Market Intelligence Utilization by Small Food Companies: An Application of the Grounded Theory Method in Exploratory Research

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Insights into how small agribusinesses acquire, process, and use market intelligence are critical to improving their marketing competencies and to understanding practices that lead to better business performance. However, the current body of literature is limited in this topic. We apply the exploratory research method of grounded theory to better understand how small- to medium-sized food companies find and utilize information in their decision-making process. We develop a taxonomy of information types sought and provide insight into how and when these firms utilize this information. In addition, we develop a conceptual model that demonstrates different relationships between information, knowledge, and actions.

Decision-makers continuously face the challenge of identifying and interpreting market intelligence and balancing the costs and benefits of acquiring and using that information. While larger agricultural companies have separate marketing departments, small agribusinesses often lack the resources and skills for extensive market research and intelligence processing. As a result, small businesses are likely to conduct market research haphazardly, if at all (Carson, McGowan, and Hill 1996; Udell, Knotts, and Jones 2002). The current literature on the subject stops at this conclusion and contains no discernable attempt to gain in-depth understanding of small agribusinesses' market-research practices. Yet insights into how small agribusinesses acquire, process, and use market intelligence are critical to improving their marketing competencies and to understanding practices that lead to business success or failure.

Our study begins filling this void by using an exploratory research method called grounded theory to investigate market-intelligence utilization in small Oregon food companies. The objective was to help them make better, more informed decisions. The research questions included: How and where do small- and medium-sized firms find market intelligence? What market intelligence do they utilize? How do they process this information? What impact, if any, does the gathered information have on their decision-making process? Grounded theory, which was effectively introduced to agribusiness researchers by Bitsch (2001, 2005), is particularly well suited to this study's objective, as it provides a rigorous and systematic framework to inductively generate new understandings and to capture unexpected results that may be missed by other methods that rely on ex ante hypotheses (Finch 2002). Employing grounded theory, we generate nine testable hypotheses of how small food companies utilize market intelligence and condense these into a conceptual model.

The presentation of the paper follows the grounded theory research process, reserving the traditional literature review of related topics until after data has been collected and analyzed. This sequence allows the data to reveal what is relevant to the research question rather than applying preconceived notions and theories (Bitsch 2005). Consistent with this order, we offer first a review of the pertinent concepts for grounded theory research, followed by a description of the data and its analysis. The final section presents and discusses the empirical results and contrasts the findings with the limited literature on the subject.

Grounded Theory

Research often starts with a base of knowledge. Yet sometimes this knowledge is limited or suspected of being incomplete. In these situations, exploratory research is extremely valuable, and related methods have been employed in economics, sociology, and organizational theory with great success (e.g., In-

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gram and Roberts 2000; Levine 1993; Uzzi 1997). When exploratory research demands more rigor and a larger sample size than the case method offers, other qualitative tools are available, and grounded theory is one such tool.

The method was formally introduced in 1967 by two sociologists, Glaser and Strauss (1967). In their work they define a grounded theory as being inductively derived from the data it represents, in contrast to traditional methods that test ex-ante hypotheses against the data. The method's procedures provide a systematic framework for analyzing qualitative data that maintains a balance between objectivity and the ability to respond to nuances in the data (Strauss and Corbin 1998). Grounded theory is not to be confused with data mining, where data is "tortured" to confirm preconceived notions and theories. The value of grounded theory has been realized and used extensively in sociology, nursing and health, and organizational studies including business management, marketing, and consumer behavior (Baker 2002; Bitsch 2005; Goulding 2005; Schroeder et al. 1986). Grounded theory's success in exploratory organizational studies, in particular, warrants application to agribusiness problems that have limited extant literature (Bitsch 2005; Finch 2002).

The methods and procedures described in the following short overview are adapted from Strauss and Corbin (1998), to which the reader is referred for additional details. The first step in grounded theory research is to decide on the research problem and to frame the research questions, as in traditional agricultural economics research projects. The traditional model then moves to a review of theory and an exhaustive literature review yielding ex-ante hypotheses to be tested. In contrast, the researcher using grounded theory should let theory and ideas emerge from the data. While the researcher's personal and professional experiences and knowledge of the literature sensitize her/him to information in the data, s/he must be aware of the potential for bias. In order to maintain a balance between objectivity and sensitivity, Strauss and Corbin (1998), call for the researcher to maintain an attitude of skepticism to hypotheses brought to the project and to repeatedly ensure that proposed hypotheses are supported by the data. Thus researchers should refrain from extensive literature reviews before collecting and analyzing the data (Bitsch 2005; Strauss and Corbin 1998).

After the research problem and the research questions are identified and framed, data are collected in qualitative form, often through in-depth interviews with open-ended questions. Unlike traditional quantitative research, the sample for exploratory work need not be random but often intentionally includes outliers or other "interesting" observations to capture the full breadth and depth of the population under study. This is a process known as theoretical sampling. The data are recorded, organized, validated, and readied for analysis much like the process of preparing quantitative data. In contrast to estimating and testing various econometric models, the analysis of the qualitative data is conducted through researchers individually coding the transcripts. Coding breaks down the bulk of words into its schematic structure using a systematic procedure. It allows researchers to "identify, develop, and relate the concepts that are the building blocks of [the] theory" (Strauss and Corbin 1998). Put another way, they are the basis for developing testable hypotheses. The coding process is iterative and continues until the researchers determine that adding one more datum would not add to the research findings. This point is considered the theoretical saturation point and concludes the theory-development stage.

