "mission"), they may be able to similarly collectively improve their efficiency and performance in the way they do business. The outcome would ideally include reducing internal costs, improving the services provided, and thereby enhancing their competitiveness. Individual firms are often constrained in their ability to influence their broader environment due in part to the limited resources able to be delegated to affect certain kinds of favorable changes. Rivalry internal to the subsector can further limit firm-level strategic choices on certain aspects.

The concepts discussed and the argument presented in this section have emphasized the potential for considering firm-level strategic management principles and practice in the context of a larger subsector system. Certain modifications of the formal corporate planning systems are likely necessary to make strategic planning and implementation workable and meaningful for firms and organizations together in a subsector.

The recent strategic planning efforts of the Michigan apple industry present a unique opportunity to examine, describe, and evaluate a somewhat unique attempt to develop this process in the context of a commodity subsector.

Taking Planning Tools to the Subsector

Based on the experience of the Michigan apple subsector and on general principles of strategic planning for the firm, components of a subsector strategic planning system are developed, analyzed, and discussed.⁸ First, the basic objectives of strategic planning within a commodity subsector are considered. Second, actual stages or components to the subsector strategic planning process are suggested. The objectives and specific elements of each component are discussed together with methods, tools, and approaches that may be suitable for analysis at each stage of strategic planning for a commodity subsector.

Another objective of this section is to discuss approaches that may be useful, or considerations that may be necessary, for developing or operationalizing a sustainable subsector strategic planning system. The unique characteristics of a subsector in comparison to a firm requires distinctive approaches to developing industry focus, maintaining industry commitment, and generating meaningful industry solutions in contrast to single firm approaches. The general approaches used in the case of the Michigan apple industry are drawn upon in this discussion as they may be useful for the development of strategic planning activities in other commodity subsectors.

The general components, approaches, objectives, and tools are presented here as they have been developed during the experience with strategic planning in the case of the Michigan apple subsector. The importance or approaches used for any given stage or the application of different tools may differ somewhat in the context of another commodity system. These are presented as a launching point, or initial

⁸ Detailed discussions on the specific planning approaches developed and used in the context of the Michigan apple subsector are discussed in Woods (1996), Ricks and Woods (1995), and Ricks and Woods (1996).

considerations for those considering strategic planning initiatives in other subsectors. The general components represent a series of distinct stages that would likely need to be developed through some means by those who might consider developing a strategic planning system in the context of another commodity subsector.

A number of important components to subsector strategic planning are discussed here. These components, including examples of specific elements, component objectives, and possible tools, methods and approaches, are presented in Table 2. Individual components suggested here for a subsector differ little conceptually from those comprising a strategic planning system for an individual firm or organization. Specific elements, objectives, and approaches, however, when considered in the context of strategic planning for the subsector, take on a fairly distinctive orientation with quite different approaches than might be employed in a corporate planning system.

The *development and maintenance of subsector goals* can be an important component that drives the system and can bring clarification to key subsector performance issues. Goal development for a system derived by individuals within that system depends on a recognition of common interest or at least mutually beneficial objectives. The extent to which industry actions are seen to be consistent with or in support of the goals of an individual participant reflects the degree to which support for these wider goals can be expected from that individual. Widely recognized system goals can serve as the rallying point or decision locus for individuals within that system.

Goal development, as a strategic planning component for the firm, often takes on quite specific definition. The experience of the Michigan apple subsector suggests that in many cases goal development, in terms of desired performance outcomes, has some advantages to being stated more generally. Measurable progress toward stated goals may be somewhat more difficult when stated more generally, but the inclusion of many independent elements within the subsector, each with their own well-defined goals, under the umbrella goals of the subsector may be critical. This would be particularly true where there is little orientation toward collective action to affect change in the system. System goals defined too narrowly may unwittingly alienate key players early in the process; those who may be needed to ultimately help affect needed changes.

