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Responses to Industry Concentration by Small- and Medium-Sized Fruit and Vegetable Wholesalers

Roger A. Hinson

Small- and medium-sized enterprises handling fruits and vegetables are disadvantaged by increasing concentration within the production-to-retailer chain. Retail grocer chains have become larger partly in response to the entry of mass merchandisers into food retailing. Shipper firms are expanding to provide the length of season and broad product lines expected by large retailers. The development of electronic hardware and software designed to enhance customer service and reduce logistics costs is expensive and, some argue, difficult to implement. Research on impacts on and responses by produce supply-chain wholesale and distribution firms is reviewed as a basis to understand the future of these and similar firms.

American diets increasingly include more raw fruits and vegetables, and more value-adding conveniences. Considering only commercially produced vegetables and melons, per-capita fresh and processed use rose from about 385 pounds in 1984 to about 446 pounds in 2004, a change of about 16% (ERS 2004). Retailers responded by increasing the size of produce departments. Estimates of the average number of products handled in a produce department increased from 312 in 1994 to 431 in 1999 (McLaughlin et al. 1999). Fresh-produce consumption has been favorably affected by demographic trends including declining household size, rising income levels, the consumption habits of baby boomers, and growth in the number of Hispanic and Asian American consumers. Better quality, increased variety, and year-round availability also have helped boost consumption. Packaging technology adds convenience in the form of precut, ready-to-eat products.

The produce industry once was comprised of many small firms. Products were shipped to auction at big city terminal markets. In today's system, large retailers have increased their market shares by establishing competitive advantage in areas such as logistics. Electronic data interchange (EDI)—computer hardware and software—is the basis for this advantage. Supply-chain management (SCM) and its derivatives have helped reduce system-wide costs. Information technology helps managers understand consumer needs and market demand, provide better service, and reduce inventory and costs.

Achieving these objectives requires coordination between the production, marketing, and retail segments. Closer business relationships and alliances within the value chain have developed. Firms that are more effective expand, while others lag. Generally, the larger, financially stronger firms are better able to afford these systems. Competitive imbalances are exacerbated, and the number of small- and medium-sized firms decreases.

Retail consolidation, the adoption of self-distribution by the largest firms, and the use of electronics to coordinate systems have encouraged direct deals between retailers and a few preferred grower/shippers. With fewer suppliers, fewer employees are needed to manage procurement, reducing transactions costs. Wal-Mart is an example firm that adopted and used EDI systems, which has been one factor in its ascendancy to retail behemoth. Produce grower/shippers have responded to the changing system by reorganizing to offer more products over a significant portion of the year. Furthermore, studies indicate there are fewer “middlemen” providing services (marketing, transportation) in today's system but those who remain are larger. In terms of the buying process, the number of retail customers declined, becoming fewer but larger. Retail buying among all customers became more centralized.

Within these changes, sales of produce to conventional retailers have been stationary or declining, but still are the largest share of sales. Mass merchandisers have been the growth component. Firms report that, overall, importance of the largest buyers has increased somewhat. Another change was the advent of fees charged to suppliers. Volume discounts and slotting fees, and services like automated inventory replenishment, special packaging and third-party food-safety certification, grew and

Hinson is a professor, Department of Agricultural Economics and Agribusiness, Louisiana State University, Baton Rouge.

became more common (Calvin and Cook 2001). There were more long-term relationships and long-term contracts, and advanced pricing for promotions. Total fees for the largest accounts were in the range of 1 to 2 percent of sales. For all accounts, fees ranged from \$5,000 to \$9,000 per million in sales. About half of fees were new in last 5 years (Dimitri, Tegegne, and Kaufmann 2003).

Research focused on structural change and its impacts in the fruits and vegetables industry has targeted the larger players in the industry, with less attention paid to the impacts of change on mid- and smaller-sized companies or their actions to effectively manage in this environment. These firms are important. Smaller companies create most jobs, and their disappearance would have consequences for local economies. The declining competitive position is clear, but strategies to mitigate impacts are not well documented.