Qualitative methods are commonly assumed to lack scientific rigor and the outcomes are thus viewed as suspect. In fact, the rigor of a research project often depends as much on the effort and process of the researcher employing it as on the method itself. Good researchers follow methods and procedures that have been proven to minimize bias, independent of whether they are quantitative or qualitative. Rigor in quantitative research may be easier to recognize by the agricultural economics profession as it relates to tasks like applying established statistical procedures or manipulating data to account for certain conditions or estimation processes. However, if qualitative methods are designed and executed correctly, they can be as rigorous as any quantitative approach and often require more effort by the research team. Rigor in qualitative research can be recognized by measures of transferability, dependability, confirmability, and credibility (Bitsch 2005; Guba 1981; Guba and Lincoln 1989).

Data and Methods

The study's population is small- to medium-sized (500 employees or less) food manufacturers in Oregon whose main activities are related to one or more of the following categories: bakery, condiment sauces and others, beverages, dairy, fruits, meat products, nuts, seafood, specialty, and vegetables. The businesses were selected from public records based on state licenses, with the objective to provide a diversity of companies in size, function, and market focus. The firms' marketing directors or related personnel were recruited by phone for a sixty-minute, in-person interview at their choice of location. Often the person interviewed was also the owner. Nine businesses were contacted, and only one firm refused to participate. Although the remaining sample appears small, it is consistent with other studies employing grounded theory (e.g., Schroeder et al. 1986). The reason lies in the grounded theory process. The number of subjects is determined by systematically adding subjects until the researchers believe they have reached theoretical saturation. Additionally, the sample offers the desired diversity of small- to medium-sized agribusinesses, scope of operations, and function. All companies in the sample are profiled in Table 1 (each is given a fictitious name in order to maintain company confidentiality).

The interviews followed a question guide that included company descriptors (e.g., nature of business, size, etc.), perception and practices of marketing and marketing research, and use of external marketing research services.[1] The question guide was designed based on previous experiences of the researchers with food companies and directed toward exploring the research questions of this study. Given the exploratory nature of the research, this question guide was not subjected to pilot testing, which is itself an exploratory activity. Rather, the researchers adapted the interview process as each subsequent interview was completed. All interviews were recorded and transcribed.

Following Schroeder et al. (1986), the team of researchers who analyzed the transcript data was assembled to protect against bias in the analysis and to capitalize on diversity of experience and perspective. To further enhance objectivity, two of the three researchers were not involved in the data collection. Each researcher independently conducted a micro-analysis of every interview. Two used paper and pencil and one used computer software. To avoid potential bias resulting from the order in which the interviews were reviewed, a Latin Square design was used to assure that:

- no interview appeared in a particular review position more than once,
- there were no consecutive pair repeats (e.g., Interview 1 is followed by Interview 2 for Reviewer 1, by Interview 4 for Reviewer 2, and by Interview 3 for Reviewer 3),
- the average position of each interview was either 13/3 or 14/3 (e.g., Interview 1 has average position $(1 + 5 + 7)/3 = 13/3$), and
- the diversity of review order was maximized.

Prior to the first group meeting, each researcher independently noted in observations; characteristics, including their dimensions and the relationships among them; and preliminary hypotheses. These memos were then reviewed by the other researchers. The concepts and the relationships between them were then integrated through a series of meetings. Specifically, at each meeting the concepts and proposed hypotheses would be reviewed, discussed, and assessed. Those ideas that were not agreed upon were revisited by each individual researcher between meetings and re-evaluated in the next meeting. Thus the results and conclusions were reached only after a series of assessments, reviews, and re-reviews by the research team.

This process resulted in a scientifically rigorous study as determined by the four metrics transferability, dependability, confirmability, and credibility (Bitsch 2005; Guba 1981; Guba and Lincoln 1989). Transferability and dependability are both substantial due to the sampling procedure and diversity of participants, which reduced context and time sensitivity. Credibility is also relatively high, attaining good marks on six of the seven sub-dimensions listed by Bitsch (2005). Although confirmability can only be determined as additional researchers test the findings, the evaluations of all other criteria show that the processes and procedures employed by the research team conform to a high degree of "trustworthiness" (Guba 1981; Guba and Lincoln 1989).

[1] The question guide is available from the authors upon request.

Results

The rigor of this work builds confidence in the generated results. In this section the findings are presented. The first half is dedicated to a general discussion of the sources of market intelligence utilized by the companies interviewed. The formulated hypotheses then are presented and related to what limited body of knowledge currently exists on this subject.

Sources for Market Intelligence

The analysis of the interviews shows that the sources for market intelligence and the type of information collected by small agribusinesses are closely related. Sources that are targeted to the industry in general, such as trade press articles, tend to provide more broad, but not necessarily less valuable, market information. In contrast, more unique sources, such as personal contacts, hold the

Table 1. Profiles of Companies in the Research Sample.