In a firm, organizational goals are set by management or major stockholders. In a subsector, system goals are developed through a consensus of subsector leaders and key subsector participants. The identification of appropriate goals for the subsector may be facilitated through industry organizations representing a broad cross-section or through an organization of industry leaders such as in the Michigan apple subsector Task Force. Group discussion, analysis, consensus decisions, and emphasis on commonality, with a view toward the driving forces of the subsector pave the way toward appropriate subsector goal development.

The *situational analysis* is a major component of strategic planning that can help clarify realistic goals and a recognition of the gaps between the current performance status and the desired goals. This is usually a complex stage even for a firm; many variables exist that potentially influence the individual firm and greater subsector performance and many areas of analysis are possible with typically limited resources for monitoring or evaluation. Firm management typically mandates the parameters of this analysis for the firm. The subsector often has little administrative structure to carry out such analysis.

Many larger commodity groups, however, have regional or national organizations that could track key trends and keep their industry informed. In many cases, however, there is little effort to compile data reflecting the subsector's competitive position with a view toward establishing a context for evaluating

Table 2. GENERAL COMPONENTS TO A SUBSECTOR STRATEGIC PLANNING SYSTEM

| Strategic Planning Component | Examples of Specific Elements | Component Objective(s) | Tools, Methods, and Approaches |
|------------------------------|---|---|---|
| Goal Development | Profitability objectives Market share objectives Market participation or penetration objectives Product development or differentiation Capability development | <ul style="list-style-type: none"> Identify general goals or desired directions for the subsector; should be defined broadly enough initially to be as inclusive as possible of subsector participants. | <ul style="list-style-type: none"> Work with a relatively small group of knowledgeable and influential industry leaders Consider goals for selected market segments Consider goals for improving overall subsector capability Some selective quantification of goals may be useful, but used only in a limited sense Broad industry goals become more clarified concurrent to the development of the subsector's competitive situation |
| Situational Analysis | Internal capability assessment Opportunity assessment External threat assessment | <ul style="list-style-type: none"> Identify current and emerging driving forces and other factors internal and external to the subsector that potentially influence overall performance. Inform key decision makers with respect to subsector's overall competitiveness. Develop a context for identifying and evaluating alternative strategies. Provide basic data for identifying Key Success Factors. | <ul style="list-style-type: none"> Subsector "SWOT" Analysis Shift-Share Analysis Customer group, function, and technology matrix Trends and forecasts of key market or supply factors from secondary data Interviews with key industry informants Industry surveys to clarify competitive situation and identify major issues |
| Gap Analysis | Deficit capability and performance assessment Deficit target market performance | <ul style="list-style-type: none"> Identify deficiencies in capabilities needed to obtain subsector goals. Identify differences between status and potential with respect to Key Success Factors. Identify differences between status and potential with respect to key markets toward prioritizing areas needing strategy refinement for the subsector | <ul style="list-style-type: none"> Relates closely to capability assessment, extent of overall responsiveness to opportunities and threats Performance deficits with respect to target buyer specifications Technology development and adoption |

Table 2. GENERAL COMPONENTS TO A SUBSECTOR STRATEGIC PLANNING SYSTEM (Continued)

