



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search  
<http://ageconsearch.umn.edu>  
[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*



# The Food Industry Center's 2001 Supermarket Annual Report

# **The 2001 Supermarket Panel Annual Report**

**Robert P. King, Elaine M. Jacobson, and Jonathan M. Seltzer**

Copyright ©2001 The Food Industry Center. 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.

The analyses and views reported in this paper are those of the authors. They are not necessarily endorsed by the Department of Applied Economics, by The Food Industry Center, or by the University of Minnesota.

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

For information on other publications, write The Food Industry Center, University of Minnesota, Department of Applied Economics, 1994 Buford Avenue, 317 Classroom Office Building, St. Paul, MN 55108-6040, USA, phone Mavis Sievert (612) 625-7019, or e-mail [msievert@aplec.umn.edu](mailto:msievert@aplec.umn.edu). Also, for more information about the Center and for full text of working papers, check our World Wide Web site [<http://trfic.umn.edu>].

## Acknowledgments

The Supermarket Panel is an activity of The Food Industry Center. Members of the research team for the 2001 Supermarket Panel were:

|                     |  |
|---------------------|--|
| Project Director    | Robert P. King<br>E. Fred Koller Professor of Agricultural<br>Management Information Systems<br>Department of Applied Economics<br>University of Minnesota |
| Project Manager     | Jonathan M. Seltzer<br>Corporate Resource, Inc.<br>Minneapolis, Minnesota  |
| Data Analyst        | Elaine M. Jacobson<br>Research Associate<br>The Food Industry Center<br>University of Minnesota  |
| Center Co-Directors | Jean D. Kinsey and Benjamin Senauer<br>Professors of Applied Economics<br>University of Minnesota  |

The Food Industry Center is located at the University of Minnesota and is one of eighteen industry centers funded by the Alfred P. Sloan Foundation. The goal of the Sloan Foundation's Industry Center program is to foster an understanding of the basic forces contributing to American economic progress in an increasingly competitive world economy. We gratefully acknowledge the funding for the Panel from the Sloan Foundation.

Mavis Sievert, Executive Secretary of The Food Industry Center, provided valuable support services. Wei Liu, M.S. student and Research Assistant in the Department of Applied Economics at the University of Minnesota, assisted with preparation of the benchmark reports. Barry Jacobson, consulting engineer, provided programming and database assistance. Ellen Carlson, Information Technology Professional in the Department of Applied Economics at the University of Minnesota, did the document design and layout for this report.

Pam Jones from the Minnesota Center for Survey Research (MCSR) was Survey Manager for the 2001 Panel. Anne Hoffman was the Data Analyst for the Panel. We thank them and their MCSR colleagues for their outstanding work.

Finally, we thank the individual owners store managers/directors and others who participated in the 2001 Panel. By sharing their time and knowledge, they have made this unique, in-depth view of the supermarket industry at the store level possible.

# The 2001 Supermarket Panel

## Executive Summary

The Supermarket Panel collects data annually from individual supermarkets on store characteristics, operations, and performance. It was established in 1998 by the Food Industry Center as the basis for ongoing study of the supermarket industry. The Panel is unique because the unit of analysis is the individual store and the same stores are tracked over time. This makes it possible to analyze the processes by which new technologies, business practices, and competitive forces are changing the industry.

The 2001 Supermarket Panel consists of 563 stores selected at random from the nearly 32,000 supermarkets in the U.S. or invited to participate through their affiliation with IGA. These 563 stores are located in forty-seven states and the District of Columbia. They are a representative cross section of the industry, including stores from all formats that belong to ownership groups ranging from single stores to the country's largest chains.

Key findings from the 2001 Supermarket Panel include:

- Supply chain and human resource practices have the most significant link to strong performance. This is consistent with findings from the 2000 Panel.
- Failure to adopt moderately progressive human resource practices can adversely affect performance. Once a basic level has been achieved in this area, other areas may offer better opportunities for improving performance.
- Food handling scores are high for stores in all ownership group size categories, but stores in the largest groups stand apart by offering more food safety training to their employees.
- Stores in ownership groups with more than sixty stores are far ahead of other stores in adopting energy efficient lighting and refrigeration management programs.

- Approximately 9% of stores in groups with eleven or more stores currently offer gasoline, and more than 20% of remaining stores in these larger groups are considering introduction of this service.
- Approximately one-third of the supermarket population recognizes significant competition from a supercenter. Stores that report supercenter competition have significantly lower sales per labor hour and sales growth.
- Top chain stores have higher weekly sales per square foot and sales per labor hour and much lower payroll as a percent of sales, but top stores in smaller groups have lower employee turnover and higher sales growth, gross profit as a percent of sales, and inventory turns.
- The top stores across the entire Panel are almost equally divided between “independent operators” and “chain stores.”

#### The 2002 Supermarket Panel

We will continue expanding the size of the Panel in 2002. This will increase the accuracy of our industry profile and make it possible to examine emerging trends in greater detail. With a third year of data from a randomly selected panel of stores, we will be able to more fully take advantage of the unique capabilities the Panel offers for longitudinal analysis. We will continue to place particular emphasis on the following questions.

- What are the characteristics of stores that are leaders across the entire range of performance measures?
- What are the key determinants of labor productivity?
- How are food system-wide supply chain and e-commerce initiatives being reflected in investment and technology adoption at the store level?

## Table of Contents

|     |   |    |
|-----|---|----|
| 1.  | Introduction . . . . .  | 1  |
| 2.  | A Descriptive Profile of the Panel . . . . .                        | 3  |
| 3.  | Supply Chain Practices . . . . .                                    | 12 |
| 4.  | Human Resources . . . . .   | 23 |
| 5.  | Food Handling . . . . .   | 30 |
| 6.  | Environmental Practices . . . . .                                   | 37 |
| 7.  | Quality Assurance . . . . .   | 42 |
| 8.  | Service Offerings . . . . .   | 48 |
| 9.  | Statistical Analysis of Performance Drivers . . . . .               | 54 |
| 10. | A Closer Look at Key Issues . . . . .                               | 62 |
| 11. | Looking Ahead to the 2002 Panel . . . . .                           | 77 |
|     | Appendix A Data Collection Procedures . . . . .                     | 78 |
|     | Appendix B Performance Driver Regression Analysis Results . . . . . | 83 |
|     | Appendix C Sample Benchmark Report . . . . .                        | 89 |

# The 2001 Supermarket Panel

## Annual Report

### 1. Introduction

The Food Industry Center established the Supermarket Panel in 1998 as the basis for ongoing study of the supermarket industry. The Panel is comprised of individual stores that provide information annually on store characteristics, operations, and performance. The Panel has two overall objectives:

1. Provide timely, useful information for the industry through benchmark reports and annual summaries.
2. Be a ready source of longitudinal, cross-section data for research on current and emerging issues.

The Panel is unique because the unit of analysis is the individual store and the same stores are tracked over time. This makes it possible to trace the impacts of new technologies and business practices as they are adopted.

The 2001 Panel consists of 563 stores selected at random from the nearly 32,000 supermarkets in the U.S. It is a representative cross-section of the industry. The information these stores have provided is the basis for the in-depth view of the industry presented here.

Key findings are summarized in the margins of each section in this report. In general, these findings highlight significant relationships among store characteristics, business practices, and performance. They should not be interpreted as cause and effect relationships.

The report begins with a brief description of the data collection procedures for the 2001 Supermarket Panel and a descriptive profile of the participating stores. The descriptive profile includes breakdowns by size of store group, format, and location.