CandyCo	Two-person operation with occasional help from family members; home-based business; founded in 1992; manufactures a variety of brittles based on a family recipe; sells in Oregon, Washington, Idaho and California via direct sales to small stores and gift shops.
IceCreamCo	Husband-and-wife owned and operated ice cream manufacturer; four full-time employees including owners; sells in local retail outlet and wholesales primarily in Portland, Oregon; founded in 1975.
CheesecakeCo	Family-owned wholesale cheesecake manufacturer based on family recipe; started in 1981; five full-time employees including family members; sells mainly through wholesale distributors to restaurants nationwide but some retail to grocery stores.
PastaCo	Markets a variety of mostly organic pasta-related products through smaller and larger distributors nationwide; founded in 1991; manufacturing outsourced in 1999; six full-time employees.
FruitCo	Manufactures high-quality fruit preserves, fruit conserves, fruits in brandy, and fruits in light syrup; owner works full-time with 0–20 seasonal employees; own brand and co-packing; sells along West and East coast via distributors and exports to primarily Japan and a dozen other countries; founded in 1995.
WineCo	Grape grower and fine wine manufacturer; 300 acres; premium product; about 40 full-time and 40 seasonal employees; sells 50% plus to restaurants in 46 states and 11 countries but also some direct retail sales via on-site tasting room and phone/Internet business; founded 1982.
TortillaCo	Manufactures Mexican food products, primarily fresh corn and flour tortillas; 150 full-time employees in two factories and one distribution center; sells via direct sales and distributors to retail outlets including grocery stores and to restaurants in the Western U.S. and some in the Midwest; founded in 1979.
FlavorCo	Subsidiary of global foods company; company's sole production facility for drum dried fruits (30%) and vegetables (70%); products sold as ingredients to other food processors and manufacturers; 35 full-time and some seasonal employees; sells 30% in North America, 30% in Europe, 40% in Asia.

potential to provide information that is relevant only to a particular agribusiness.

More specifically, a formal classification system for market-intelligence sources emerged during the data analysis. This classification system is displayed in Figure 1 and empirically supported by Table 2. Respondents used two main sources for market intelligence: relational and non-relational sources. Relational sources rely on connections and/or relationships with people or organizations. They can be differentiated further into those that exist within the market channel and non-market channel sources. Market-channel sources include vertical sources in the production and distribution chain (e.g., customers, suppliers, brokers) and horizontal sources (e.g., cooperation with competitors, internal people). Non-market-channel sources include governments and universities, professional organizations and associations, consultants, and family and friends. Of the relational information sources, market-channel sources in the distribution chain were used extensively (Table 2). All firms collected sales and trend data from channel participants such as distributors, retailers, and/or brokers. Similarly, product feedback is collected from end consumers at markets, retail outlets, and via the Internet. Moreover, firms that had contact with competitors often cooperated with them by sharing market information. The use of government, academic, and trade associations as relational information sources was less prevalent, and the use of consultants was limited. Many of the relational information sources were based on informal contacts rather than on formal agreements.

Non-relational sources, on the other hand, are those sources that are independent of relationships. They are further differentiated into standardized and customized sources. Standardized sources are those that are not oriented specifically to the particular business but rather to the firm's industry and include news media, trade press, the Internet, or published material available to the public (free and fee-based). Customized sources generate information specific to a business's needs, such as surveys, self-conducted market reviews, and trade show attendance. The empirical results in Table 2 show that the most widely used non-relational sources of market information were trade press articles for trend information and informal market reviews of competitor products regarding prices and product characteristics. Published media, surveys, and focus groups were generally not used. The Internet, as an information source only, played an important role for those companies who maintained an active website.

The classification system of market-intelligence sources developed from the empirical work comprehensively shows where small- and medium-sized food companies look for information. This exploratory study also demonstrates that not all sources are equally utilized and/or valued. A particularly interesting finding in this context is that decision-makers appear to gravitate to their network of people. One possible explanation for this result is that social networks incorporate a feedback mechanism that allows decision-makers to validate their interpretation of the obtained market information and thereby to decrease the risk associated with using that information. Social networks in small- and medium-sized companies could therefore be a valuable area for future study.

Market-Intelligence Utilization Hypotheses

From the analysis of the interviews we generated nine researchable hypotheses, which can be tested in future research. Four main hypotheses emerged that relate to market information gathering and utilization. In addition, five other researchable questions related to marketing decision making in small businesses were identified. The four market-intelligence hypotheses are listed with numerical references while the latter are referred to with letters. Each hypothesis is presented and discussed below.

Hypothesis 1: Market information and the sources from which it is gathered are similar across agribusinesses, making how companies process market information the driving difference in firm performance.

All businesses collected both relational and non-relational types of market information. This information included industry trends, competitor information (pricing and product characteristics), product feedback, sales figures, input and production factors, and growth opportunities. All firms also relied on standardized information; quotes like "I subscribe to virtually all of the magazines" were common. TortillaCo noted specifically that they "try to stay on top of demographic trends, national trends and some of that information is readily accessible for everybody."

