

Creating a Vision for XYZ Research Corporation: A Case Study

Paul Jaramilloⁱ
University of Florida

Lisa Houseⁱⁱ
University of Florida

Allen Wysockiⁱⁱⁱ
University of Florida

Selected Paper prepared for presentation at the American Agricultural Economics Association Annual Meeting, Providence, Rhode Island, July 24-27, 2005

Copyright 2005 by Jaramillo, House and Wysocki. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

ⁱ Paul Jaramillo is a PhD Student in the Food and Resource Economics Department at University of Florida.

ⁱⁱ Lisa House is an Associate Professor of Food and Resource Economics at University of Florida.

ⁱⁱⁱ Allen Wysocki is an Associate Professor of Food and Resource Economics at University of Florida.

XYZ Research Corporation⁴

Introduction:

The importance of strategic planning for businesses in today's highly competitive business environment is rather evident. Systematic and strategic planning is a must for companies that intend to become major players in their respective industries. Miller and Dess (1996) define strategic analysis as the conjugation of three processes: (1) consideration of the organization's strategic intent; (2) exploration of the opportunities and threats presented in the immediate environment surrounding the organization; and (3) a study of the organization's internal strengths and weaknesses. This definition is very similar or equivalent to the concept of a Strength, Weakness, Opportunity, and Threat Analysis (SWOT), plus any effort to define a company's strategy.

On the other hand, strategic planning is defined by Aaker (1988) as the process of increasing a company's ability to anticipate changes that have strategic implication, by focusing on their immediate market environment to achieve an in-depth understanding of competitors and customers. Pearce (1994) defines strategic planning as an on-going process based on the implementation and development of better strategies.

Finally, strategic management is described as the on-going dynamic process (involving both strategic analysis and strategic planning) leading to a set of analysis-driven decisions and actions taken by a firm to achieve its performance goals (Pearce 1994, Peterson 1994). Performance may mean desired level of profits, market share, customer satisfaction, or sales.

The objective of this study was to assist XYZ Research Corporation in developing a strategic plan and propose a set of strategic alternatives for their future development.

⁴ The company name has been disguised.

The strategic plan is a core plan of action based on a competitive force analysis, a SWOT analysis and a strategic plan analysis. The strategic plan was intended to aid XYZ Research Corporation in developing a set of goals and objectives that will jumpstart their slowed growth from a medium-size profitable company into a larger, more profitable corporation. In the process of developing a strategic plan for XYZ, data and information used to write a teaching case study was gathered. This paper will concentrate on focus groups interviews used to collect data for the case study and strategic planning process.

XYZ Research Corporation

Historically, **XYZ Research Corporation** performed well both financially and in terms of having steady rates of increasing sales revenues. However, recently sales growth appeared to have reached a plateau. Past positive performance has sparked a desire in the company's founder and owner to grow and improve even further. In its struggle to find the best plan of action, XYZ's management team realized the need to address several internal and external factors that were constraining the company from developing to its full potential as a leader in the industry.

Established in 1967 by Dr. William L. Brown, XYZ Research Corporation is a full-service laboratory. The company started out with 20 scientists, and has grown to more than 70 scientists and a \$1.5 million payroll. XYZ Research Corporation conducts daily chemical, physical, and microbiological analyses for its customer base of over 2,000 food companies. This includes mostly large (but also small) fast-food chains, mainstream chain restaurants, food retail and wholesale firms, food-processing firms, packing firms, commercial farms, and some companies in foreign countries. Until this day, the company remains under complete management of its founder.

XYZ Research Corporation's organization and major departments are described as follows: (1) Top Management (CEO, Dr. William Brown; Vice President, Mr. Hart); (2) Quality Control; (3) Office Management; (4) Business Development (increasing XYZ's capabilities to include product development, HACCP auditing, and biotechnology services); (5) Sales and Marketing; (6) Microbiology (tests for presence of pathogens in food, errors in food processes that result in spoilage, and purity of water; and offers regulatory assistance); (7) Research Microbiology (analytical, research, and consulting services); (8) Chemistry (analytical tests for physical properties); (9) Food Chemistry: analytical tests on general nutritional content; miscellaneous properties of foods (pH, flavor, odor, etc); and presence of pesticide residues, additives, and toxins; and (10) Chemistry/Problem Solving (offers problem solving services for any type of food product).

U.S. Independent Food-Testing Laboratory Industry:

Reliable (and quantitative) economic and financial data for the food testing industry is difficult to find. Most companies in the industry are privately held, making information about competitors and even market size difficult to calculate. A respectable, though limited, source of data was found in Fanjoy et al. (2001) Food Testing Laboratories Database (FTLD). Fanjoy et al. (2001), from the Research Triangle Institute, used FDA's (1997) definition for private laboratories to gather data on food-testing laboratories and compiled it into a database that documents several industry variables (e.g., location, economic variables, capabilities, and quality assurance programs). Their research recognizes two limitations: (1) the U.S. food-testing laboratory industry is not well defined which posed difficulties when screening companies that qualified as food-testing laboratories from other types of laboratories, and (2) laboratory

websites, maintained mainly for promotional purposes and association sources (e.g., American Council of Independent Laboratories—ACIL), do not include economic variables or economic data on sales volume and what was available was hard to confirm. In general, companies do not share such information in a freely manner.