If SCM is a key to competitiveness, then a definition is in order. It “represents a collection of management activities exercised between vertically related firms to improve efficiency, vertical coordination, and overall performance and competitiveness of the participating firms within an industry” (Ricks, Woods, and Sterns 1999). Barriers that exist between links in the supply chain are reduced or removed to achieve higher levels of service and cost savings, which may be passed through to consumers. Benefits include smaller inventories across the system, smaller distribution centers, and better customer service by synchronizing production planning, operations scheduling, and shipping activities.

Information technology plays a key role by facilitating improved information flow through the chain. The ultimate software-controlled system would be a continuous, automatic inventory-replenishment system that would maintain inventory at predetermined levels with minimal human oversight. In this scenario, shippers have access to customers’ sales data and are responsible for providing the replenishment quantities. In practice, systems do not reach this level, and many do not aspire to.

SCM is a general term for many specific initiatives. Using Collaborative Planning Forecasting and Replenishment (CPFR) as an example, the point of collaboration is the retail-level demand forecast, which synchronizes replenishment and production plans through the chain using web-based coordination of activities (Flidner 2003). CPFR involves

the creation of a front-end partnership, joint business planning, development and sharing of demand forecasts, and replenishment. Forecasts are developed iteratively, and the forecast becomes the order. While the literature cites cases of successful, cost-saving implementations, barriers include lack of trust, lack of within-firm forecast collaboration, availability and cost of technology, fragmented information sharing standards, the total number of forecasts required, and fear of collusion.

Small- and mid-sized enterprises (SME) are evaluating alternative strategy responses to these structural changes. In the traditional view, a firm establishes, builds, and defends a market. However, cost and customer-service advantages of SCM have forced change. Many shippers, processors, and manufacturers have worked together in the past because they can achieve more in a vertically linked supply chain. Most growers have been more traditional. The demands of many customers means SMEs must coordinate to provide maximum value to downstream buyers. Investments in SCM can be expensive. Third parties may provide solutions by selling technology to many different firms to spread developmental costs. Joining cooperative organizations such as procurement and distribution organizations is not a new idea, but probably takes on increasing importance in the current environment.

This paper reviews research that has addressed the competitive pressures facing the SME from concentration and the advances in information technology.

Research on Changing Strategies of SMEs

For farm and rural-enterprise SMEs, responses to concentration (survival strategies) have included flexible specialization and differentiation. Flexible specialization is “a strategy of permanent innovation: accommodation to ceaseless change, rather than an effort to control it” (Piore and Sabel 1984). In manufacturing, flexible specialization caters to custom and high-value goods. The food system equivalent might be niche market, high-value crops such as those grown for local fresh markets, organics, or value-adding activities. Other strategies involve alliances in which producers, grocers, and other middlemen work together to deliver high-value products to end-users (Drabenstott 2002). The issue guiding these strategies is who will pay, and for what? Figuring this out may be a major determinant

of survival of SME produce wholesalers.

A high service level is a differentiation strategy, and is appropriate for customers with special needs. "If a company's strategy is to serve a mass market and compete on the basis of price, it had better have a supply chain optimized for low cost. If a company's strategy is to serve a market segment and compete on the basis of customer service and convenience, it had better have a supply chain optimized for responsiveness. Companies find others they can work with to perform the activities called for in their supply chains. How a company defines its core competencies and how it positions itself in the supply chains it serves is one of the most important decisions it can make" (Hugos 2003).

Affecting the competitiveness, economic viability, and growth potential of regional fruit and vegetable sellers are external forces—changing markets, competitors' strategies, consumer needs, cost conditions, technological developments, policies and regulations, and others. The strength of competitive forces and hence of industry profitability are suggested in structure, and have a strong influence on competitiveness among firms and on the strategies available to individual firms.

The Wholesale/Distribution Sector

Types of Firms

Food wholesaling firms can be classified in different ways. By ownership or control, they include merchant wholesalers, manufacturers' sales offices and branches, and agents and brokers. By type of activity, there are specialty wholesalers (including dairy and produce), miscellaneous, and general line (broadliners). Retail service also is available through direct store delivery (for some products) or self-distribution, which is more prevalent among larger retailers.