Furthermore, all firms utilized customized non-relational information sources. For example,

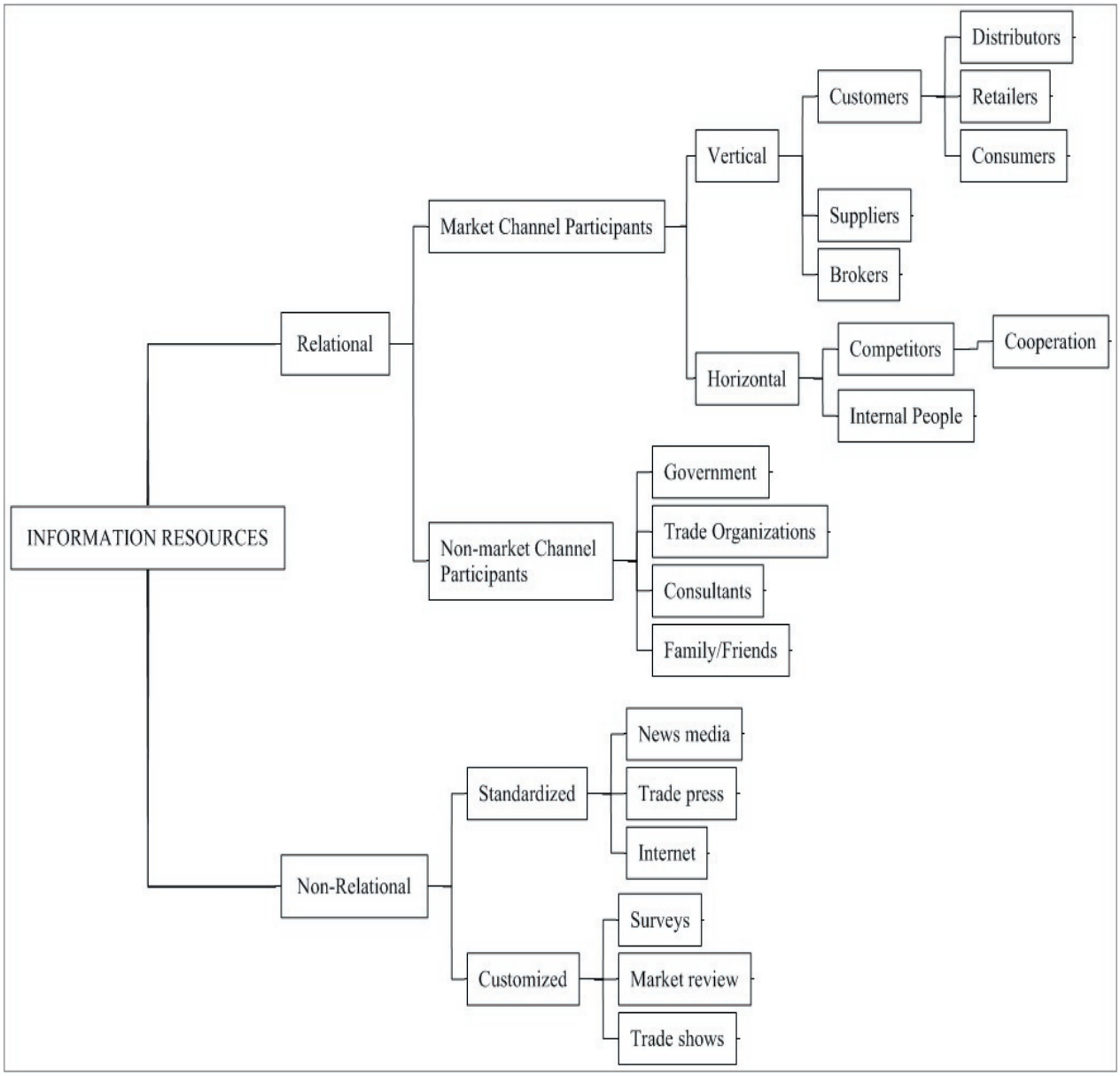

Figure 1. Categorization of Market Information Resources Utilized by Small- and Medium-Sized Agribusinesses.

[a] Trade shows were considered a source of information as well, and depending on how companies worked, the shows determined whether they would be relational or non-relational. For the purposes of this graph, classification was conducted from the eyes of a business attending a trade show to gather information in general.

Table 2. Market Information Resources Utilized by Small- and Medium-Sized Agribusinesses[a].

	CandyCo	IceCreamCo	CheesecakeCo	PastaCo	FruitCo	WineCo	TortillaCo	FlavorCo
Non-relational								
Standardized								
Published media			Watches Food Network				Demographic figures from govt.; newspapers	
Trade press	Hospitality news	Trade magazines	Trade magazines	Yes	Cooking magazines	Industry press, but sees it as targeted to major industry players; Zagat Guide		Subscribes to major food industry publications trend information
Internet			No	Customer feedback via website		Internet sales and customer feedback via website		Information on competitors
Customized								
Surveys/focus grp	No	Limited success with student projects	No		No	Focus group on label design (process failed)	No	No
Market review	Examined packaging and related info about competitive products	Looks at other ice cream parlors for price, flavor, etc.	Comparative tests of competitive products	Analyzes competitor products at retail outlets	Reviews grocery outlets	Price comparison at retail outlets; Compares taste with competitive products		Visits grocery outlets for trend information
Trade shows	Yes	Yes	WUSATA		FMI, Int'l Food & Drink Exhibition, Fancy Foods			

Table 2. Market Information Resources Utilized by Small- and Medium-Sized Agribusinesses (Continued)[a].