Fanjoy et al.'s research used several screening methods to select laboratories and define the food-testing laboratory population: (1) use of multiple private and federal resources (e.g., company websites, FDA's OASIS), (2) use of a list purchased from infoUSA containing 5,000 laboratories that are included in SIC code 8734-02: Laboratories—Testing which was filtered by initially excluding laboratories that do not test food or water, (3) grouping of the remaining laboratories in the list into categories by their names and reviewing 5 to 10 examples from each category, (4) giving closer scrutiny to exclude companies containing keywords in their names (e.g., agri, calibration, hemo, terra), (5) use of corroborating sources to reconsider laboratories excluded using the keyword filter, and (6) expert reviews from food science personnel at six universities (Cornell, NCSU, Penn State, Texas A&M, University of California Davis and Virginia Tech).

The final database included records for 546 companies that test food mostly within, but also outside the United States. Available economic data for 193 of the 546 firms suggests that industry sales volume easily surpasses \$1.3 billion. However, this includes revenues from all activities and services offered by the laboratories, not only from food-testing services.

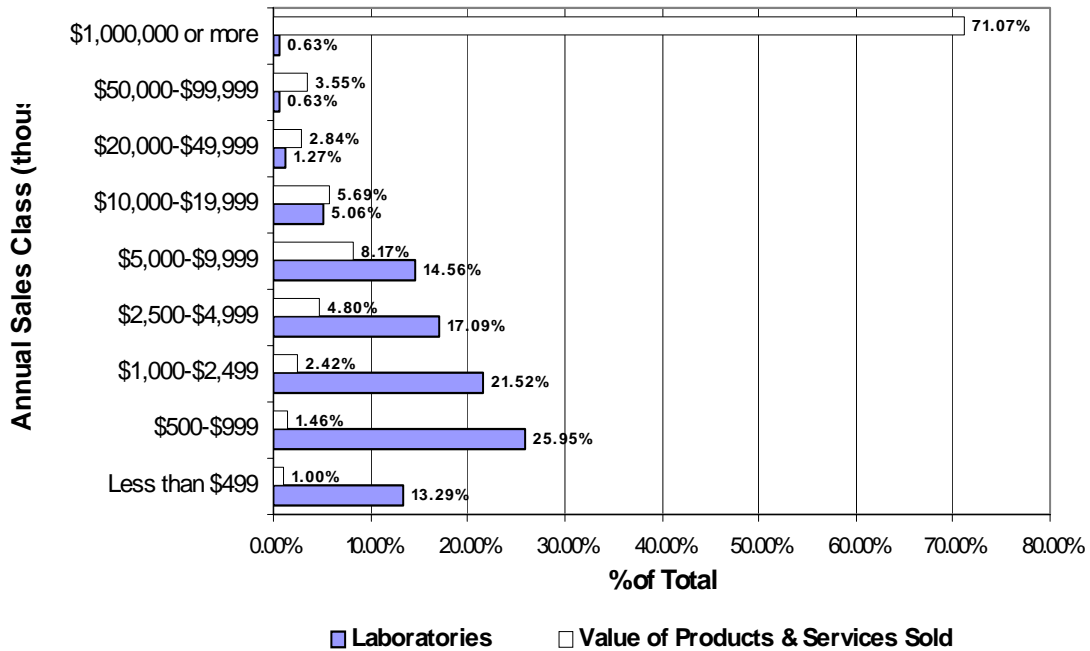


Figure 1. Distribution of U.S. independent food-testing labs by sales class: 2001

In Figure 1 all independent food-testing laboratories for which data was available were grouped according to their sales volume or sales size. From the 193 available records, the diversity in size of firms operating in the industry is easily observed. Almost half of the laboratories (47%) have a sales volume of \$500,000 to \$2,499,000. Approximately a third (32%) have a sales volume ranging from \$2,500,000 to \$19,999,000. Only four firms showed larger sales volumes. A smaller number of firms (13.3%) fall under the small mom-and-pop type of business with sales volumes of \$1,000 to \$500,000.

According to the same data, around 71% of the estimated minimum of \$1.3 billion sales for the 193 laboratories belong to one single company (U.S Filter/Zimpro Incorporated). Filter/Zimpro specializes in offering products, services and solutions for water, wastewater and selected industrial processes to several industries. The rest of the sales in the industry were distributed as follows: Medium-large sized companies (with

sales ranging from \$2,500,000 to \$19,999,000) accounted for approximately 19% of the sales and medium-small sized laboratories (\$500,000 to \$2,499,000) accounted for 3.8% of the sales. “Mom-and-pop” (\$1,000 to \$500,000) businesses contributed less than 1% of the sales. The remaining 6.3% was made by the other three companies with volumes sales larger than \$19,999,999.

Using a more holistic approach to research, our study identified two particularly important characteristics about the functioning of the industry. First, the existence of the industry is closely linked and dependent on a trend in the food industry to outsource some of the activities required by their business.⁵ Second, a large portion of the demand in the industry is generated via mandatory compliance of food companies to an increasing number of federal regimented food-safety regulations.

Food firms in the U.S. operate in an intensely competitive, highly regulated, and mature industry. Many of these firms have resorted to downsizing in areas that are not central to their business – for example, laboratory testing. In fact, many labs that today are contract labs are, or were in the past, directly associated with a major food company. Some examples include: R-Tech (Land O’Lakes), Medallion Laboratories (General Mills), TPC Labs (Pillsbury), Northland Laboratories (Sara Lee Corporation), and Covance (once a Ralston Purina Company division) (Marsili 1997).