A more exhaustive typology of produce handlers includes shipper/processors, importers, buying groups, integrated purchasing organizations, brokers, terminal and off-market produce wholesalers, local/regional processors, and foodservice management companies. Among the distributors, about 95 percent of broadliners' total sales were to foodservice customers, while produce distributors had a more diverse set of customers and only about 45 percent of sales were to foodservice (Dimitri, Tegegne, and Kaufmann 2003). For sales of produce

items only, these accounted for about 12 percent of total sales by broadliners, but for produce distributors this value was about 70 percent. Produce distributors carried more produce items, a higher percentage of imported products, differentiated themselves by procuring specialty items, and emphasized pre-cut value-added product. In terms of SCM applications, these were used for less than half of sales by either broadline or produce distributors. This proportion was expected to increase significantly. Broadliners had fewer suppliers, presumably because produce distributors needed more to support differentiation. Suppliers' attributes most valued by buyers were "can fill demand," "prompt notification of changes," and "honor satisfaction guarantee." Least valued were "lowest priced products" and "one-stop shopping."

Concentration

As stated above, concentration across the system has increased. The retail level was most concentrated, while shippers were least concentrated. Among the wholesalers, broadliners were most concentrated. The market share of the largest 26 firms rose to 35 percent in 2004 from 20 percent in 1998 (Technomics 2004). Specialty wholesalers were least concentrated.

Addressing the Viability of SMEs

The Small Independent Retail Store/Chain as Retailer and Customer

Because typical large retailers self-distribute and foodservice companies use broadliners, the dominant customer base for the SME produce wholesaler is the small- to moderate-sized local retailer. About 46 percent of these stores were wholesaler supplied (King 2003). Industrywide, the small-store category had almost half of stores but only 32 percent of sales. These stores were smaller, older, less unionized, located in less-populated areas where household incomes were lower, and their numbers were dropping. They were threatened by larger conventional retailers, mass merchandisers, and food away from home. These wholesaler-supplied stores lagged self-distributed stores in areas such as technology adoption, involvement of external parties in marketing and promotion decisions, and use of formal methods to assess satisfaction.

Survival was based on being more responsive to a customer base within the market area. Despite these obstacles and the different approach, these stores were competitive. Distribution costs and human-capital development were areas where they faced challenges. The weak customer base was a problem area for produce distributors.

The Large Food Chainstore Retailer as Customer

On the other hand, the large foodstore retailer is not viewed as an unequivocal threat to the SME (Blundell and Hingley 2001). The argument is made that self-distributed retailers and large wholesalers do well in moving large quantities of product in standard ways, but innovation, change, and new products come from independents. It was hypothesized that SMEs must innovate to survive, with the caveat that success makes them buy-out targets. Some areas of innovation include supplying traceability and food safety. For large firms, concentration and coordination have meant moving from single, market-based contact with customers to close and continuous contact. SMEs, however, are not a competitive threat, and may deliver key benefits including food safety, traceability, intimacy, and responsiveness.

The process- and resource-based approach used by Blundell and Hingley focused on a few fresh-produce businesses that have grown by serving large chainstores. These SMEs adapted to the complex supply chains, increased structural concentration and highly vertically integrated processes when given the opportunity, and were mentored. To succeed, a “complex pattern of internal and contextual factors all need to combine appropriately.” Possibly most critical, the large firm had to refuse to take advantage of its power. The SME’s role was to act on its core competency—the ability to innovate, to act quickly to resolve conflict and to make decisions. In these cases, large customers chose to support small companies, to give them “developmental supplier” status, to transfer knowledge, and to give progressively more market access. The general conclusion was that this is a way to grow, but not the only one.

The Collaboration Process and Related Barriers

The potential gains from SCM may be tempered by failure to realize “the meaning (and behavioral

implications) of collaboration in the supply chain” (Barratt 2004). Problems, particularly with the issue of partnerships and collaboration, included difficulty of implementation, an over-reliance on technology, potential failure of firms to differentiate whom to partner with, and the issue of lack of trust between trading partners. The analysis of collaborative efforts revealed several issues: plans and subplans that may be uncoordinated; shortcomings of forecasting methods; barriers to communication between functional areas within firms; lack of understanding of their own processes, which makes them unlikely to understand partners’ processes; problems making decisions and delegating implementation; the need to apply common performance measures among partners; and so many management-information reports they are ignored even if helpful.