	CandyCo	IceCreamCo	CheesecakeCo	PastaCo	FruitCo	WineCo	TortillaCo	FlavorCo
Relational								
Market channel								
Vertical								
Distributors	N/A	N/A	Supplier names, price points, competitive market info	Developed "psychological ownership" relations; market data on best selling product categories		Information on trends and sales from depletion reports	Sales figures	N/A
Retailers	Conversational relationships	Builds relationships with retailers	Samples product with restaurants	Sales data; works with retails to improve sales	Feedback from sales process	Info on trends, sales, and consumer feedback	Sales force collects info about competitors from retailers	Trend info
Consumers	Talked to customers at trade shows and farmers markets	Feedback through retail outlet		Feedback from Internet and in-store demos	Demos at retail outlets	Feedback from tasting room and internet	Integrated into core customer's community	N/A
Suppliers	Design help from label supplier	No		Collects market-information trends	Ideas from label designer	Design help from label supplier		
Brokers	N/A	N/A	Receives market information	N/A	Pricing information		N/A	N/A
Horizontal								
Cooperation	No	Through interactions at workshops	No	Exchange of market information and management tactics with competitors	Exchange information about suppliers with competitors	Marketing alliance with Pinot producers		
Internal people	Yes		No	Exchange of ideas	N/A	Marketing staff	Marketing staff	Market info from parent company, managers

Table 2. Market Information Resources Utilized by Small- and Medium-Sized Agribusinesses (Continued)[a].

	CandyCo	IceCreamCo	CheesecakeCo	PastaCo	FruitCo	WineCo	TortillaCo	FlavorCo
Relational								
Non-market channel								
Govt./Univ.	No		State Dept. of Agriculture		WUSATA, FAS in London, State Dept. of Agriculture	No		Faculty in food science dept.
Prof. org./assoc.	Oregon Gourmet Foods Assoc.			Provider Alliance – natural food industry organization		Wine Advisory Board		
Consultants	No	Once, to help define goals and direction	No	Had poor experience in the past	No	No	Uses consultant with expertise in Hispanic market demographics and media	Access through parent company
Family/friends	Product feedback	Family business	Family business		Product feedback		Family business	

[a] A blank field means that use or non-use of a particular information resource could not be recovered from the respondent's answers. N/A means that the information resource did not apply to the agribusiness. For example, CandyCo, does not place product through brokers and therefore cannot use brokers as an information resource.

FruitCo noted that they visit supermarkets when they travel. "I actually go to a lot of supermarkets and do a market survey on my own. Just to find out what is in the marketplace, what people are charging for it, and just to find out before we launch whether we can be competitive." The companies also used some type of vertical channel information sources, as many noted that they use input from distributors and customers. Non-market relational information sources were employed by several businesses. PastaCo, for example, looks to other manufacturers about experiences and solutions to problems. Seven of the eight firms also utilized horizontal relational market-channel information sources. IceCreamCo for example admitted "my marketing research is basically going to other ice cream parlors and people in the same business; seeing what they're doing." If this hypothesis holds true in subsequent empirical studies, the type of market information a business accesses would not be sufficient to explain performance differences between companies.

Hypothesis 2: Agribusinesses utilize standardized information sources for industry context and customized information sources to make specific decisions.

Makadok and Barney (2001) suggest that businesses require market information to understand both the context of their situation and the expected outcome of strategic actions. Our analysis shows that general market data—found, for example, in trade press articles and reports—are used mainly to identify overall market trends and opportunities: the context of respondents' business. As noted in the explanation of Hypothesis 1 above, firms often subscribe to industry magazines and general reports such as demographic descriptions from the Census Bureau to keep in touch with general trends in the industry. On the other hand, agribusinesses use primary information from channel sources to address market-specific issues or to help them understand the expected outcome of a specific action. For example, the businesses interviewed regularly turned to their distribution channels and sought advice from competitors with whom they cooperate to better inform their decision-making.

The use of relational information sources to answer specific questions is consistent with previous research. Carson, McGowan, and Hill (1996), for example, found that information and decision-making processes rely almost exclusively on the owner-managers. The owner-managers in turn depend most heavily on personal contact networks to obtain information and reports of personal experiences that they then use for their own decision-making. Moreover, Carson (1993) maintains that the acquisition and use of information by small businesses is characterized as entrepreneurial: creative, opportunistic, and short-term in scope but almost informal and not according to the dictates and conventions of formal marketing theory. Thus one can expect that small agribusinesses capitalize on connections with players in the industry they call on or that calls on them, exchanging information notes as well as transacting business.

In addition, small- and medium-sized agribusinesses assign greater weight and importance to their networks of industry players than to industry generalists. In modeling firms' information acquisition strategies, Makadok and Barney (2001) found that a firm's confidence in a particular resource and the uniqueness of this resource, among other things, affects the strength of the impact of a firm's strategy on its profits. The eight agribusinesses interviewed obviously thought their suppliers and buyers to be relevant, unique, and valuable.