| Strategic Planning Component | Examples of Specific Elements | Component Objective | Tools, Methods, and Approaches |
|--|---|---|---|
| Issue Clarification and Prioritization | Issue definition Interdependence or scope of implication for the subsector | <ul style="list-style-type: none"> Clarify and prioritize issues emerging from the competitive situation analysis with respect to following criteria: urgency (implications for stated goals), size (and scope) of impact, prospects for developing workable industry responses beyond those of the firm | <ul style="list-style-type: none"> Strategic Issue Management System Interviews with key industry informants Segment surveys Discussion meetings among segment leaders and key organizations Strategic Planning Task Force |
| Action Alternative Identification | Action definition | <ul style="list-style-type: none"> Identify a series of alternative actions (initiated by individual firms or jointly) that could potentially address industry challenges or facilitate initiative toward certain opportunities. | <ul style="list-style-type: none"> Industry leadership brainstorming Analysis of previous industry experiences Analysis of parallel approaches employed in other subsectors Discovery through iterative exchange with subsector leaders, trade associations, leading organizations, and other surveys Consultants, university analysts |
| Action Evaluation | Effectiveness - Prospect for resolving issue Barriers to implementation Benefit-Cost assessment Secondary subsector effects Synergy with other industry actions | <ul style="list-style-type: none"> Evaluate alternative actions according to the following criteria: provides substantial improvement or broad economic gain to the system; workable; apt to be broadly acceptable - strong industry consensus; synergistic (or consistent) with other actions and broader industry strategy; reasonably equitable | <ul style="list-style-type: none"> Expert judgement from industry leadership Identify barriers to previous similar actions Survey of major segment support Benefit-Cost Analysis Economic or systems analysis |

Table 2. GENERAL COMPONENTS TO A SUBSECTOR STRATEGIC PLANNING SYSTEM (Continued)

| Strategic Planning Component | Examples of Specific Elements | Component Objective | Tools, Methods, and Approaches |
|--------------------------------|---|---|---|
| Consensus Building Plan | Identification of key participants among which consensus for industry action is critical Identify who should take the lead in building consensus May require clear articulation of incentives for individual participation or support | <ul style="list-style-type: none"> ● Build a strong consensus for change, ownership of a particular action, and recognition of individual benefits to industry changes ensure necessary follow through. A well-crafted consensus-building plan will coalign micro-motives with the generally desired macro-behavior. ● Consensus building may only need to be focused among several key segment or organizational leaders or it may require wider discussions and consensus decisions among many individuals and firms. | <ul style="list-style-type: none"> ● Utilize respected industry leadership to ensure industry ownership of plan ● Work through established trade organizations and publications to generate wide industry communication ● Progression of previous strategic planning components emphasizes consensus support |
| Resource Development Plan | Identification of program or action cost or needed resources Identification of cost sharing | <ul style="list-style-type: none"> ● Devise a means for marshalling resources needed to carry out a particular action. ● Identify who pays and how with respect to resources needed for action identification, evaluation, or implementation. | <ul style="list-style-type: none"> ● Segment assessments or check off programs ● Develop research proposals to special interests or public funds ● Pooling resources among major trade organizations and/or firms |
| Implementation Plan | Identification and involvement of key participants Decide on lead implementing organization(s) Approximate time line Contingency options and plans | <ul style="list-style-type: none"> ● Facilitate the adoption or implementation of desired actions or orientation among needed subsector participants. | <ul style="list-style-type: none"> ● Move from general concept of action to more finely detailed program ● Implementation by stages may be more effective and acceptable ● Action may require enforcement through legislation, other actions may evolve through voluntary self-enforcement ● Changes may be affected through a strategic planning lead organization or industry task force recommendations to specific firms or organizations |
| Strategy Evaluation Mechanisms | On-Going gap and situational analysis | <ul style="list-style-type: none"> ● Evaluate relationship between implemented actions and desired results or performance objectives. ● Monitor and evaluate other possible approaches that may better achieve desired results. | <ul style="list-style-type: none"> ● Monitor key subsector performance indicators; ie, market share, market presence, profitability, industry growth, quality or product delivery. |

alternative strategies or identifying driving forces or key success factors. The qualitative dimension to this kind of analysis is critical. There may be incomplete understanding of the internal subsector dynamics or clarity of the emerging driving forces. The stock of secondary production and price data is a useful departure point for this kind of analysis, but is only of limited usefulness when considered alone.