Each participating store in the 2001 Panel received a confidential benchmark report comparing it to peer stores similar in format and selling area. Index scores for six key management areas – supply chain,

human resources, food handling, environmental practices, quality assurance, and service offerings – were an important feature of the benchmark report. Sections 3 through 8 present detailed findings on store practices and performance related to these six key management areas.

In Section 9 we present a more comprehensive analysis of drivers for key measures of store performance, using regression analysis to measure relationships between performance and individual store characteristics while controlling for other factors. Section 10 of this report offers a closer look at five key issues for the industry – technology adoption and new service offerings, performance of wholesaler supplied stores relative to members of self distributing groups, supercenter competition, remodeling, and characteristics of outstanding stores. This report concludes with a brief look ahead to the 2002 Panel.

## 2. A Descriptive Profile of the Panel

Data collection procedures for the 2001 Panel were similar to those used in 2000.<sup>1</sup> The population for the Panel was defined as the 31,356 establishments classified as supermarkets on a USDA list of 158,168 establishments in the United States that accept food stamps. All 386 stores that participated in the 2000 Panel were included in the sample for 2001. Of these, eighteen stores had either ceased operations or declined to participate again, leaving 368 stores that had previously participated in the Panel. An additional 1,632 stores were drawn at random from the remaining 30,970 stores in the population, yielding a total sample of 2,000 stores.

Prior to the initiation of data collection, the Food Industry Center and IGA agreed to send the 2001 Panel to all of the IGA stores in the United States. After accounting for the IGA stores already in the Panel, this increased the total sample size for the 2001 Panel to 3,601 stores.

Data collection, coding, and entry were administered and performed by the Minnesota Center for Survey Research (MCSR). In November 2000 MCSR personnel telephoned each of the 2,000 stores in the “original sample” constructed prior to inclusion of the IGA stores to confirm the store address and the name and title of the manager, so that all subsequent communication could be addressed to the person in charge at the individual location. This could be the owner, manager, or store director, depending on the individual organization, but respondents will be referred to as store managers henceforth.

In early January 2001 each store manager in the sample drawn from the USDA list received a letter introducing the Panel and indicating that his or her store had been randomly selected for participation. The letter indicated that each participating store would receive a confidential benchmark report. This was the only incentive offered for participation. In mid-January 2001, Panel data booklets were mailed to the 2,000 stores in the original sample. This mailing was followed by post card reminders and a second mailing of the data booklets to stores that had not responded. Data collection for these stores ended in mid-March 2001.

---

<sup>1</sup> See Appendix A for a more detailed description of data collection procedures.

Data booklets for IGA stores were mailed in March 2001 from IGA headquarters in Chicago, IL, along with a separate IGA survey. Managers were asked to return completed Panel data booklets to IGA headquarters, with the understanding that they would be forwarded to MCSR for coding and data entry. IGA forwarded data booklets to MCSR through early May 2001.<sup>2</sup>

Data were coded, edited, key punched, and cleaned by MCSR personnel in May and early June. During June and early July a confidential benchmark report was prepared for each participating store, comparing it to a group of peer stores similar in format and size.<sup>3</sup>

Of the 3,601 stores in the overall sample, 563 returned useable data booklets. This represents an overall response rate of 15.6%. Response rates differed by ownership group size and by region. To correct for these response imbalances, the population, sample, and respondents were grouped into strata defined by ownership and region, and frequency weights were constructed for use in the statistical analysis of the Panel data.<sup>4</sup> Unless noted otherwise, all analyses in this report are based on weighted data.

- Characteristics of stores in the 2001 Panel are generally quite similar to figures presented in the *68<sup>th</sup> Annual Report of the Grocery Industry* published by *Progressive Grocer* in April 2001.

Characteristics of stores in the 2001 Panel are similar to figures presented in the *68<sup>th</sup> Annual Report of the Grocery Industry* published by *Progressive Grocer* in April 2001. Table 2.1 compares median store characteristics for the entire U.S. from the *Progressive Grocer* report and the Supermarket Panel. Median stores from the two studies have nearly identical size and weekly sales per checkout. Panel stores have slightly lower annual sales and sales per square foot. Median sales per employee for the Supermarket Panel is 25% higher than the figure reported by *Progressive Grocer*, but this may be due to differences in the definition of this variable.

---

<sup>2</sup> IGA stores were informed that their Panel data would be available to IGA as well as to Food Industry Center researchers. IGA was not given access to data from the non-IGA stores that participated in the 2001 Panel.

<sup>3</sup> See Appendix C for a sample benchmark report.

<sup>4</sup> See Appendix A for details on response rates by ownership strata and region, a description of procedures for constructing frequency weights, and a table of the frequency weights.

Table 2.1 Median Store Characteristics for U.S. Supermarkets

| Characteristic                                 | Median Store Characteristics           |                    |
|--|--|--------------------|
|  | <i>Progressive Grocer</i> <sup>1</sup> | Supermarket Panel  |
| Annual Store Sales                             | \$12,089,224                           | \$10,920,000       |
| Selling Area                                   | 28,490 square feet                     | 29,000 square feet |
| Weekly Sales per Checkout                      | \$25,733                               | \$25,600           |
| Weekly Sales per Square Foot                   | \$8.16                                 | \$7.47             |
| Weekly Sales per Full-time Equivalent Employee | \$3,450                                | \$4,324            |

<sup>1</sup> Source: *68<sup>th</sup> Annual Report of the Grocery Industry*, special supplement to *Progressive Grocer*, April 2001.

#### Stores Grouped by Store Group Size

Control over a larger group of stores can be the basis for efficiency gains in procurement, distribution, advertising, employee training, and implementation of new technologies. However, the associated cost savings may be more apparent at the corporate level than in individual stores. Table 2.2 shows median characteristics and performance measures for stores in five group size categories that range from single store independents to groups with more than sixty stores. Store group size is based on common ownership, and a group may include stores with several different names.

The number of stores represented in each category is determined by summing the frequency weights across stores and is an estimate of the total number of stores nationally in the group size. The smaller number in parentheses is the actual number of Panel stores in the group size category prior to weighting. For example, the 185 single store independents in the 2001 Panel represent an estimated 5,989 single store independents nation-wide.

Table 2.2 Descriptive Profile of the Panel for Stores Grouped by Store Group Size