Hypothesis 3: Agribusinesses are comprehensive in the type of market information they utilize.

The literature consistently treats small firms' marketing competencies as sub-optimal and unconventional, often pointing to limited time and financial resources, as well as limited marketing expertise, as causes (Carson, McGowan and Hill 1996; Chaston 1997; Stoica, Liao and Welsch 2004; Udell, Knotts and Jones 2002). With limited time, and financial resources for that matter, greater concentration of efforts on fewer resources can be expected. Our study's interviewees contradict this reasoning. All but one firm used at least one specific information source in each of the five categories presented in Table 2—standardized non-relational, customized non-relational, vertical market channel relational, horizontal market channel relational, and non-market channel relational sources. The exception was CheesecakeCo, which did not rely on horizontal market channel resources but relied on all the other four information sources. A possible explanation for the comprehensive market information use is that the lack of marketing expertise may leave small businesses seeking multiple resources as a way to mitigate the risk of not gathering the right market intelligence from only limited sources.

Hypothesis 4: Agribusinesses with a high degree of interfunctional coordination (integration of all functions within the company) gather, process, and utilize information effectively.

The ability of agribusinesses to work as an integrated unit affects how they approach market-intelligence gathering, which further influences how the collected information is used in the firms' decision-making processes. When firms operate with a clear strategic intent communicated clearly throughout the company, decentralized market-intelligence gathering is possible. The greater the number of people involved in gathering and sharing information, the more extensive the business will be in that effort. Interfunctional coordination marks a particular type of corporate culture where teamwork and cooperation dominate. This type of culture can then lead to great effectiveness in utilizing market information. In a different context than food, Menon and Varadarajan (1992) found that organizational culture and the environmental context in which the business operates influences the manner in which information is processed and used. Other studies suggest that firms that are able to maintain an organizational structure and culture appropriate to their environmental contexts are more likely to utilize information effectively (Chaston 1997; Stoica, Liao, and Welsch 2004).

The four hypotheses presented above demonstrate the value of using grounded theory to discover characteristics and constructs important to a problem that heretofore has received limited attention in empirical studies. In addition, grounded theory is beneficial in identifying new information which can lead to additional research topics. The following hypotheses emerged from the data but were not part of the study's original intent.

Hypothesis A: Market-information utilization (and marketing) is a learning process, resulting in the firm developing personalized "best practices" based on previous experience.

Hypothesis A does not refer to the learning organization noted by Senge (1990), whose focus is the capacity to learn, which is arguably a source of a competitive advantage. Rather, Hypothesis A reflects the impact or result of past experiences. The focus is less strategic and more tactical in nature. Under the concept of organizational learning, the processing and utilization of information is described as learned behavior, evolving with time and experience (Cyert and March 1963). Given that the organizational learning curve is steepest for small, young firms and that organizational learning is the most intense when there are failures or when firms get unexpected results (Sinkula 1994), it is no surprise that firms fall into the pattern of best practices based on their experiences.

These firms adopt certain practices because they worked in the past, and the firms therefore stick to these practices. In contrast, practices that didn't work are shed and create a long institutional memory telling firms not to try them again. FruitCo, for example, contracted with a graphic artist to help develop their labels. The owner ended up firing the artist and developing a successful label himself. Now, he would be hard-pressed to hire another graphic artist to design his future labels. Likewise, PastaCo has sworn off all consultants because of their past experience with one consultant. This evidence supports Carson's (1993) argument that small firms may not be receptive to developing marketing competency if business is satisfactory without it. Even though there is not a desire to develop a marketing competency, our result suggests that some level of marketing effectiveness is developed through the creation of best practices.

Hypothesis B: Ability to measure the return on investment of marketing activity increases the willingness to undertake market research efforts and employ marketing tactics.

The firm's perceived risk and return on investment (ROI) determine the willingness to undertake marketing and research efforts. Because small agribusinesses usually have limited resources, they fiercely guard those resources. This sentiment is reflected well in the adage that fifty percent of a firm's ad budget is wasted—they just don't know which half is profitable. WineCo, a $4 million company that saw market research as beyond their means, would rather spend $50,000 on a new salesperson than on placing ads in gourmet magazines and the like. The owner didn't know if ads would boost sales, but he was certain that a new salesperson had a chance to do it. FruitCo saw marketing as risky, noting that it was an enigma to him. Spending $5,000 for an advertisement in a national magazine was not appealing because he could not see direct sales from the effort. Even if sales were to increase, he would be suspicious and wonder if there were other causes making sales grow. TortillaCo gives their marketing

division a certain amount of freedom, but they do require the division to project return on investment for major marketing efforts brought to the board for budget approval. However, the smallest of the firms interviewed were even more constrained in their resources and limited their marketing research and marketing tactics to those that posed low financial risk with greater ties between effort and outcome. In addition to past experiences (Hypothesis A), another reason agribusinesses do not utilize consultants or market research is because they require a large upfront cost and have an uncertain outcome, whereas most of the information sources utilized by the firms interviewed do not impose a financial burden on the firm.

Sub-hypothesis B.1: In the absence of the ability to measure return on investment, a manger's default is to rely on past experiences in the market.