Compass Consulting International (2004) and Giese (2001) recognize the advantages for food companies from outsourcing food testing services. First, it can be a cost effective method of supplementing in-house testing. Second, it allows for food

⁵ Outsourcing is the assignment of work to a third party for a specific length of time with an agreed-on price and service level (Giese 2001). According to International Data Corporation (1999), worldwide outsourcing services is a \$100-billion industry, with sales of \$99 billion for 1998 and expected sales for 2003 of \$151 billion.

companies to concentrate in their main business and core competencies. And third, it is a convenient source of additional expertise in this intricate area of the food business. Two downsides related to outsourcing, as expressed by outsourcing companies, include: (1) some loss of control from part of the outsourcing company to the outsourced company, and (2) sharing of confidential information with the outsourced laboratory.

Given the scarcity of usual industry data, the next step of the strategic analysis of the firm was to learn as much as possible from XYZ itself. To achieve this, a set of focus-group interviews were conducted with XYZ's personnel in order to gather more information on the company's performance and to gain insights on what the firm does extraordinarily well, as well as what aspects in which the firm could improve. This would help determine which new markets XYZ would have the greatest chance of success in and what strategy it should follow.

Strategic Analysis:

The strategic analysis involved a series of visits to the company to conduct focus groups with its employees and management. Five focus groups were carried out at XYZ Research Corporation. Each session took between three and four hours. Four of the five focus groups were comprised of employees across the company. The fifth session was conducted directly with the CEO, Dr. Brown; and Vice President, Mr. Hart. In total, 17 employees and 2 top managers were interviewed. Participants were selected from each department in the company to make the sample representative. Interviewees were grouped according to their department. The majority of the interviewees were full-time employees, not the hourly workers in the laboratories.

The interview began with participants completing a questionnaire regarding: marketing, financial, human, operations/production, organizational and information resources in the company. Each item in the questionnaire was to be ranked by the interviewee as a weakness or strength for the company. The scale ranked from 1 (great weakness) to 5 (great strength).⁶ The questionnaire was then used as the basis for a general discussion on the issues facing XYZ.

This method proved to be effective and valuable when aiming to gather detailed information on the specifics of the company. For example, information and insights on the company and its business that would not become evident through any kind of meticulous financial or economic analysis of the company's and industry's numbers – which in fact were unavailable or scarce – was efficiently obtained by personal communication from the employees in the interviews.

The ranked responses obtained from employees were averaged and compared to the average obtained from top management answers. Top management included the CEO and the vice-president of the company. Qualitative as well as quantitative data obtained from the focus groups were then used to compare perceptions and gain insights into the issues confronting the company.

Results

Table 1 summarizes the results obtained from the focus group interviews at XYZ Research Corporation. The first column in the table shows the number of participants that answered each item. The number of participants varies by each item because participants

⁶ The interview was adapted from a previously developed interview, authored by Dr. Christopher Peterson from Michigan State University. Dr. Christopher Peterson (who enjoys an extensive background in strategic management research) obtained his PhD from Cornell University in 1991, and his M.B.A. from Harvard University in 1981.

had the option of leaving any item blank if they so desired. The second and third columns show the Average and Standard Deviation obtained from the participants' answers. The fourth column represents the Average from the answers given by the top management (Dr. Brown and Mr. Hart). Finally, based on simple subtraction, the fifth column shows the difference between the Employee Average and the Top Management Average. For example, the difference between the employee assessment of product/service line breadth and depth top management assessment was -.69. This means that XYZ employees, on average, scored this item .69 (on a scale of 1-5) lower than top management. Large differences (larger than 0.99) are marked with (***) next to the number while medium size differences (larger than 0.5 but smaller than 0.99) are marked with (*). Averages and averages' differences supported with opinions expressed in the focus groups and interviews will be used to gain insight into the issues concerning the company and as an indicator of similarities and differences in perceptions between management and employees.

The rest of this section discusses the results from the focus group interviews according to the following resource areas: marketing, financial, human, operation/production, management/leadership, organizational, and informational.

Marketing Resources

With respect to marketing resources, top management and employees agree in their assessment that customer satisfaction with XYZ's products and services is high and that this represents a strength (average score of 4) for the company. Meanwhile, both employees and management agree the company's ability to gain customers versus competition could be improved (average score of 3). These scores are consistent with

verbal information gathered in the focus groups showing a perception of a weakness in attracting customers because of the company's inability to compete on price with some competitors (possibly due to economies of scale differences), but also of a strength in keeping customers by offering quality-personalized service (volume vs. quality).

The average employees' scores for marketing items (6) advertising and promotion activities, (7) product/service pricing, (8) facilities and methods used to sell to customers, and (9) market share, reflect the employees' perception of a deficiency in the marketing area. Employees' averages on grading marketing resources were in general lower than top management's scores.

It remains a challenge for management to deal with this employees' perception. It may be that such perception is due only to a lack of involvement and staff-management flow of information. Or it may be that employees are indeed aware of both a true deficiency and an opportunity to improve marketing activities. Perhaps, the situation can be addressed as a chance to draw ideas from the personnel on ways to improve the company's marketing effort.