|  | Single<br>Store    | 2 -10<br>Stores    | 11 - 30<br>Stores | 31 - 60<br>Stores | > 60 Stores         |
|--|--------------------|--------------------|-------------------|-------------------|---------------------|
| <b>NUMBER OF STORES REPRESENTED</b>      | <b>5,989 (185)</b> | <b>5,802 (145)</b> | <b>3,204 (61)</b> | <b>2,170 (24)</b> | <b>14,292 (148)</b> |
| <b>STORE AND MARKET CHARACTERISTICS</b>  |                    |                    |                   |                   |                     |
| • Median Selling Area (sq. ft.)          | 15,000             | 24,000             | 29,000            | 28,000            | 38,000              |
| • Median Store Age (years)               | 29                 | 24                 | 19                | 21                | 16                  |
| • Median Number of Stores in Store Group | 1                  | 4                  | 16                | 45                | 586                 |
| • Percent Wholesaler Supplied            | 100                | 97                 | 86                | 37                | 4                   |
| • Percent Located in an SMSA             | 51                 | 55                 | 65                | 50                | 79                  |
| <b>MEDIAN PERFORMANCE MEASURES</b>       |                    |                    |                   |                   |                     |
| • Weekly Sales                           | \$80,499           | \$141,000          | \$285,000         | \$200,000         | \$320,000           |
| • Weekly Sales per Square Foot           | \$6.71             | \$7.10             | \$7.81            | \$5.95            | \$7.88              |
| • Sales per Labor Hour                   | \$91.72            | \$96.43            | \$101.75          | \$115.79          | \$125.10            |
| • Sales per Transaction                  | \$15.00            | \$16.83            | \$20.64           | \$19.42           | \$23.81             |
| • Annual Inventory Turns                 | 18.0               | 17.0               | 14.0              | 13.0              | 16.0                |
| • Percent Employee Turnover              | 40.0               | 47.3               | 58.1              | 40.0              | 42.3                |
| • Gross Profit as a Percent of Sales     | 24.1               | 24.0               | 23.5              | 22.0              | 24.2                |
| • Payroll as a Percent of Sales          | 10.0               | 10.0               | 9.5               | 9.5               | 9.8                 |
| • Annual Percentage Sales Growth         | 2.9                | 4.1                | 1.2               | -0.6              | 3.2                 |
| <b>NUMBER OF STORES BY FORMAT</b>        |                    |                    |                   |                   |                     |
| • Conventional                           | 5,353 (174)        | 5,068 (130)        | 1,466 (38)        | 1,484 (17)        | 6,021 (61)          |
| • Upscale                                | 97 (3)             | 350 (6)            | 420 (5)           | 219 (2)           | 1,728 (17)          |
| • Food/Drug Combination                  | 250 (3)            | 249 (6)            | 854 (12)          | 239 (2)           | 5,783 (61)          |
| • Warehouse                              | 289 (5)            | 135 (3)            | 464 (6)           | 228 (3)           | 760 (9)             |
| <b>NUMBER OF STORES BY REGION</b>        |                    |                    |                   |                   |                     |
| • Northeast                              | 1,398 (28)         | 1,480 (19)         | 163 (3)           | 429 (3)           | 3,432 (24)          |
| • South                                  | 1,496 (35)         | 1,343 (26)         | 672 (7)           | 881 (10)          | 5,472 (57)          |
| • Midwest                                | 1,919 (95)         | 1,893 (75)         | 1,529 (41)        | 608 (8)           | 2,280 (30)          |
| • West                                   | 1,176 (27)         | 1,086 (25)         | 840 (10)          | 252 (3)           | 3,108 (37)          |

For almost every characteristic and performance measure, there are striking differences in stores across these group size categories, though often there are not clear-cut, consistent trends across categories. Nearly all stores in groups of ten or fewer stores are wholesaler supplied, as are more than 85% of the stores in groups with eleven to thirty stores. As group size increases beyond thirty stores, however, the parent company is increasingly likely to operate its own distribution system. Stores in smaller groups, especially single stores, tend to be smaller and older and are less likely to be in an metropolitan area.

For three key median performance measures – weekly sales per square foot, sales per labor hour, and sales per transaction – stores in large groups clearly outperform single stores. This overall trend holds for sales per labor hour across the intermediate group sizes, but it breaks down for weekly sales per square foot and sales per transaction. Stores in groups of 11 - 30 stores have higher sales per square foot and sales per transaction than stores in groups of 2 - 10 and 31 - 60 stores. This pattern is consistent with that observed in the 2000 Panel. Median gross profit as a percent of sales is similar across all group sizes with the exception of groups of 31 - 60 stores which have notably lower gross margins. Median payroll as a percent of sales is similar for stores in the two smallest and largest group sizes but is slightly lower for stores in groups of 11 - 30 and 31 - 60 stores. Finally, sales growth varies considerably across group sizes. Median sales growth was negative for stores in groups of 31 - 60 stores – the group size category that had the highest median growth rate in the 2000 Panel.

Figures in the two sections at the bottom of Table 2.2 provide information on the distribution of stores by format and region within each group size category. Once again, the larger numbers are estimates for the entire population based on frequency weights, while the numbers in parentheses are actual numbers of Panel stores. Over 80% of stores in the single store and 2 - 10 store categories are conventional, as are more than two-thirds of stores in the 31 - 60 store category. There is much more variety with regard to format in the 11 - 30 and largest store group size categories. With respect to region, it is noteworthy that the South has such a high proportion of stores in groups with more than sixty stores, while the majority of stores in the Midwest are in groups of thirty or fewer stores.

- Stores in ownership groups with ten or fewer stores tend to be smaller and older and are less likely to be in a metropolitan area.

- Stores in large groups have the highest median levels for weekly sales per square foot, sales per labor hour, and sales per transaction.

- The South has a high proportion of stores in ownership groups with more than sixty stores, while the majority of stores in the Midwest are in groups of thirty or fewer stores.

### Stores Grouped by Format

Supermarket operators use store format to better respond to customers' desire for cost savings, convenience, quality, variety, and service. Table 2.3 shows median store characteristics and performance measures for stores grouped into four format categories: conventional, upscale, food/drug combination, and warehouse. In the top row of Table 2.3, numbers of stores represented are estimates for the entire population, while numbers in parentheses are actual numbers of stores in the 2001 Panel.

- Upscale and food/drug combination stores tend to belong to large store groups. Median group size is relatively small for warehouse stores.

Relative to stores in other formats, those in the conventional category are smaller, older, more likely to be wholesaler supplied, and less likely to be located in a metropolitan area. Upscale and food/drug combination stores are similar in size and tend to belong to large store groups, but the food/drug combination stores are much less likely to be wholesaler supplied. Warehouse stores have the largest median selling area. Median group size is relatively small for warehouse stores.

- Upscale stores have the highest sales per square foot, sales per transaction, inventory turns, and gross profit as a percent of sales. Warehouse stores have the best performance for sales per labor hour, payroll as a percent of sales, and sales growth.

Turning to the median performance measures in the middle of the Table 2.3, conventional stores have the lowest sales per square foot, sales per labor hour, and sales per transaction. Upscale stores have the highest sales per square foot, sales per transaction, inventory turns, and gross profit as a percent of sales. These stores also have outstanding median values for employee turnover and sales growth. The food/drug combination stores have the worst median performance levels for inventory turns, payroll as a percent of sales, and sales growth. On the other hand, they have the best level for employee turnover. Finally, warehouse stores have the best performance levels for sales per labor hour, payroll as a percent of sales, and sales growth. However, these stores also have the lowest median value for gross profit as a percent of sales and the highest for employee turnover.

### Continuing and New Stores in the Supermarket Panel

Of the 563 stores in the 2001 Panel, 155 were part of the 2000 Panel, and 408 were participating in the Panel for the first time. Because data for the continuing stores will be used later in this report to gain deeper insights on relationships between changes in operating practices and store performance, it is useful here to examine similarities and differences between continuing and new stores in the Panel. Table 2.4 shows median store characteristics and performance measures for these two groups.

