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Exploring Supplier-Manufacturer Relationships in the Specialty Food Sector

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Abstract

We use results from a survey of specialty food manufacturers to examine how supplier–manufacturer relationships vary in the specialty food sector. While diverse mechanisms govern relationships between manufacturers and suppliers, relational contracts (longstanding, informal commitments) are the most common governance structure in our sample overall, particularly for

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medium-sized manufacturers. Vertical integration with the principal supplier is most common for smaller manufacturers, who also are most likely to use open market purchases. The largest manufacturers are significantly more likely to use formal contracts. Nearly half of manufacturers in our sample, regardless of their size, purchase directly from farms.

Keywords: small and medium-sized farms, supplier-manufacturer relationships, specialty food industry, specialty food manufacturers, value-added products

Introduction

As Sexton (2013) notes in his 2012 AAEA presidential address on modern agricultural markets, food products are often highly differentiated, and relationships among primary producers, distributors, manufacturers, and retailers are often governed by arrangements that foster vertical coordination. In this paper, we use results from a survey of specialty food manufacturers (SFMs) to more closely examine the nature of ingredient supplier–manufacturer relationships in the specialty food sector. This work is part of "Beyond Fresh and Direct," a USDA/NIFA-funded project focused on the following research question: As markets for direct to consumer sales of fresh products become saturated, are there opportunities for small and medium-sized farms to sell ingredients to SFMs or to produce specialty foods themselves?

The Specialty Food Association defines specialty foods as "foods and beverages that exemplify quality and innovation, including artisanal, natural, and local products that are often made by small manufacturers, artisans, and entrepreneurs from the U.S. and abroad." This sector is growing rapidly; in 2015, its combined U.S. retail and food service sales reached $120.5 billion, up 21.2% from 2013 (Tanner and Purcell, 2016). Sexton (2013) notes that modern agricultural markets have "a growing emphasis on product differentiation and increasingly broad dimensions of product quality" (p. 217); these trends are the hallmarks of the specialty food industry. Thus, the specialty food sector serves as an excellent vantage point for understanding modern agricultural markets.

Literature Review

Sexton (2013) argues that modern agricultural markets differ significantly from the ideal of perfect competition and yet do not perform in a manner consistent with predictions based on analyses of oligopoly/oligopsony power. These markets are highly concentrated in the processing and retail segments of the supply chain, yet processors and retailers do not exercise significant market power. In addition, the need for assured supplies of differentiated farm inputs encourages repeat purchases from suppliers. Although Sexton does not use the term "relational contracts," the stylized facts he identifies for the operational strategies of food manufacturers and retailers suggest that relational contracts (MacNeal, 1974, 1978; Klein and Leffler, 1981; Levin, 2003; MacLeod, 2007) are likely to play a significant role in modern agricultural markets. The key features of a relational contract are: i) buyers and sellers trade repeatedly yet generally do not have a formal contract; ii) they trade at a fixed price or price premium with specific quality and quantity requirements that may be adjusted over time by mutual agreement; and iii) the

relationship ends if either the buyer or seller reneges (MacLeod, 2007). These features imply that in many cases we should expect to see stable manufacturer–supplier relationships, with ingredients trading at prices above commodity prices and with terms of trade enforced by informal mechanisms rather than formal contracts.

Based on results from MacLeod's (2007) formal model, we hypothesize that relational contracts will be most likely when ingredient requirements are idiosyncratic. For ingredients purchased directly from farms, relational contracts may be more likely for medium-sized manufacturers because their size is better matched with that of typical farms. In contrast, as price becomes more important and as volumes increase, formal contracts may be more efficient. We use data from a survey of SFMs to investigate these hypotheses about the choice of manufacturer–supplier governance mechanisms in modern agricultural markets.

Methods

We conducted a survey of SFMs during 2015. The target population was 940 specialty food businesses in California, Minnesota, Oregon, Washington, and Wisconsin, identified through directories, web searches, and government lists. We limited the list to firms selling products in four broad categories: dairy; grain and baked goods; processed meats; and processed fruit, vegetables, nuts, and herbs. We received 266 responses, with 240 of them useable for analysis.