If the agribusiness lacks the ability to measure return on investment (ROI), or if it cannot be measured for a specific marketing-related activity, then primary knowledge of the markets becomes a larger influence in the planning process. FruitCo noted that there is a lot of confusing information in the world and that he often reverts back to his intuition and what has worked in the past. IceCreamCo, a retail and wholesale company, relies primarily on customer feedback for input on products and other marketing mix components. These companies find it easier to make the direct connection between primary market knowledge and impact of marketing programs.

Hypothesis C: Marketing cooperation is a potential competitive advantage for small agribusinesses.

Small- and medium-sized agribusinesses often have limited access to available funds and other critical resources. For example, the small firms in our sample do not have the marketing budgets required for large marketing efforts nor the critical mass to present themselves as a formidable company at a trade show. In response to these challenges, many agribusinesses have turned to partnering with other industry players and even direct competitors to help offset the higher costs and/or to build the critical mass needed to conduct these larger efforts. FruitCo, for example, sought ways to share the costs of displaying products at trade shows. In their eyes, cooperating in this manner not only splits the costs of renting a booth space but also allows them to share each other's presence to create the appearance of a sizable company and not a "misfit child." WineCo was able to advertise nationally by partnering with other small area wineries to jointly promote Oregon Pinot Noir. The owner's perspective was captured in this statement:

"I felt since I started that the most effective promotion for us would be . . . in conjunction with other producers who are in the same marketplace. . . . Sure, we're competitors, but we're very small competitors compared to our competition around the world. And as a group, we can afford to do some things that we simply can't do alone."

WineCo also collaborated with three other competitors to develop a successful information campaign targeted toward major buyers. Thus instead of allowing limited resources to be hindering, agribusinesses can join forces to promote a class of products.

Hypothesis D: Market-intelligence utilization and marketing planning increases with the relative risk exposure.

In general, as the firm size grew in sales volume and the relative risk exposure of a project increased, agribusinesses tended to look for more assurance in planning their marketing work. In contrast, the smaller agribusinesses displayed more of a trial-and-error attitude. For example, at one point CandyCo had excess capacity. This enabled them to make the decision to try another formulation without risking the business's survival and the owners' security. The marginal cost to try something was small, and the trial method was often cheaper than researching the issue first. At the other end of the spectrum, TortillaCo spent more time, effort, and money to allocate their limited marketing resources to the investment with the greatest possible return. Contrary to CandyCo, TortillaCo has a lot to lose when thousands of units are rolled out with each new product introduction.

Conceptual Model of Market Intelligence Utilization

The nine hypotheses presented are the result of a structured and focused analysis and hence are grounded in the collected data. They provide novel insights into how small agribusinesses utilize market information. Coupled with the formal classification system for market-intelligence sources advanced in

Figure 1 and Table 2, the hypotheses independently have value in directing future research efforts in that any particular hypothesis can be tested. The information classification system could, for example, be tested using a Likert-scale approach with varying degrees of agreement or disagreement regarding various market-information sources. However, the impact of this research increases substantially when all hypotheses are taken together to formulate a conceptual model of market-intelligence utilization like the one presented in Figure 2.

From Hypothesis 1 we expect information-processing capabilities to significantly impact firm performance. Hypothesis 2 is depicted by non-relational, custom information being connected to firm-level issues and non-relational, standard information being connected to industry context. Hypothesis 3 is represented in the fact that all information sources are present in the model. Hypothesis 4 on interfunctional coordination is closely tied with Hypothesis 1 in that it is expected to positively impact how firms process information. Best practices are determined through past experience, which according to Hypothesis A should impact both how firms make decisions and the actual decisions they make. Hypothesis B implies there are other characteristics, such as ROI, that moderate the influence of past experiences and information-processing capabilities on marketing practices. The opportunity to collaboratively or cooperatively market products also influences what marketing practices a firm undertakes (Hypothesis C). Finally, the intensity or overall effort put into this process of market-intelligence utilization is influenced by the relative risk exposure the firm feels (Hypothesis D).

The conceptual model displayed in Figure 2 is a proposal of future research as the hypotheses of connections still need to be quantitatively tested. This future research will require the development of mechanisms to measure the different variables. Some will be easier to measure than others, which by their very nature are difficult to observe or reduce to a value. For example, measuring what information sources are utilized is fairly straightforward, but measuring a firm's decision- or information-processing capability is more challenging. Such variables are latent variables requiring proxies or multi-item scales. The data for this type of research will definitely need to be collected directly from companies, and it will likely be an iterative process. Finally, subsequent analysis tools must be able to accommodate latent variables and multiple dependent relationships (i.e., allow a variable to be endogenous and exogenous within the overall model) in order to obtain meaningful results. Structural Equation Modeling, for example, would be one possible method for this type of work (Kline 2005).

Conclusion

This study leads to insights about how small agribusinesses find and utilize information. It develops a classification system of market-information sources that includes five categories: vertical market channel relationships, horizontal market-channel relationships. non-market-channel relationships, standardized non-relational sources, and customized non-relational sources. Our results show that these market-information sources are not utilized in the same way and that many factors influence how a firm processes information. We used grounded theory to analyze the interviews of the eight subjects in order to generate nine hypotheses about the firms' market-information utilization, an important issue about which little empirical or theoretical work exists to date. Collectively the research has yielded a model of how small agribusinesses utilize information in their decision-making processes. Since exploratory work must be followed by confirmatory work, the study's qualitative findings must be tested quantitatively by independent researchers as the logical next step toward theory development. Thus this new model, in part or in whole, provides ideas that future projects could consider testing.