Using verbal information obtained from the interviews, our study identified three repeatedly expressed perceptions on company and industry issues concerning marketing activities: (1) that there is an overwhelming quantity of propaganda and magazine advertising made by the large number of laboratories participating in the industry, and that this compromises the effectiveness of such marketing methods, (2) that highly specialized testing personnel is usually not trained to perform marketing activities; while marketing specialized personnel is unable to effectively promote the company due to their lack of understanding of chemistry, biology and other sciences concerning the

companies services and products, and (3) considering the high costs per hour of labor and the personnel's high level of education and specialization, a management type of problem exists on deciding the most economically efficient way to allocate time between testing and marketing activities. For example, how much time should a scientist spend on performing tests and how much on answering the phone?

Financial Resources:

The low number of responses obtained from employees suggests that they have little knowledge about the company's profitability and financial performance. However, employees did show at least a little knowledge on the some financial resources, such as strong and recurring operating profits and efficient asset management. Employees rated these as slightly better than average. In general, employees ranked their answers lower than top management.

While it is understandable that management may not wish to make financial numbers public in a privately held company, in some cases the lack of awareness of employees with respect to the company's performance may pose a threat to the company's morale, motivation, and stability in terms of turnover, and productivity. Managers should monitor this particular issue.

Human Resources:

The most recurring discrepancy between top management's perception and employees' perception occurred in the human resource management section. In reference to performance standards and evaluation procedures, a compensation system that promotes performance and satisfaction, equitable and competitive pay, and equitable and competitive fringe benefits, employees rated these human resource management

components considerably lower than top management. While top management rated them 4 and 5 (strengths), employees averaged a rating of 3.08 or lower. Although it is expected for employees to feel “underpaid”, the depth of this feeling and the lack of motivation resulting from the perception of low pay tied with low ratings for incentives and evaluation implies a serious underlying problem for the company.

Such results show the need to look more closely at the compensation and incentives programs in the company. The decrease in productivity that can arise from a low level of motivation in an organization can adversely impact its performance and profitability. An effective incentive program should produce higher returns by increasing morale and productivity and more than offset the costs of such programs.

When examining responses to: adequate quality of people to do the work, personnel plans, design and descriptions and appropriate use of teams; both top management and employees rated these items as being average at best (with employee ratings slightly lower than top management. Ineffective job descriptions can reduce productivity and efficiency by: (1) over-lapping job duties leading to duplication of efforts, (2) inefficiencies of assigning more people than needed to a given job, and (3) unclear job responsibilities leading to confusion as to who is responsible for a given area. As expressed in the interviews, the very specific nature of tasks in the company’s area of business may make it difficult to implement extremely detailed job descriptions. However, this does not imply that job descriptions should not be used at all. While XYZ Research Corporation does indeed have job descriptions; many middle managers felt these job descriptions could contain more details and expectations. Job descriptions can

also be used as evaluation tools by assigning direct tasks and responsibilities to each employee.

Operation/Production Resources:

Efficient and effective use of production and operations resources affects productivity in a very direct manner. As a whole, this section received only average grades, meaning it is considered neither a weakness nor strength. Most of the items were answered by more than 75% of the interviewees.

Owners and employees concur in giving average grades to: up-to-date and appropriate technology (item 3), effective and efficient inventory control (item 6), and effective and efficient purchasing practices (item 7). Low scores were given to effective and efficient physical layout (item 4).

According to the interviewees' answers, technology could be kept more up-to-date in the company. The FDA and other executive branch agencies base each of the regulations put in place on scientific discoveries and the increasing number of better technologies to perform tests. Laboratories have to keep up with the latest technologies to offer tests required to comply with the latest federal regulations. Coping with the latest technologies poses a potential opportunity for having a first-move advantage over other laboratories in offering the latest and newest tests first. With respect to XYZ, it seems that changing this issue from not being weakness or strength to being a strength, is more a matter of enabling internal company processes that speed up managerial decisions to acquiring equipment than a matter of short cash flows.

With respect to inventory control and purchasing practices, these are two factors that greatly determine a company's cost structure. Assuming XYZ actually faces

limitations to successfully compete on a price basis (see marketing resources in this section) with larger companies and that such limitations are indeed a consequence of economies of scale, it results most important for the company to achieve a cost structure that is as efficient as possible. Developing written procedures that regulate inventory control and purchasing practices are recommended by our study as one alternative solution to this issue.

Two items that scored lower by employees than top management in this section were: quality of needed facilities to serve customers (item 1), and capacity of needed facilities to serve customers (item 2). Two items that employees scored higher than top management were: effective and efficient work flow (item 5), and effective and efficient production practices (item 8).

The difference in perception between employees and managers on capacity and quality of installations could be restraining top management from recognizing that current facilities represent a constraint for the employees' and the company's growth. Managers believe installations to be a strength for the company, while employees consider them as average. Some of the employees explained their answers by mentioning the facilities were not initially designed for its current use but instead adapted, and that this somewhat affects flow and efficiency. All parties recognized that the current physical location of XYZ is not the ideal physical set-up for the business as it has grown. It is possible that top management rated these higher as they are more aware than the employees of the problems associated with trying to move at this time. Employees did recognize there were some EPA issues that were involved in selling the current location that probably prohibited XYZ from selling and moving, but more direct communication

may help employees realize why their firm has not moved into different facilities. With a better understanding, the employees may still feel that the physical facility is not ideal, but may lead to increased morale if the employees knew that management would prefer to move to a new location.