The first section of our survey instrument included questions on foods produced, modes of distribution, annual sales, years selling products produced with the key ingredient, types of suppliers, and SFMs' criteria for choosing suppliers for their key ingredient. The second section focused on the nature of the firm's relationship with its principal ingredient supplier. It included questions on the type of supplier, the mechanism governing the relationship with the principal supplier, and the duration of that relationship. A more complete compilation of survey results and a copy of the survey instrument are presented in King et al. (2017).

Results

In our sample, the most common key ingredient category was fruit/vegetables/nuts/herbs (48%), followed by milk (24%), grain (19%) and meat (9%). We divided the SFMs into three size categories: i) small, with annual sales less than $500,000; ii) medium, with annual sales between $500,000 and $4,999,999; and iii) large, with annual sales of $5,000,000 or more. The majority of respondents were small (61%), followed by medium (22%) and large (17%). Table 1 shows principal supplier types for firms grouped by key ingredient. While a distributor is the most common principal supplier type overall, direct purchases from farms and procurement from a farm owned by the company are almost as common. The distributions of principal supplier types across ingredient categories are significantly different at the 0.01 level. When grain is the key ingredient, procurement is much more likely to be from a distributor or manufacturer, perhaps because grain has standardized grades and can be blended to meet specific quality standards. Approximately 70% of firms identifying milk as their key ingredient procure it directly from farms or farmer cooperatives. Firms with fruit/vegetable/nuts/herbs as their key ingredient are most likely to source from a distributor or purchase direct from a farm. Finally, firms that list

Table 1. Principal Supplier Type of Specialty Food Manufacturers, by Key Ingredient Category

	Key Ingredient				
Principal Supplier Type	**Milk**	**Grain/ Flour**	**Meat**	**Fruit/Vegetable/ Nuts/Herbs**	**Overall**
Distributor	9%	46%	29%	29%	27%
Direct purchase from farm(s)	32%	9%	24%	29%	25%
Farm owned by our company	26%	6%	33%	23%	22%
Manufacturer	14%	24%	9%	4%	11%
Farmer cooperative	12%	2%	0%	6%	6%
Other	4%	9%	5%	6%	6%
Co-packer	3%	4%	0%	3%	3%

Notes: The distributions of principal supplier types across firms grouped by key ingredient are significantly different from the overall distribution at the 0.01 level.

meat as their key ingredient are the most likely to have a farm owned by the firm as a principal supplier.

Table 2 shows principal supplier types for firms grouped by annual sales. The distributions of principal supplier types across sales categories are significantly different at the 0.01 level. The percentage of SFMs that identify a farm owned by their company as their principal supplier declines fairly steadily as annual sales increase. However, farms are principal suppliers (the sum of supplier types "farm owned by our company" and "direct purchases from farms") of about 46% across the three SFM sales categories. Firms in the two smallest sales categories often rely on a distributor as a principal supplier; they may be too small to buy significant quantities of ingredients from farms or farmer cooperatives.

Table 2. Principal Supplier Type of Specialty Food Manufacturers, by Sales Category

	Annual Sales			
Principal Supplier Type	**< $500,000**	**$500,000– $4,999,999**	**≥ $5,000,000**	**Overall**
Distributor	31%	25%	15%	27%
Direct purchase from farm(s)	18%	31%	41%	25%
Farm owned by our company	28%	17%	5%	22%
Manufacturer	10%	15%	8%	11%
Farmer cooperative	2%	10%	18%	6%
Other	9%	0%	5%	6%
Co-packer	2.9%	1.9%	7.7%	3%

Notes: The distributions of principal supplier types across firms grouped by annual sales revenue are significantly different from the overall distribution at the 0.01 level.