Our work also demonstrates how a qualitative tool can be used in addressing a particular research problem. However, scholars must overcome a number of challenges for these tools to be more widely adopted. First, qualitative research is often more time-demanding than is quantitative work. Assuming that primary data collection is equivalent for both qualitative and quantitative approaches, the actual qualitative data analysis can be more extensive and drawn-out. Grounded theory, for example, requires that every researcher must deeply think through each transcript, reading it several times to identify constructs. This process is repeated for all observations. The constructs in turn are reviewed, revisited, and revised multiple times by the research group as a whole. Because this iterative process is

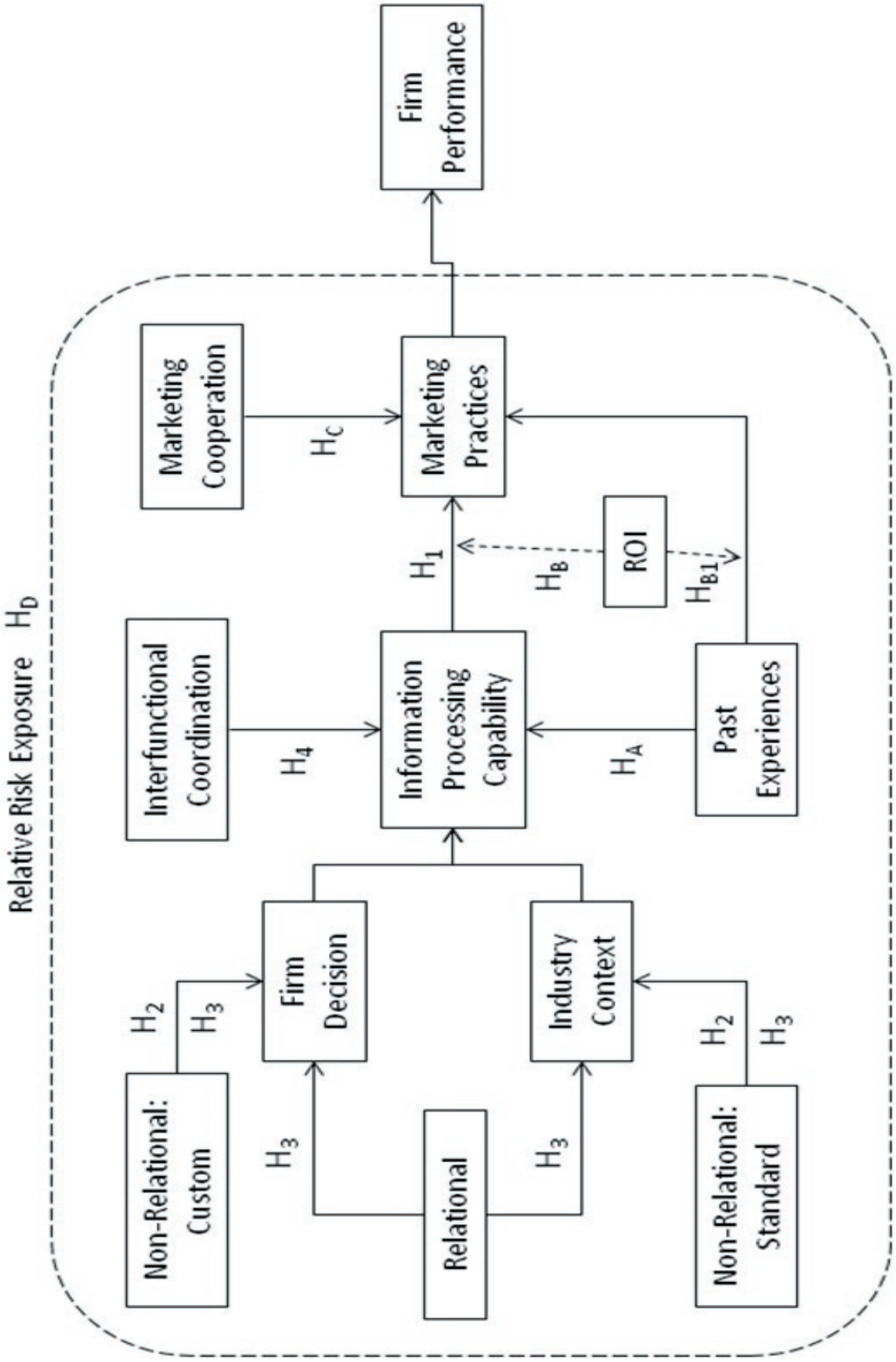

Figure 2. Conceptual Model of Small Agribusiness Market Intelligence Utilization.

not necessarily sequential, it demands substantial amounts of time, motivation, and focus. Finally, more widespread adoption of qualitative methods like grounded theory as viable research tools requires greater assurance of acceptance by the agricultural economics profession.

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