Management/Leadership Resources:

For this section, only for items 2, timely decision-making and 3, effective delegation, were employees' and managers' averages different from one another by more than a factor of .5. Both groups graded most items in this section as higher than average meaning leadership resources are perceived as strengths of the company. It is interesting to note that employees felt that timely decision making was more a strength (4 on a scale of 5) than top management (3 on a scale of 5). Perhaps this reflects the current level of satisfaction that employees have with decision making, while management would like to see more timely decision making by entry-level and middle managers. One general comment regarding delegation is in order. The average score given by employees was 3.47. Based on a qualitative assessment of the interview responses, most mid-level managers feel there is a great deal of delegation when it comes to long-range goals and objectives. However, these mid-level managers would welcome more flexibility when it comes to some of the day-to-day decisions such as the handling of customer service requests.

Interviewees expressed a concern towards an excessive concentration of the leadership in the company relying in one single person (Dr. Brown). The question: "What would happen to XYZ if Dr. Brown wasn't here?" was repeatedly mentioned as posing a threat to the company given the industry's tendency to pair XYZ's future success with the

presence or absence of Dr. Brown in the company. This included a perception that clients were beginning to prepare for a time when Dr. Brown was no longer with XYZ, and that the clients also did not know what to expect, therefore might be making “contingency” plans to move to other companies. Stressed here is the importance of the role played by trust, experience, and reliability in generating demand for a given laboratory operating in this industry. In this case, food companies may observe a large portion of these attributes in the person Dr. Brown, and not in XYZ the company.

Organizational Resources:

Top management scored all organizational resources in the company as a 4 (strengths) or higher while the average employee score for each item in the section was 3.75 or lower. Again, personnel in the company recognize the threat of a possible absence of Dr. Brown as constraining the firm’s public image from being a substantial strength to being perceived only as little better than average.

While top management perceived there was an appropriate mix of resources (item 1) and that effective interdepartmental communications were operating (item 3), as seen in their scores of 5 and 4 respectively; employees scored these considerably lower at 3.28 on appropriate mix of resources and 2.74 for effective interdepartmental communications.

Some of the middle managers were finding it difficult to take on marketing and sales roles in addition to the scientific roles they were trained for. There was some discussion regarding the relatively high turnover of entry-level positions that may be a result of a lack of appropriate resources, however, there were no other indications corroborating this issue.

Many of the interviewees indicated that interdepartmental communications were in need of extensive improvement. Interview discussions suggest interdepartmental communication improvements could be made in areas such as: (1) supply usage and replenishment, (2) customer contacts, the needs of customers common to multiple departments, (3) general knowledge of what is going on in each department and how this related to other departments, and (4) the future direction of XYZ Research Corporation.

Information Resources:

Effective information resources are crucial for the timely and efficient evaluation of business plans being implemented. Large differences were observed between top management and employees' average scores.

Top management considered that the company makes good use of efficient and effective financial and cost accounting systems, and has an appropriate planning system for internal analysis. In contrast, the employees perceived that financial and cost accounting systems are neither strengths nor weaknesses for the company; and that the planning system represents a weakness. In referring to the current accounting system, one employee statement summarizes the impression received from the employee interviews: "under this system, we are forced to manage to avoid a loss instead of managing to make a profit."

Employees rated the planning system appropriate for internal analysis as a 2.52, while top management rated this as a 5. The general impression from interviews was that many of the current tools were used more to show what went wrong in a given department versus what could go right in the future. Another factor affecting this scoring was a general belief that planning exercises, such as this strategic analysis of XYZ

Research Corporation, have resulted in little change to company culture or operating procedures.

A more effective planning system developed and implemented with the participation of middle management could result in better planning and consequently in higher productivity and profitability of each project and the company.

In terms of marketing and increasing business through the Internet, the employees believe there is considerable room for improvement. Many employees believe XYZ Research Corporation needs a more involved web presence.

Recommendations - Defining a Strategy:

XYZ could greatly benefit from investing time and effort in defining itself and its competitive strategy in a detailed manner. XYZ does a good job in retaining customers due to its personalized service, but seems to have a hard time getting new customers due to its inability to compete based on price with larger rivals. This assertion was extracted from the data gathered in the interviews.

In his works, *Competitive Strategy* (1980) and *Competitive Advantage* (1985), Michael Porter identifies three generic strategies that firms in any industry can follow. Business theorists often categorize business behaviors using Porter's three distinct strategies. They are cost leadership, differentiation, and focus strategies. Cost leadership involves concentrating in selling a standardized product at low costs targeting the larger portion of a price-sensitive clientele (Wright 1987). Cumulative volume of output, conceptualized by the experience curve, is what allows cost leader strategists to offer competitively priced services to a large portion of the industry's market through a combination of economies of scale, capital-labor substitution possibilities and an

incrementally increasing learning curve (Hout, Porter, and Rudden 1982; Allan and Hammond 1985; Abernathy and Wayne 1983; Boston Consulting Group 1972). Product differentiators offer an industry-wide unique product or service (e.g., personalized and fast, quality service) to the larger portion of a price-insensitive clientele. Finally, focus strategists concentrate in addressing needs of particular buyers in the industry, which are fewer in number (Wright 1987). It is highly unusual, and equally as unprofitable, for a company to attempt to excel at more than one strategy at the same time. For example, Wal-Mart’s size allows the company to offer the lowest prices, but it is unlikely to see Wal-Mart aiming to match the highest quality in the industry. Many argue that pursuing two strategies at a time may result in a firm ending up in the middle with no competitive advantage at all.