Table 2.3 Descriptive Profile of the Panel for Stores Grouped by Format

|   | CON                 | US                | FD COMBO          | WH                |
|---|---------------------|-------------------|-------------------|-------------------|
| <b>NUMBER OF STORES REPRESENTED</b>         | <b>19,392 (420)</b> | <b>2,814 (33)</b> | <b>7,375 (84)</b> | <b>1,876 (26)</b> |
| <b>STORE AND MARKET CHARACTERISTICS</b>     |                     |                   |                   |                   |
| • Median Selling Area (sq. ft.)             | 22,000              | 37,000            | 42,000            | 58,000            |
| • Median Store Age (years)                  | 24                  | 12                | 18                | 13                |
| • Median Number of Stores in Store Group    | 7                   | 168               | 265               | 34                |
| • Percent Wholesaler Supplied               | 65                  | 31                | 21                | 39                |
| • Percent Located in an SMSA                | 59                  | 84                | 75                | 74                |
| <b>MEDIAN PERFORMANCE MEASURES</b>          |                     |                   |                   |                   |
| • Weekly Sales                              | \$135,000           | \$400,000         | \$365,000         | \$503,000         |
| • Weekly Sales per Square Foot              | \$7.00              | \$10.00           | \$8.00            | \$9.15            |
| • Sales per Labor Hour                      | \$98.28             | \$120.69          | \$117.19          | \$131.25          |
| • Sales per Transaction                     | \$17.65             | \$28.52           | \$23.01           | \$26.67           |
| • Annual Inventory Turns                    | 17.0                | 19.0              | 15.0              | 18.0              |
| • Percent Employee Turnover                 | 44.8                | 39.9              | 38.4              | 52.4              |
| • Gross Profit as a Percent of Sales        | 24.0                | 28.0              | 24.5              | 21                |
| • Payroll as a Percent of Sales             | 10.0                | 10.1              | 10.3              | 7.5               |
| • Annual Percentage Sales Growth            | 2.5                 | 5.5               | 1.9               | 5.9               |
| <b>NUMBER OF STORES BY STORE GROUP SIZE</b> |                     |                   |                   |                   |
| • Single Store                              | 5,353 (174)         | 97 (3)            | 250 (3)           | 289 (5)           |
| • 2 - 10 Stores                             | 5,068 (130)         | 350 (6)           | 249 (6)           | 135 (3)           |
| • 11 - 30 Stores                            | 1,466 (38)          | 420 (5)           | 854 (12)          | 464 (6)           |
| • 31 - 60 Stores                            | 1,484 (17)          | 219 (2)           | 239 (2)           | 228 (3)           |
| • > 60 Stores                               | 6,021 (61)          | 1,728 (17)        | 5,783 (61)        | 760 (9)           |
| <b>NUMBER OF STORES BY REGION</b>           |                     |                   |                   |                   |
| • Northeast                                 | 4,449 (57)          | 821 (7)           | 1,632 (13)        | 0 (0)             |
| • South                                     | 6,582 (100)         | 838 (9)           | 2,086 (22)        | 358 (4)           |
| • Midwest                                   | 5,433 (204)         | 477 (8)           | 1,137 (19)        | 1,182 (18)        |
| • West                                      | 2,928 (59)          | 678 (9)           | 2,520 (30)        | 336 (4)           |

CON = Conventional  
US = Upscale

FD COMBO = Food/Drug Combination  
WH = Warehouse

**Table 2.4 Descriptive Profile for Continuing and New Stores in the 2001 Supermarket Panel**

|   | <u>Median Store Characteristics</u>                       |   |
|---|---|---|
|   | Stores that First Participated in the Panel Prior to 2001 | Stores that First Participated in the Panel in 2001 |
| <b>NUMBER OF STORES REPRESENTED</b>         | <b>11,463 (155)</b>                                       | <b>19,994 (408)</b>                                 |
| <b>STORE AND MARKET CHARACTERISTICS</b>     |   |   |
| • Median Selling Area (sq. ft.)             | 29,000  | 30,000  |
| • Median Store Age (years)                  | 21  | 21  |
| • Median Number of Stores in Store Group    | 24  | 47  |
| • Percent Wholesaler Supplied               | 55  | 48  |
| • Percent Located in an SMSA                | 65  | 66  |
| <b>MEDIAN PERFORMANCE MEASURES</b>          |   |   |
| • Weekly Sales                              | \$240,000   | \$200,000   |
| • Weekly Sales per Square Foot              | \$7.82  | \$7.31  |
| • Sales per Labor Hour                      | \$108.19  | \$107.35  |
| • Sales per Transaction                     | \$20.47   | \$20.95   |
| • Annual Inventory Turns                    | 17.0  | 16.0  |
| • Percent Employee Turnover                 | 40.7  | 44.2  |
| • Gross Profit as a Percent of Sales        | 23.0  | 24.1  |
| • Payroll as a Percent of Sales             | 9.5   | 10.0  |
| • Annual Percentage Sales Growth            | 3.60  | 2.40  |
| <b>NUMBER OF STORES BY STORE GROUP SIZE</b> |   |   |
| • Single Store                              | 2117(36)  | 3872(149)   |
| • 2 - 10 Stores                             | 1881(31)  | 3921(114)   |
| • 11 - 30 Stores                            | 1867(30)  | 1337(31)  |
| • 31 - 60 Stores                            | 1036(12)  | 1134(12)  |
| • >60 Stores                                | 4562(46)  | 9730(102)   |
| <b>NUMBER OF STORES BY REGION</b>           |   |   |
| • Northeast                                 | 2592(23)  | 4310(54)  |
| • South                                     | 3004(34)  | 6860(101)   |
| • Midwest                                   | 3071(61)  | 5158(188)   |
| • West                                      | 2796(37)  | 3666(65)  |

Stores in the two groups are remarkably similar with regard to median selling area, store age, and percent located in an SMSA. The median ownership group size is slightly lower and the percentage that are wholesaler supplied is slightly higher for continuing stores. Median performance levels are also quite similar. These figures suggest, then, that the continuing stores are roughly representative of the entire 2001 Panel.

- Stores that participated in both the 2000 and 2001 Panels are roughly representative of the entire 2001 Panel.

In a more formal statistical analysis, a Pearson chi-square test was used to assess differences in the distributions of continuing and new stores across store group sizes, formats, and regions. In each case, the store distributions for the two groups were found to be significantly different. Therefore, caution needs to be exercised in generalizing results from the continuing stores to the entire population.

#### Summary

This descriptive profile of the stores in the 2001 Supermarket Panel provides general information on the characteristics of stores groups by ownership group size and format. Descriptive information is also presented for continuing and new stores in the Panel. The stores represent industry-wide diversity in group size, format, and regional location. In most cases when direct comparison is possible, findings for the Panel are similar to figures reported in *Progressive Grocer's Annual Report of the Grocery Industry*.

### 3. Supply Chain Practices

New technologies and business practices are being put in place to reduce inefficiencies and improve coordination throughout the retail food supply chain. New technologies include systems to facilitate faster transfer of product movement data, product orders, and invoices. Stores are also using frequent shopper cards and shelf-space allocation software. New business practices include scan-based trading, computer assisted ordering based on product movement data, and the information and decision sharing that is part of many category management programs.

In the past year, electronic commerce was a focus of attention in the food system and in other sectors of the economy. Increased emphasis is being placed on development of business-to-business applications, and the move from proprietary electronic data interchange (EDI) to Internet-based systems is making it easier to extend the benefits of e-commerce beyond the manufacturers and distribution centers to the store level.