We consider SFMs that identify a farm they own as their principal supplier to be vertically integrated. We asked firms that were not vertically integrated to characterize their relationship with their principal supplier. SFMs in the highest sales category are most likely to have formal

Table 3. Relationship of Specialty Food Manufacturers with Principal Supplier, by Sales Category

Relationship with Principal Supplier	Annual Sales			Overall
	< $500,000	$500,000–$4,999,999	≥ $5,000,000	
Relational contract	26%	50%	26%	32%
Formal contract	11%	23%	66%	23%
Open market purchase	34%	10%	3%	23%
Vertical integration	28%	17%	5%	22%
Other	1%	0%	0%	0%

Notes: The distributions of principal supplier relationships across firms grouped by annual sales revenue are significantly different from the overall distribution at the 0.01 level.

contracts and are much less likely than smaller firms to be vertically integrated (Table 3). Relational contracts are the most common form of relationship for the midsize SFMs. The smallest SFMs are most likely to make open market purchases. The distributions of principal supplier relationships across annual sales categories are significantly different at the 0.01 level.

The duration of a firm's relationship with its principal supplier is also important for understanding the relationships SFMs have with their suppliers. SFMs' responses indicated that 72% of firms that were not vertically integrated had been sourcing their key ingredient from their current key ingredient supplier for as long as they had been selling products made with the key ingredient. Once trusting relationships are formed, they tend to last.

We also asked respondents to rate the importance of thirteen factors considered in choosing suppliers for their key ingredient. There were several interesting differences in responses for firms grouped by their relationship with their principal supplier; Table 4 presents percentages of SFMs rating a subset of these factors as "very important." Quality and food safety practices are the most important factors across all relationship types. However, price is significantly less likely to be rated "very important" by firms that are vertically integrated and by firms that have relational contracts with their principal supplier. Conversely, "stories" about ingredients that can be used in marketing are considerably more important for SFMs that are vertically integrated or have relational contracts with their principal supplier.

Conclusions

In this paper we examine relationships between SFMs and their ingredient suppliers. We assert that these relationships often take the form of relational contracts characterized by repeated transactions governed by informal enforcement mechanisms. We find that SFMs use a variety of mechanisms to govern their relationships with suppliers. These range from vertical integration to open market purchases, but relational contracts are the most common governance form for firms in our sample.

Medium-sized SFMs are more likely to use relational contracts. As SFMs' sales increase, they are significantly more likely to use formal contracts. Price is also more important for firms using

Table 4. Very Important Factors in Choosing a Supplier for Firms Categorized by Relationship with Principal Supplier

	Relationship with Principal Supplier				
Very Important Factors in Choosing Suppliers	**Vertical Integration**	**Formal Contract**	**Relational Contract**	**Open Market**	**Overall**
Quality	86%	93%	93%	80%	87%
Food safety practices	73%	81%	71%	75%	75%
Year-round availability	53%	74%	62%	71%	65%
Price[a]	49%	76%	53%	73%	62%
Local or regional sources	69%	63%	58%	49%	59%
Convenience of logistics	43%	41%	39%	40%	41%
Non-GMO certification	37%	30%	33%	25%	31%
"Stories" about ingredients[a]	53%	22%	32%	13%	30%
Organic certification	22%	25%	22%	18%	22%
Gluten-free certification	10%	22%	14%	20%	17%

Notes: [a]Importance of this factor differs significantly across relationship categories at the 0.01 level.

formal contracts and for firms making open market purchases. Finally, many of the SFMs in our sample are vertically integrated; this is most likely for smaller firms and for firms that use stories about ingredients in marketing their finished products.

This study points to the need for more analytical and empirical research on supply chain relationships in modern agricultural markets. Analytical work should focus on integrating models of relational contracts, such as those presented by Levin (2003) and MacLeod (2007), into the model of modern agricultural markets proposed by Sexton (2013). Empirical work should focus on investigation of supply chain relationships in other sectors within the food system to determine whether relational contracts are common in other settings and on the design and implementation of more sophisticated empirical strategies that make it possible to identify causal factors underlying the choice of supplier-manufacturer relationships.

Finally, though not the focus of this paper, our survey results show that there are significant opportunities for farms to directly supply ingredients to SFMs. More than 45% of firms in our sample identify a farm—either owned by or distinct from the SFM itself—as the principal supplier for their key ingredient. Thus, it is important for farms interested in becoming ingredient suppliers to SFMs to understand how such relationships can be established and nurtured.

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