Wright (1987) further argues that larger firms in an industry with greater access to resources may primarily compete with cost leadership or differentiation strategies. He also argues that small firms, on the other hand may only viably compete with the focus strategy. Using this framework, Figure 2 shows our study’s assessment of XYZ’s current position.

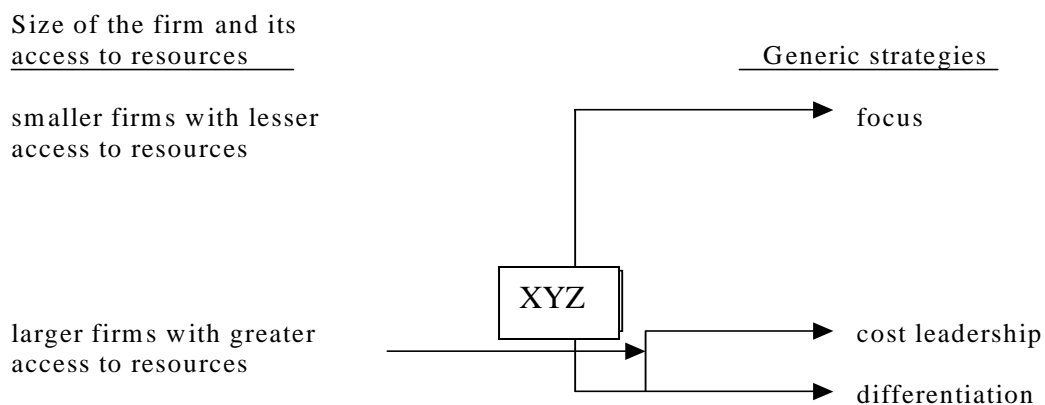


Figure 2. XYZ’s size position and available strategies.
 Obtained from Wright, P. “A Refinement of Porter’s Strategies.” *Strategic Management Journal* 8(1)(January 1987):93–101.

XYZ's medium-large size operations and privileged financial position allow for cost leadership or differentiation strategies. However, consideration should be given to the fact that defining a strategy involves many important factors. For example, a strategy dictates whom you compete against and how you compete. According to Porter (1980), different strategies imply different organizational arrangements, control procedures, and incentive systems. Considering the importance and wide set of economic and organizational repercussions associated with selecting a strategy, the careful logic-based approach to picking a strategy should involve XYZ choosing that one that best suits its internal strengths and best exploits areas of opportunity in the industry; while minimizing the potential effects of identified weaknesses and probable threats. This is where the study's detailed Strengths Weaknesses Opportunities and Threats Analysis (SWOT) and Porter Five Forces framework stepped in.

Cost leadership involves concentrating in selling a standardized product at low costs targeting the larger portion of a price-sensitive clientele (Wright 1987). Before taking this road, XYZ should consider the next issues.

- **Other labs would have a first-mover advantage in this strategy.** It seems some other labs already operate under this strategy.
- **What is the level of price-sensitiveness of the clientele?** Our study found information suggesting that food companies might hold other factors as more important than price (e.g., reliability in terms of accreditations and accuracy on test results, quick turnaround).
- **Growing to take advantage of economies of scale.** Cost leadership is achieved by having the lowest production costs in the industry; this in turn is possible because of a firm's ability to distribute fixed costs between larger quantities of output. Given the medium-large size of XYZ's operations, becoming cost leader in the industry would require increasing market share or demand and building new facilities to increase output.

- **Growing industry allows for firm's growth.** There is space to grow in the food-testing market. Several factors such as: as growing number of regulations, increasing health concerns among the general public, development of new technologies which in turn generate the need or possibility of doing more and new tests, and homeland security issues; suggest a long-term period of growth for the industry.

Product differentiators concentrate in offering an industry-wide unique product or service to the larger portion of a price-insensitive clientele (Wright 1987). For XYZ, important considerations if taking this strategy include.

- **How to differentiate?** First thing is identifying the value traits desired by food companies on their outsource laboratory of choice. The standardized characteristic of tests does not allow for differentiation on the physical quality of the product other than increased levels of accuracy in results. Differentiation is also possible on the quality-of-service aspect of the product.

- **XYZ's reputation for quality offers a forefront position to pursuing the differentiation strategy.** Results from the strategic analysis interviews show employees' and management's perception of XYZ's output quality as a strength for the company.

Recommendations - Decentralizing Leadership:

In addition to deciding on the overall company strategy, management of XYZ Research Corporation needs to clearly identify and communicate a transition strategy for the time when the CEO (Dr. Brown) will be less active in the day-to-day management of XYZ Research Corporation. While formulating a transition strategy and finding the appropriate personnel to carry out this transition strategy have been a priority for XYZ Research Corporation management, events have occurred to delay the implementation of this strategy. Clearly communicating the transition strategy to the entire company would reduce uncertainty and employee anxiety, and increase morale, and allow for a better competitive response to questions being raised by current customers and competitor of XYZ Research Corporation. The case study designed from this research enables the

instructor to lead a discussion on management succession issues in a family-held business.