The Supply Chain score is designed to serve as an indicator of a store's ability to participate in and contribute to supply chain initiatives. This score has two equally weighted components. The technology component measures a store's adoption of ten store-level technologies related to supply chain management:

1. Electronic transmission of orders
2. Electronic receipt of invoices
3. Electronic transmission of movement data
4. Internet/Intranet links to corporate headquarters and/or key suppliers
5. Scan-based trading
6. Scanning data used for automatic inventory refill
7. Product movement analysis/Category management
8. Shelf-space allocation plan-o-grams
9. Electronic shelf tags
10. Frequent shopper/Loyalty card program

The first four of these technologies are related to EDI and Internet-based systems for sharing data with suppliers. Scan-based trading and use of scanning data for automatic inventory refill are technology-based business practices that facilitate decision sharing with trading partners. Finally, the last four technologies all support product assortment, pricing, and merchandising decisions at the store level. These ten technologies are equally weighted, and the score for the technology component is simply the percent of technologies adopted.

The decision sharing component of the Supply Chain score measures the extent to which parties outside the store are involved in store-level decisions in five key areas:

1. Pricing
2. Advertising
3. Space allocation
4. Display merchandising
5. Promotions.

Store managers were asked who has primary responsibility for decisions in each of these areas for four products: apples, dry cereal, direct store delivery (DSD) snacks, and fluid milk. The score for this component is the percent of these twenty decisions (five for each of four products) for which someone outside the store has primary responsibility.

#### Supply Chain Practices for Stores Grouped by Store Group Size

Table 3.1 shows median supply chain scores and technology adoption rates for stores in the five group size categories that range from single store independents to groups with more than 60 stores. In the top row of the table, numbers of stores represented are estimates for the entire population, while numbers in parentheses are unweighted numbers of stores in the Panel. The median Supply Chain score increases steadily with store group size, as do both the technology and decision sharing components.

Use rates for individual technologies are shown in the lower portion of the table. Electronic transmission of orders has an essentially constant adoption rate across group sizes. Use rates increase with store group size for the other three technologies related to EDI and Internet-based data sharing. The most dramatic differences are in the use of electronic

- Use rates increase with group size for three of the four technologies related to EDI and Internet-based data sharing.

Table 3.1 Supply Chain Practices for Stores Grouped by Store Group Size: Technology Adoption

|  | Single<br>Store | 2 -10<br>Stores | 11 - 30<br>Stores | 31 - 60<br>Stores | > 60<br>Stores  |
|--|-----------------|-----------------|-------------------|-------------------|-----------------|
| NUMBER OF STORES REPRESENTED (SC Score)  | 5,989<br>(185)  | 5,641<br>(142)  | 3,204<br>(61)     | 2,170<br>(24)     | 14,196<br>(147) |
| <b>MEDIAN SUPPLY CHAIN SCORE</b>   | <b>30</b>       | <b>45</b>       | <b>67</b>         | <b>70</b>         | <b>80</b>       |
| • Technology Component   | 40              | 40              | 60                | 60                | 60              |
| • Decision Sharing Component   | 20              | 55              | 70                | 80                | 100             |
| <b>USE OF TECHNOLOGY (Percentages)</b>   |                 |                 |                   |                   |                 |
| • EDI and Internet-based Data Sharing Technologies                                   |                 |                 |                   |                   |                 |
| – Electronic transmission of orders to vendors/suppliers                             | 67              | 74              | 72                | 70                | 68              |
| – Electronic receipt of invoices from vendors/suppliers                              | 33              | 25              | 54                | 67                | 80              |
| – Electronic transmission of movement data to headquarters or key suppliers          | 38              | 50              | 84                | 91                | 89              |
| – Internet/Intranet link to corporate headquarters and/or key suppliers              | 53              | 48              | 82                | 70                | 83              |
| • Technologies that Facilitate Decision Sharing                                      |                 |                 |                   |                   |                 |
| – Scanned-based trading (payment to vendor triggered by sale to consumer)            | 14              | 11              | 30                | 29                | 39              |
| – Scanning data used for automatic inventory refill                                  | 5               | 3               | 2                 | 7                 | 29              |
| • Technologies that Support Product Assortment, Pricing, and Merchandising Decisions |                 |                 |                   |                   |                 |
| – Product movement analysis/Category management                                      | 76              | 83              | 95                | 87                | 96              |
| – Shelf-space allocation plan-o-grams  | 53              | 71              | 70                | 90                | 96              |
| – Electronic shelf tags  | 20              | 30              | 30                | 31                | 21              |
| – Frequent shopper/Loyalty card program  | 31              | 23              | 35                | 40                | 50              |

invoices and in the electronic transmission of movement data, suggesting that these technologies – which yield cost savings at the store and distribution center levels – are being adopted first in settings where the store and distribution center are under common ownership.

There is also a strong upward trend across group sizes for use rates of scan-based trading and computer assisted ordering. In general, scan-based trading arrangements are made with direct-store-delivery (DSD) vendors. The higher use rate for stores in larger groups may be due to cost savings for larger groups in negotiating the arrangements for all their stores. Use of scanning data for automatic inventory refill is generally quite low except for stores in the largest groups. One possible explanation for this is that stores in large groups may have better access to the sophisticated software required for effective automated ordering. Alternatively, stores in larger groups may be more closely linked to distribution centers and may be shifting to vendor managed inventory systems.

Finally, differences in use rates for the four product assortment, pricing, and merchandising technologies are much less pronounced across group sizes. This is understandable, since most of the benefits from these technologies are realized at the store level and are not as strongly linked to greater coordination with suppliers.

Table 3.2 shows how decision sharing changes across store group sizes in the five decision areas for each of the four products. Rates of decision sharing increase consistently with group size in most cases. Among the decision areas, it is not surprising that advertising and promotions have the highest rates of decision sharing, while display merchandising has the lowest. Among the products, the rate of decision sharing tends to be higher for DSD snacks and fluid milk.

#### Supply Chain Practices for Stores Grouped by Format

Tables 3.3 and 3.4 show detailed information on Supply Chain score components for stores grouped by format. In the top row of the table, numbers of stores represented are estimates for the entire population, while numbers in parentheses are unweighted numbers of stores in the Panel. Upscale and food/drug combination stores have the highest median scores for both the technology and decision sharing components. Warehouse stores have slightly higher scores for both components than

- Technologies that yield cost savings at the store and distribution center levels are being adopted first by stores in self distributing companies.
- There is a strong upward trend across group sizes in the use of scan-based trading.
- Use of scanning data for automatic inventory refill is quite low except for stores in the largest groups.
- Rates of decision sharing increase consistently with group size.

conventional stores. These patterns are not surprising, since upscale and food/drug combination stores are more likely to be part of larger, self-distributing groups.