Gap Analysis should be developed in the context of the situational analysis, identifying performance objectives and potential for the subsector. A wide range of performance objectives may be considered. Benchmarking of other subsectors and unmet product or service needs expressed by customers or stakeholders may be important sources of input for this component. Food safety gaps, for example, real or perceived, may need to be documented and can perhaps be addressed by wide-scale adoption of subsector HACCP standards.

Issue clarification and prioritization often requires considerable qualitative kinds of analyses for any kind of organization. This is especially relevant for a complex subsector. Certain management systems may attempt to partially quantify this activity, but it is inherently dependent on managerial judgement based on the best information at hand. The firm can typically achieve issue clarification through division specialists or an occasional outside consultant. Prioritization of these issues then is a managerial decision which may involve the collaborative judgement of a number of management staff of the firm.

This component becomes much more complicated in the context of a subsector. One must identify and engage individuals who are particularly knowledgeable about the broad subsector and the various nuances and complexities of particular issues. Effective leadership and independent initiative to assemble individual and divergent perspectives must be in place for meaningful information to be maintained for a subsector.

Clarification of certain issues can often be derived through the use of key industry informants. The prioritization of issues for industry action is one of the aspects where the subsector can encounter particular difficulties. A firm can often more clearly sort out an issue in terms of its urgency and magnitude of impact as it influences its own objective function. The subsector, with its many independent firms and other participants, may hold widely divergent perspectives with regard to the urgency or magnitude of an issue for the subsector system. Furthermore, firms may simply not recognize the importance to their own interest of an issue that appears to primarily impact another part of the subsector system.

Another important dimension to issue prioritization for the subsector not typically realized in the firm is the prospect for developing workable joint responses to an issue. Cooperation can be mandated in a firm. Cooperation in a subsector is usually dependent on voluntary commitment. The sorting process of issues by the subsector for which considerable attention will be directly devoted must consider the extent to which consensus and workable joint actions can be developed as part of its issue priority criteria. These must also be perceived as sufficiently beneficial to be worth the effort by a "critical mass" of industry participants.

Firms will take a variety of approaches to identifying and choosing from among **alternative actions** to address an issue or support a strategy. Firm management can delegate plan development to a select group, provide resources for detailed investigation, request proposals by specified times, and even employ outside assistance when needed. Certain aspects of this kind of initiative are considerably more difficult and often less workable for a subsector. Meaningful action identification for any organization is contingent on a strong understanding of the issues involved, the potential benefits, costs, and shortcomings, the relationship of a particular action proposal to other on-going actions, a recognition of implementation barriers, and an anticipation of secondary effects resulting from imposed changes.

It is not always immediately evident in the context of a subsector who should or can propose or **evaluate actions**, or what the action alternatives are, that would require broad industry participation in order to be effective. The experience of the Michigan apple industry suggests a strong dependence on established and knowledgeable industry leaders for providing input on proposing and/or evaluating actions. Further, a clear and wide recognition of significant economic gains from the action alternative is often going to be necessary in order to bring about meaningful industry-wide change. Evaluation at this stage is generally going to be dependent primarily on qualitative analysis; issues of acceptability, workability, suitability, and equity, to address an issue are all going to be major components of such an analysis.

An analysis of previous industry experience with regard to a particular issue or improvement action is often quite useful. Many issues identified as important by those in the Michigan apple industry have been a challenge to that industry and to other industries for some time with a variety of remedies considered. Long

term production planning, fruit maturity management, and a premium fresh apple grade are examples of issues for which a variety of approaches or initiatives have been considered. These are not new issues to production in other fruit subsectors. Drawing on parallel experiences from approaches developed earlier in the industry or in other subsectors can speed the development of effective actions by identifying barriers to anticipate or by focusing on successes elsewhere.⁹

Consensus building holds a more central focus for strategic planning among the many varied individuals and firms within a subsector as compared to a firm. The firm may require a degree of consensus building among management or divisions, but consensus building for the subsector will often have to be considered among even the most atomistic levels. In subsector strategic planning, it is relatively easy for participants who don't agree to cease to be involved. They can readily withdraw from the planning activities or resist implementation of improvement actions for a subsector. Strong consensus for change is often the main ingredient required to implement an action. Partial or divided commitment to a particular industry course may not allow the industry as a whole to develop nor especially to implement a certain strategy at all.¹⁰ Firm management can often impose certain strategies or actions on its employees or divisions independent of their support or non-support.