In addition, Barratt asked with whom collaboration could happen. Some sellers/buyers wanted or would accept a relationship, while others preferred cost-based transactions. Those who wanted partnerships probably chose a few strategic partners and focused resources where both wanted value added to the transaction. Cross-functional activities (within and across partners) are required for process collaboration to be aligned between functions and partners, for joint decision making to be implemented, and for supply-chain metrics within firms and between partners to be common.

Intangibles were elements of collaboration—the appropriate culture, the external and internal trust based on honesty, assuring mutuality of benefits, and communication. These enabled firms to feel comfortable exchanging information with partners, thus creating the virtual supply chain and allowing joint product development, common systems, and shared information. Some firms partner to attain a larger volume of business, while others want an improved value chain by knowing consumer needs and working with partners to provide higher-valued products.

Impacts of Concentration on Produce Firms in the Northwest

Among small fresh-produce grower/shippers in the Pacific Northwest, McCluskey and O’Rourke (2000) hypothesized a negative impact of buyer concentration on growers’ opportunities and problems, and a market power gap, low capital availability, and limited adoption of technology. They identified

little research about structural change impacts on SMEs, or SMEs' actions to effectively manage in this environment. Using a case-study personal-interview format, firms were asked about key business characteristics, how they perceived they were being affected by concentration, and offensive/defensive competitive strategies that were being adopted. The suppliers were 19 small- and medium-sized produce firms, while the buyers were four major retail food chains. Many issues were SCM-related. Neither suppliers nor buyers were using SCM techniques on most of their transactions, but the larger transactions and relationships were more likely to involve some SCM. Both sides felt that SCM would become more important, but reported little sentiment to move toward fully automated systems in close relationships. Retailers did recognize advantages of SMEs: "flexibility, ability to react quickly, local or regional presence, competition for larger suppliers, service orientation, lower overhead costs, and supply reliability." These advantages reflect the comment of Blundell and Hingley.

A Trade Association's Concerns

The Grocery Manufacturers of America (GMA) commissioned a study of key industry trends. The report noted that member stores (mostly medium and small chains, and independents) used outmoded and non value-adding practices in logistics and operations (Grocery Manufacturers of America 2003). Key findings were rising logistics costs (to about 7.4 percent of sales), more responsive and demand-driven consumer packaged goods compared to other categories, reduction of order-to-delivery cycle time to 79 hours (a decline of 3 days) since 1999, and slowly decreasing inventory levels (down about 2 days to 44.7 over the same period). None of these were improvements in SCM performance relative to the large-firm segment of the industry. The report recommended changes that included achieving the "perfect order" (complete, on-time, damage free). In addition, SCM should be used more frequently, because 41 percent of volume shipped from manufacturers used only one of seven identified services. Forecasting accuracy remained problematic. Additionally, on-shelf availability should be improved, global standards and item catalogs should be used to synchronize data, more-flexible order and delivery processes should be implemented, and better cross-functional collaboration achieved. These lat-

ter results are similar to items discussed by Barrett, and the description of these stores and their needs reflect King's findings about store constraints and problems.

Conclusion

This paper discusses the reduced economic opportunities of small- and medium-sized enterprises. As larger firms gain larger shares of the retail market, in the distribution system, and among grower/shippers, smaller firms find fewer traditional opportunities. Large firms have implemented SCM and are making these systems work despite many within- and between-firm issues. Hesitancy to form value-adding partnerships probably will recede as firms learn to overcome these issues. In terms of viability of SMEs, the retail grocer market available to fruit and vegetable marketing firms appears to be weak, based on the description reported by King and by the GMA study. Yet these grocers seem ingrained in their communities, existing because managers know their customer base, and adopt useful new ideas and retain successful ones. SMEs serve these grocers while searching for other niches that may be exploited profitably. Generally, while both wholesaler and grocer firms may change and look different over time, their flexibility, adaptability, experience and knowledge of markets suggest many will survive.

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