**Table 3.2 Supply Chain Practices for Stores Grouped by Store Group Size: Decision Sharing**

|  | Single<br>Store | 2 -10<br>Stores | 11 - 30<br>Stores | 31 - 60<br>Stores | > 60<br>Stores |
|--|-----------------|-----------------|-------------------|-------------------|----------------|
| <b>DECISION SHARING WITH PARTIES<br/>OUTSIDE THE STORE (Percentages)</b> |                 |                 |                   |                   |                |
| <b><u>APPLES</u></b>   |                 |                 |                   |                   |                |
| • Pricing  | 30              | 58              | 77                | 89                | 92             |
| • Advertising  | 46              | 74              | 92                | 96                | 95             |
| • Space Allocation   | 10              | 24              | 42                | 60                | 84             |
| • Display Merchandising  | 8               | 12              | 24                | 41                | 66             |
| • Promotions   | 27              | 56              | 71                | 86                | 92             |
| <b><u>DRY CEREAL</u></b>   |                 |                 |                   |                   |                |
| • Pricing  | 44              | 75              | 92                | 93                | 93             |
| • Advertising  | 46              | 79              | 92                | 96                | 95             |
| • Space Allocation   | 17              | 36              | 62                | 68                | 90             |
| • Display Merchandising  | 6               | 16              | 24                | 33                | 73             |
| • Promotions   | 29              | 57              | 83                | 80                | 92             |
| <b><u>DSD SNACKS</u></b>   |                 |                 |                   |                   |                |
| • Pricing  | 37              | 63              | 90                | 99                | 94             |
| • Advertising  | 41              | 75              | 92                | 100               | 94             |
| • Space Allocation   | 12              | 37              | 66                | 68                | 90             |
| • Display Merchandising  | 18              | 29              | 40                | 50                | 73             |
| • Promotions   | 34              | 59              | 83                | 91                | 92             |
| <b><u>FLUID MILK</u></b>   |                 |                 |                   |                   |                |
| • Pricing  | 30              | 69              | 86                | 85                | 91             |
| • Advertising  | 41              | 69              | 87                | 100               | 95             |
| • Space Allocation   | 10              | 26              | 62                | 65                | 88             |
| • Display Merchandising  | 8               | 15              | 33                | 41                | 74             |
| • Promotions   | 26              | 59              | 84                | 83                | 93             |

**Table 3.3 Supply Chain Practices for Stores Grouped by Format: Technology Adoption**

|  | CON                     | US                    | FD<br>COMBO           | WH                    |
|--|-------------------------|-----------------------|-----------------------|-----------------------|
| <b>NUMBER OF STORES REPRESENTED (SC Score)</b>                                       | <b>19,231<br/>(417)</b> | <b>2,814<br/>(33)</b> | <b>7,279<br/>(83)</b> | <b>1,876<br/>(26)</b> |
| <b>MEDIAN SUPPLY CHAIN SCORE</b>   | <b>55</b>               | <b>80</b>             | <b>80</b>             | <b>70</b>             |
| • Technology Component   | 50                      | 70                    | 70                    | 60                    |
| • Decision Sharing Component   | 60                      | 95                    | 100                   | 75                    |
| <b>USE OF TECHNOLOGY (Percentages)</b>   |                         |                       |                       |                       |
| • EDI and Internet-based Data Sharing Technologies                                   |                         |                       |                       |                       |
| – Electronic transmission of orders to   | 47                      | 82                    | 74                    | 70                    |
| – Electronic receipt of invoices from vendors/suppliers                              | 58                      | 94                    | 94                    | 91                    |
| – Electronic transmission of movement data to headquarters or key suppliers          | 61                      | 94                    | 77                    | 89                    |
| – Internet/Intranet link to corporate headquarters and/or key suppliers              | 25                      | 17                    | 22                    | 35                    |
| • Technologies that Facilitate Decision Sharing                                      |                         |                       |                       |                       |
| – Scanned-based trading (payment to vendor triggered by sale to consumer)            | 61                      | 80                    | 81                    | 96                    |
| – Scanning data used for automatic inventory refill                                  | 83                      | 100                   | 98                    | 100                   |
| • Technologies that Support Product Assortment, Pricing, and Merchandising Decisions |                         |                       |                       |                       |
| – Product movement analysis/Category management                                      | 20                      | 42                    | 40                    | 30                    |
| – Shelf-space allocation plan-o-grams  | 7                       | 38                    | 30                    | 14                    |
| – Electronic shelf tags  | 72                      | 92                    | 96                    | 90                    |
| – Frequent shopper/Loyalty card program  | 39                      | 52                    | 38                    | 22                    |

CON = Conventional  
US = Upscale

FD COMBO = Food/Drug Combination  
WH = Warehouse

Table 3.4 Supply Chain Practices for Stores Grouped by Format: Decision Sharing

|   | CON | US | FD<br>COMBO | WH |
|---|-----|----|-------------|----|
| <b>DECISION SHARING WITH PARTIES<br/>OUTSIDE THE STORE (Percentages)</b>  |     |    |             |    |
| <u>APPLES</u>   |     |    |             |    |
| • Pricing   | 62  | 89 | 91          | 76 |
| • Advertising   | 74  | 89 | 96          | 92 |
| • Space Allocation  | 40  | 68 | 77          | 64 |
| • Display Merchandising   | 28  | 49 | 66          | 38 |
| • Promotions  | 60  | 80 | 91          | 85 |
| <u>DRY CEREAL</u>   |     |    |             |    |
| • Pricing   | 72  | 95 | 95          | 88 |
| • Advertising   | 75  | 89 | 96          | 92 |
| • Space Allocation  | 50  | 76 | 88          | 62 |
| • Display Merchandising   | 30  | 51 | 71          | 43 |
| • Promotions  | 64  | 77 | 88          | 75 |
| <u>DSD SNACKS</u>   |     |    |             |    |
| • Pricing   | 69  | 90 | 93          | 86 |
| • Advertising   | 72  | 91 | 96          | 96 |
| • Space Allocation  | 48  | 81 | 87          | 69 |
| • Display Merchandising   | 38  | 62 | 73          | 46 |
| • Promotions  | 65  | 85 | 89          | 83 |
| <u>FLUID MILK</u>   |     |    |             |    |
| • Pricing   | 66  | 90 | 91          | 78 |
| • Advertising   | 71  | 89 | 95          | 92 |
| • Space Allocation  | 45  | 73 | 84          | 62 |
| • Display Merchandising   | 31  | 54 | 74          | 47 |
| • Promotions  | 64  | 82 | 90          | 75 |
| <div> CON = Conventional<br/> US = Upscale </div> <div> FD COMBO = Food/Drug Combination<br/> WH = Warehouse </div> |     |    |             |    |

Use rates for the four EDI and Internet-based data sharing technologies are generally similar for upscale, food/drug combination, and warehouse stores and lower for conventional stores. Upscale and food/drug combination stores have higher use rates for scan-based trading and use of scanning data for automatic inventory refill – the two technologies that facilitate decision sharing. Finally, among the product assortment, pricing, and merchandising technologies, it is noteworthy that warehouse stores have the highest use rate for electronic shelf tags – a labor-saving technology that yields the greatest benefits for stores with large selling area that carry many items.

- Warehouse stores have the highest use rate for electronic shelf tags.

#### Store Characteristics and Performance Measures for Stores Grouped by Supply Chain Score

Table 3.5 shows store characteristics and performance measures for stores grouped into quartiles based on the Supply Chain score. Median scores range from 30 for stores in the lowest quartile to 87 for those in the highest. The range of median scores is especially dramatic for the decision sharing component. For each quartile, medians for the overall score and both component scores are higher than those reported for the 2000 Panel. This points to broad-based progress in supply chain initiatives throughout the industry.

There are interesting differences in both market and store characteristics across the quartiles. Compared to stores in the lowest quartile, those in the highest quartile tend to be located in areas with higher median incomes and much higher population density. Stores in the highest quartile are newer, members of much larger store groups, and much less likely to be wholesaler supplied. They also have larger selling area and weekly sales. These patterns are similar to those observed for the 2000 Panel and are not surprising. Location in a more densely populated area makes it easier to interact with parties outside the store, as does membership in a larger store group. Similarly, larger size makes it easier to justify investments in new information technologies, since their cost is often not sensitive to store size.

- Stores in the highest quartile for the Supply Chain score are newer, members of larger store groups, and much less likely to be wholesaler supplied.