Firms may have a **resource development plan** to affect certain internal changes. Worker re-training programs, investment plans, new equipment or technology adoption, implementing managerial accounting changes, and hiring outside consultants are all examples of how firms invest and allocate resources to re-direct the organization toward developing its capabilities suitable for new strategies. Firms may have to use retained earnings, sell stock or bonds, or otherwise use its own resources to affect an internal re-orientation.

Such approaches to resource development and allocation are typically much more difficult and often not workable in the context of a subsector. The need for supporting resources to help carry out subsector change is still often present. Questions such as who should pay and how should costs be shared are not always self-evident. It is often at this stage that some actions that seemed to have strong support meet an implementation challenge related to financing the costs. Where significant cost to a program is perceived with relatively limited corresponding benefits (ie, expanding promotion for newer fresh varieties), and wide support is required (such as an assessment increase paid by all growers), the proposal may fail.

Actions that address high priority industry issues and have been identified, debated, and worked through by industry leadership, and which generally meet the criteria for action evaluation (see Table 7.1), are well positioned for successful implementation. The industry acceptable approach to implementation will depend on the extent to which voluntary or mandatory participation is necessary. The range of actions may extend from new educational programs, technical workshops, encouragement from industry leaders to others to consider possible reforms, developing and disseminating new information resources or results of economic analyses, to developing some sort of enforceable legislation.

The stage where **change is actually implemented** can be especially met by resistance. The importance of consensus building can be particularly significant at this stage where coalitions for change may have to be developed. A well-crafted implementation plan considers likely barriers to implementation and appropriate contingencies. It also considers incentives, enforcement, leadership behind change, and possible secondary system effects. A means for evaluating industry action on an on-going basis allows for identification of the effectiveness of actions toward bringing about desired changes or performance.

Some changes may well be implemented simultaneously as a related set of action intended to address a similar objective. Educational programs on packing house Total Quality Management may be coordinated with other quality improvement initiatives, such as grower workshops on harvest management and maturity information as they relate to improving quality delivered to the packing house. Both activities support a

⁹ Some of the approaches behind the formation of the Strategic Planning Task Force itself as a vehicle for industry improvement were based in part on some experiences in other subsectors (Woods, 1996).

¹⁰ Wide participation for such activities as promotional assessments, production or quality educational programs, or mandatory minimum quality standards are all examples of such initiatives observed in the Michigan apple industry strategic planning activities.

broadest thrust of improving overall quality and simultaneously orient related segments of the subsector toward overall quality improvements for the subsector.

A plan for implementing a certain action can be crafted among industry leaders that will give careful thought to receptivity to or implications of change among those within the subsector. Some action or aspects may need to take into account the implications for the ultimate buyers of the products generated. Periodic *evaluation* of the implemented changes is necessary, with a view toward how these actions or strategies are moving the subsector or major subsector segments toward the desired performance level. Flexibility to modify and refine approaches as improvement actions or strategy implementation is played out is usually desirable. A fair bit of experimentation with certain actions, with on-going refinements, should be expected. Plans should not be so rigid as to be difficult to refine or abandon when they fail to deliver the intended effect. Dynamic adjustments to subsector improvement strategies based upon experiences and reactions are expected.

In sum, these general components of subsector strategic planning have been suggested as dimensions to a strategic planning system that need to be considered when pursuing strategic planning in the context of a commodity subsector. While the components and objectives are likely to be similar for most subsectors, the specific tools, methods, and approaches most useful to analytically develop these components may vary considerably.

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