Conclusion

The focus group and interview method is recommended as a valid alternative to gathering detailed data and information when facing limited availability of reliable quantitative economic data on sales, size, and other information on the industry.

The focus group method was flexible and convenient in terms of allowing the researchers to familiarize themselves with the main issues affecting the company in a short period of time. This method also allowed for digging out intricate functional relationships within the company and between the company and the industry. The amount and quality of person-to-person information gathered in the interviews made the questionnaire a more powerful tool versus the alternative of simply mailing it. In our study, such advantage results particularly important, since it allowed for deeper analysis and stronger and more dependable recommendations.

The interviews revealed a general disconnect between employees and management. This was shown by large gaps in average scores between employees and top management for most items in the interviews; verbal communications during the interviews also support this. This study identified those that seemed the most imperative issues to be solved, and addressed them in the recommendations presented.

A teaching case study was developed based on the information and analysis done in this study. The case study presents the reader with information to develop a SWOT and Porter's Five Forces analysis on the company and industry. The reader is also given enough information to help XYZ in choosing among the three generic strategies we

discussed in this study. Some of the other issues (e.g. moving to a new site, management succession, marketing strategies) are also placed in the case for potential discussion.

Table 1. Summary statistics from the XYZ Research Corporation interviews

		Employees		Mgmt. Employee Ave-	
	N=19	Ave	Std Dev	Ave	Mgmt. Ave
<i>I. MARKETING RESOURCES</i>					
1. Customer satisfaction with products/services	19	4.00	0.58	4.0	0.00
2. Ability to gain customers versus competition	19	2.97	0.59	3.0	-0.03
3. Knowledge of market	18	3.72	1.07	4.0	-0.28
4. Product/service line breadth and depth	18	4.31	0.77	5.0	-0.69*
5. Product/service quality in terms of function, image, place, time, possession, ease of use	15	4.17	0.70	4.0	0.17
6. Advertising and promotion activities	17	2.43	1.15	3.0	-0.57*
7. Product/service pricing	19	3.71	0.84	4.5	-0.79*
8. Facilities and methods used to sell to customers	16	2.99	0.83	4.0	-1.01**
9. Market Share	15	3.01	0.64	4.0	-0.99**
<i>II. FINANCIAL RESOURCES</i>					
1. Strong and recurring operating profits	9	3.61	0.56	5.0	-1.39**
2. Efficient asset management	8	3.66	0.66	5.0	-1.34**
3. Strong and recurring return on investment	2	3.60	0.85	5.0	-1.40**
4. Proper balance of debt and equity	1	5.00	N/A	5.0	0.00
5. Strong and recurring return on equity	2	4.60	0.57	5.0	-0.40
6. Strong and recurring cash flow	3	4.40	0.53	5.0	-0.60*
7. Ready access to outside/new funds	4	3.13	1.03	3.0	0.13
8. Well managed customer credit	7	4.21	0.70	4.0	0.21
9. Well managed supplier credit	6	4.45	0.46	3.5	0.95*
<i>III. HUMAN RESOURCES</i>					
1. Adequate number of people to do the work	18	3.14	0.97	3.5	-0.36
2. Adequate quality of people to do the work	17	3.74	1.03	3.0	0.74*
3. Personnel plans	15	2.87	0.40	3.5	-0.63*
4. Job design and descriptions	16	2.76	1.29	3.5	-0.74*
5. Performance standards and evaluation procedures	18	3.08	1.03	5.0	-1.92**
6. Training programs	17	2.94	1.08	3.0	-0.06
7. Good morale as evidenced by absenteeism, turnover, tardiness, complaints, bickering, employee growth and development	19	3.14	1.01	3.5	-0.36
8. Compensation system that promotes performance and satisfaction	19	2.45	0.81	4.0	-1.55**
9. Equitable and competitive pay	18	2.60	0.83	4.0	-1.40**
10. Equitable and competitive fringes	18	2.54	0.78	4.0	-1.46**
11. Appropriate use of teams	15	3.17	0.96	4.0	-0.83*
12. Work ethic of individuals and teams	18	3.87	1.01	3.5	0.37