Turning attention to the performance measures reported in the lower portion of the table, increases in the Supply Chain score are associated with stronger performance in sales per labor hour and payroll as a percent of sales. There is no clear pattern across quartiles for weekly sales per square foot, gross profit as a percent of sales, and sales growth. Surprisingly, median inventory turns trends down across the quartiles. This could be due to problems with the quality of data provided by

**Table 3.5 Average Characteristics and Performance Measures for Stores Grouped by Supply Chain Score**

|  | <b>Lowest<br/>Quartile</b> | <b>Second<br/>Quartile</b> | <b>Third<br/>Quartile</b> | <b>Highest<br/>Quartile</b> |
|--|----------------------------|----------------------------|---------------------------|-----------------------------|
| <b>MEDIAN SUPPLY CHAIN SCORE</b>               | <b>30</b>                  | <b>60</b>                  | <b>75</b>                 | <b>87</b>                   |
| • Technology Component                         | 30                         | 50                         | 60                        | 80                          |
| • Decision Sharing Component                   | 15                         | 65                         | 100                       | 100                         |
| <b>MARKET CHARACTERISTICS</b>                  |                            |                            |                           |                             |
| • Median Population Density (per sq. mi)       | 80                         | 196                        | 747                       | 1,390                       |
| • Median Household Income (\$/year)            | \$36,766                   | \$37,071                   | \$41,775                  | \$43,849                    |
| • Percent Located in an SMSA                   | 48                         | 60                         | 76                        | 82                          |
| <b>STORE CHARACTERISTICS (Median)</b>          |                            |                            |                           |                             |
| • Store Age (years)                            | 25                         | 26                         | 18                        | 16                          |
| • Number of Stores in Store Group              | 1                          | 13                         | 160                       | 1,035                       |
| • Weekly Sales                                 | \$110,000                  | \$190,000                  | \$310,000                 | \$325,000                   |
| • Selling Area (sq. ft.)                       | 15,000                     | 28,000                     | 38,000                    | 39,000                      |
| • Weekly Labor Hours                           | 1,100                      | 1,850                      | 2,650                     | 2,680                       |
| <b>STORE CHARACTERISTICS (Percentage)</b>      |                            |                            |                           |                             |
| • Wholesaler Supplied                          | 90                         | 70                         | 22                        | 7                           |
| • Union Workforce                              | 10                         | 20                         | 35                        | 52                          |
| <b>PERFORMANCE MEASURES (Median)</b>           |                            |                            |                           |                             |
| • Weekly Sales per Square Foot of Selling Area | \$7.33                     | \$7.50                     | \$7.43                    | \$7.75                      |
| • Sales per Labor Hour                         | \$95.08                    | \$96.34                    | \$115.00                  | \$130.00                    |
| • Sales per Transaction                        | \$16.47                    | \$20.35                    | \$22.29                   | \$24.36                     |
| • Annual Inventory Turns                       | 18.0                       | 20.0                       | 14.0                      | 12.0                        |
| • Percentage Employee Turnover                 | 40.0                       | 44.2                       | 47.4                      | 44.0                        |
| • Gross Profit as a Percent of Sales           | 24.0                       | 23.0                       | 23.0                      | 25.0                        |
| • Payroll as a Percent of Sales                | 10.0                       | 10.0                       | 9.5                       | 9.4                         |
| • Annual Percentage Sales Growth               | 3.4                        | 3.5                        | 1.6                       | 3.2                         |

managers for inventory turns. Alternatively, increased reliance on parties outside the store for inventory management decisions may be lowering inventory turns at the store level.

Overall, the association between supply chain readiness and store performance is weak. This may reflect maturation in the use of supply chain technologies and business practices – i.e., many stores already may have realized the most important store-level gains from the supply chain initiatives. It may also suggest that the most significant benefits from supply chain initiatives are being realized at the distribution center or manufacturer level.

#### Supply Chain Practice Changes for Stores that Participated in the 2000 Panel

Examining changes in supply chain practices for stores that participated in the 2000 Panel can provide additional insights on the adoption of these practices. Table 3.6 shows how adoption rates for individual technologies and practices within the technology component of the Supply Chain score changed for stores that participated in the Panel in both 2000 and 2001.<sup>1</sup> Adoption rates increased for all practices except for scan based trading, and the change in adoption was statistically significant at the 0.10 level for electronic receipt of invoices, electronic transmission of movement data, product movement analysis/category management, electronic shelf tags, and frequent shopper/loyalty card programs. Clearly, these 155 stores made significant progress in adopting supply chain technologies.

The mean score for the decision sharing component of the Supply Chain score increased slightly from 2000 to 2001 for stores that participated in the Panel both years – from 57.3 to 58.8. This change was not statistically significant, however.

#### Summary

The results presented here confirm the finding from the 2000 Panel that stores in larger groups are better positioned to take part in supply chain initiatives. In contrast to the results for 2000, readiness in this area is not strongly associated with superior performance at the store level for the 2001 Panel. The relationship between supply chain readiness and

- The weak association between supply chain readiness and store performance may suggest that the most significant benefits from supply chain initiatives are being realized at the distribution center and manufacturer level.

---

<sup>1</sup> Data were not weighted for this analysis.

**Table 3.6 Changes in Supply Chain Technology Practice Adoption Rates for Continuing Panel Stores**

| <b>Supply Chain Technology</b>  | <b>Percentage Adoption Rate</b> |             |
|---|---------------------------------|-------------|
|   | <b>2000</b>                     | <b>2001</b> |
| <b>EDI and Internet-Based Data Sharing Technologies</b>                                   |                                 |             |
| • Electronic Transmission of Orders   | NA                              | 69.9        |
| • Electronic Receipt of Invoices  | 35.3                            | 50.3*       |
| • Electronic Transmission of Movement Data  | 53.4                            | 66.4*       |
| • Internet/Intranet Link to Corporate Headquarters and/or Key Suppliers                   | NA                              | 72.1        |
| <b>Technologies that Facilitate Decision Sharing</b>                                      |                                 |             |
| • Scan-Based Trading  | 29.9                            | 28.5        |
| • Scanning Data Used for Automatic Inventory Refill                                       | 9.3                             | 9.9         |
| <b>Technologies that Support Product Assortment, Pricing, and Merchandising Decisions</b> |                                 |             |
| • Product Movement Analysis/Category Management   | 84.2                            | 89.5*       |
| • Shelf-Space Allocation Plan-o-Grams   | 76.0                            | 76.7        |
| • Electronic Shelf Tags   | 14.9                            | 20.3*       |
| • Frequent Shopper/Loyalty Card Program   | 28.5                            | 33.1*       |

\* Difference in adoption rate is statistically significant at the 0.10 percent level.

performance will be examined again in the more comprehensive analysis of performance drivers presented in Section 9. Finally, adoption rates for many of the individual technologies and practices within the technology component of the Supply Chain score increased significantly for stores that participated in the Panel in both 2000 and 2001.

## 4. Human Resources

Hiring, training, retaining, and motivating employees are key challenges for store managers. Stores connect with their customers through their employees, and customers will quickly go elsewhere if they have a bad shopping experience.

The Human Resource score measures a store's adoption of progressive human resource practices. It has four equally weighted components.