Table 1. Continued

		Employees		Mgmt.	Employee Ave-
	N=19	Ave	Std Dev	Ave	Mgmt. Ave
<i>IV. OPERATIONS/PRODUCTION RESOURCES</i>					
1. Quality of facilities to serve customers	19	3.32	1.01	4.0	-0.68
2. Capacity of needed facilities to serve customers	15	3.14	0.96	4.0	-0.86*
3. Up-to-date and appropriate technology	16	3.07	1.09	3.5	-0.43
4. Effective and efficient physical layout	16	2.56	1.2	2.5	0.06
5. Effective and efficient work flow	15	3.54	0.61	3.0	0.54*
6. Effective and efficient inventory control	12	3.08	1.28	3.5	-0.42
7. Effective and efficient purchasing practices	12	3.48	0.97	3.0	0.48
8. Effective and efficient production practices	16	3.86	0.59	3.0	0.86*
<i>V. MANAGEMENT/LEADERSHIP RESOURCES</i>					
1. Effective management style	17	3.59	0.83	3.5	0.09
2. Timely decision making	17	4	0.81	3.0	1.00**
3. Effective delegation	16	3.47	0.72	4.0	-0.53*
4. Effective participation	16	3.63	0.97	3.5	0.13
5. Effective risk taking	13	3.35	1.11	3.0	0.35
6. Effective leadership	17	3.59	0.81	3.5	0.09
<i>VI. ORGANIZATIONAL RESOURCES</i>					
1. Appropriate mix of resources (people, money, equipment) available	18	3.28	0.81	5.0	-1.72**
2. Resources properly placed to do the job	18	3.33	0.79	4.0	-0.67*
3. Effective interdepartmental communications	19	2.74	0.75	4.0	-1.26**
4. Effective reporting relationships	15	3.53	0.64	4.0	-0.47
5. Firm's public image	18	3.75	0.94	4.5	-0.75*
6. Strong organizational culture (productivity, honesty, dispute handling, tolerance of change)	18	3.5	0.87	4.0	-0.50
<i>VII. INFORMATION RESOURCES</i>					
1. Appropriate financial and cost accounting systems	10	3.25	0.79	5.0	-1.75**
2. Planning system appropriate for internal analysis	10	2.52	0.84	5.0	-2.48**
3. Planning system appropriate for external analysis	7	3.21	0.81	3.5	-0.29
4. Control system that highlights problems and generates corrective action	14	3.36	0.98	2.5	0.86*
5. Information systems that use the best technology available	14	3.46	1.08	4.0	-0.54
6. Effective information for strategic decision making	11	3.32	0.72	4.0	-0.68*
7. Effective information for operational decision making	12	3.46	0.72	4.0	-0.54*
8. Ability to utilize internet and e-commerce	17	3.52	0.74	5.0	-1.48**

* Differences larger than 0.5 but smaller than 0.99

** Differences larger than 0.99

References:

- Abernathy, W. and K. Wayne. "Limits to the Learning Curve." *Harvard Business Review*, 1983, pp. 114–131.
- Aaker, David A. *Strategic Market Management*. 2nd ed. New York: John Wiley & Sons, 1988, pp. 11–12.
- Allan, G. and J. Hammond. "Note on the Use of Experience Curves in Competitive Decision-Making." Harvard Intercollegiate Clearing House of Cases, 1975. Available at http://harvardbusinessonline.hbsp.harvard.edu/b02/en/common/item_detail.jhtml?id=175174 (Accessed June 2004).
- American City Business Journals Inc.. "Money Not Key Motivator for Most Employees." *Business First*, June 2001. Available at <http://louisville.bizjournals.com/louisville/stories/2001/06/25/editorial1.html> (Accessed June 2004).
- Beaver G. and C. Ross. "Enterprise in Recession: The Role and Context of Strategy." *International Journal of Entrepreneurship and Innovation* 1(1)(February 2000):23–31.
- Boston Consulting Group. *Perspectives on Experience*. Boston, MA: Boston Consulting Group, 1972.
- Compass Consulting International Incorporated. "Outsourcing: Is It Right For Higher Education Technology Services?" Available at <http://www.compassconsulting.com/articles/outsourc.html> (Accessed March 2004).
- Fanjoy, Monica S., Michaela C. Coglaiti, Heather L. Carter-Young, and Shawn L. Karns. "Food Testing Laboratory Database: Final Report," RTI Project Number 06673.011. Research Triangle Park, NC: Research Triangle Institute, 2001. Available at http://www.foodriskclearinghouse.umd.edu/Doc/6673_11_FR.pdf (Accessed June 2004).
- Giese, James. "Selecting an Outside Food Testing Laboratory," *Food Technology* 55(11)(2001):11. Available at http://www.ift.org/publications/docshop/ft_shop/11-01/11_01_pdfs/11-01-lab.pdf (Accessed April 2004).
- Hout, T., M. E. Porter and E. Urden. "How Global Companies Win Out." *Harvard Business Review*, September 1982, pp. 98–108.

- Jaramillo, P. "Strategic Analysis and Recommendations for XYZ Research Corporation: A Case Study." Master's Thesis. Adviser Lisa House, Co-Adviser Allen Wysocki. University of Florida. Summer 2004. Available at http://etd.fcla.edu/UF/UFE0006262/jaramillo_p.pdf .
- Marsili, R. "Sending It Out: Outsourcing Pros and Cons." *Food Product Design*, May 1997. Northbrook, IL: Weeks Publishing Company. Available at <http://www.foodproductdesign.com/archive/1997/0597QA.html> (Accessed April 2004).
- Miller, Alex, and Gregory G. Dess. *Strategic Management*, 2nd ed. New York: McGraw Hill, 1996, pp. 38–40.
- Pearce, John A. *Formulation, Implementation, and Control of Competitive Strategies*. 5th ed. Homewood, IL: Irwin, 1994.
- Peterson, H. Christopher. "Strategic Posture: Choosing a Business Direction in an Uncertain World." Paper presented at the Management Clinic in Louisville, KY, February 1994.
- Porter, M. "Creating and Sustaining Superior Performance." *Competitive Advantage*. New York: Free Press, 1985.
- Porter, M. "Techniques for Analyzing Industries and Companies." *Competitive Strategy*. New York: Free Press, 1980.
- Wright, P. "A Refinement of Porter's Strategies." *Strategic Management Journal* 8(1)(January 1987):93–101.