1. New employee training is based on hours of training during the first twenty-six weeks of employment for new hires in cashier and other positions. This component is defined as total training hours for these two employee categories as a percent of 100 hours, with a maximum score of 100.
2. Key employee training is based on hours of training in the previous year for three key employees: the store manager, the grocery department manager, and the scanning coordinator. This component was added for the 2001 Panel. It is defined as total training hours for these three employees as a percent of 120 hours, with a maximum score of 100.
3. The proportion of all employees who are classified as full-time.
4. The use of incentive based compensation and several types of non-cash compensation. The score for this component reflects the opportunities store managers, department heads, other full time employees, and part time employees have to receive incentive pay. It is also based on the extent to which employees in these four categories receive the following types of non-cash compensation: employee stock ownership, individual health insurance, family health insurance, disability insurance, pension, and a 401(k) plan.

Each of the four components is scored on a 100 point scale, as is the overall index.

### Human Resource Practices for Stores Grouped by Store Group Size

Table 4.1 shows median human resource scores for stores in the five group size categories that range from single store independents to groups with more than sixty stores. In the top row of the table, numbers of stores represented are estimates for the entire population, while numbers in parentheses are unweighted numbers of stores in the Panel. The median Human Resource score is lowest for single store independents

and highest for stores in the largest store group size category, but there is no clear pattern for stores in the intermediate groups. There is no consistent pattern for scores for the individual components.

The median new employee training score is similar across all ownership group sizes, as are training levels for the two employee categories considered in this component. The median key employee training score increases steadily with group size except in the case of stores in

**Table 4.1 Human Resource Practices for Stores Grouped by Store Group Size**

|   | <b>Single</b>          | <b>2-10</b>            | <b>11 - 30</b>        | <b>31 - 60</b>        | <b>&gt; 60</b>          |
|---|------------------------|------------------------|-----------------------|-----------------------|-------------------------|
| <b>NUMBER OF STORES REPRESENTED (HR Score)</b>  | <b>5,625<br/>(167)</b> | <b>5,567<br/>(136)</b> | <b>2,877<br/>(56)</b> | <b>2,018<br/>(22)</b> | <b>13,776<br/>(142)</b> |
| <b>MEDIAN HUMAN RESOURCE PRACTICES SCORE</b>    | <b>33</b>              | <b>38</b>              | <b>41</b>             | <b>35</b>             | <b>45</b>               |
| • New Employee Training Component               | 40                     | 42                     | 36                    | 38                    | 40                      |
| • Key Employee Training                         | 6                      | 10                     | 16                    | 8                     | 40                      |
| • Proportion of Full-time Employees             | 37                     | 39                     | 30                    | 37                    | 35                      |
| • Compensation Component                        | 30                     | 41                     | 50                    | 44                    | 63                      |
| <b>NEW EMPLOYEE TRAINING COMPONENT: MEDIANS</b> |                        |                        |                       |                       |                         |
| • Cashier Training (1 <sup>st</sup> 26 weeks)   | 25                     | 24                     | 20                    | 24                    | 20                      |
| • Other Training (1 <sup>st</sup> 26 weeks)     | 20                     | 24                     | 16                    | 12                    | 20                      |
| <b>KEY EMPLOYEE TRAINING COMPONENT: MEDIANS</b> |                        |                        |                       |                       |                         |
| • Store Manager Training                        | 0                      | 8                      | 10                    | 5                     | 27                      |
| • Grocery Manager Training                      | 0                      | 0                      | 4                     | 2                     | 12                      |
| • Scanning Coordinator Training                 | 0                      | 3                      | 0                     | 1                     | 8                       |
| <b>COMPENSATION COMPONENT: MEDIANS</b>          |                        |                        |                       |                       |                         |
| • Incentive Based Component                     | 13                     | 19                     | 25                    | 13                    | 38                      |
| • Noncash Component                             | 45                     | 60                     | 65                    | 70                    | 85                      |

ownership groups with 31 to 60 stores. The difference in the median number of hours devoted to key employee by single store operators and stores in the largest groups is especially noteworthy.

There is no apparent pattern in the median proportion of full-time employees across group size categories. Median scores for the compensation component are generally higher for stores that belong to larger groups. This is expected, since large store groups often centralize human resource policies and are able to offer a wider array of benefits.

#### Human Resource Practices for Stores Grouped by Format

Table 4.2 shows detailed information on Human Resource score components for stores grouped by format. In the top row of the table, numbers of stores represented are estimates for the entire population, while numbers in parentheses are unweighted numbers of stores in the Panel. Conventional stores score lower than stores in other format categories for each component. Upscale, food/drug combination, and warehouse stores devote more resources to training, especially key employee training. Stores in these format categories are also much more likely to include non cash benefits in their compensation packages.

- Stores in the largest ownership groups devote much more time to key employee training than single store operators.

- Upscale, food/drug combination, and warehouse stores devote more resources to training, especially key employee training, than conventional stores.

#### Store Characteristics and Performance Measures for Stores Grouped by Human Resource Score

Table 4.3 shows store characteristics and performance measures for stores grouped into quartiles based on the Human Resource score. Median scores range from 26 for stores in the lowest quartile to 60 for those in the highest. Among the components of this score, variation is lowest for the proportion of full-time employees component and highest for the key employee training component.

On average, stores with the highest Human Resource practice scores are newer, larger, and part of larger store groups. They are more likely to be located in a metropolitan area and less likely to be wholesaler supplied. These patterns are consistent with those observed for the 2000 Panel. The fact that the percentage of stores with a union workforce is lowest for the lowest and highest quartiles is noteworthy and is a departure from the relatively constant percentage of stores with a union workforce across the top three quartiles in the 2000 Panel.

Stores that score in the upper quartile for the Human Resources score have the highest median levels for sales per labor hour, sales per transaction, and annual percentage sales growth. They also have the

Table 4.2. Human Resource Practices for Stores Grouped by Format

|   | CON             | US            | FD<br>COMBO   | WH            |
|---|-----------------|---------------|---------------|---------------|
| NUMBER OF STORES REPRESENTED (HR Score)       | 18,544<br>(391) | 2,654<br>(31) | 6,949<br>(77) | 1,716<br>(24) |
| MEDIAN HUMAN RESOURCE PRACTICES SCORE         | 38.0            | 50.0          | 44.0          | 48.0          |
| • Training Component                          | 38.0            | 46.0          | 42.0          | 48.0          |
| • Key Employee Training                       | 16.0            | 40.0          | 33.0          | 26.0          |
| • Proportion of Full-time Employees           | 35.0            | 35.0          | 35.0          | 39.0          |
| • Compensation Component                      | 39.1            | 58.4          | 57.8          | 51.9          |
| NEW EMPLOYEE TRAINING COMPONENT: MEDIANS      |                 |               |               |               |
| • Cashier Training (1 <sup>st</sup> 26 weeks) | 20              | 23            | 24            | 30            |
| • Other Training (1 <sup>st</sup> 26 weeks)   | 19              | 25            | 20            | 25            |
| KEY EMPLOYEE TRAINING COMPONENT: MEDIANS      |                 |               |               |               |
| • Store Manager Training                      | 8               | 24            | 24            | 25            |
| • Grocery Manager Training                    | 0               | 16            | 12            | 10            |
| • Scanning Coordinator Training               | 3               | 10            | 2             | 8             |
| COMPENSATION COMPONENT: MEDIANS               |                 |               |               |               |
| • Incentive Based Component                   | 19              | 31            | 31            | 25            |
| • Noncash Component                           | 60              | 85            | 80            | 80            |

CON = Conventional  
US = Upscale

FD COMBO = Food/Drug Combination  
WH = Warehouse

**Table 4.3 Average Characteristics and Performance Measures for Stores Grouped by Human Resource Practices Score**

|  | <b>Lowest<br/>Quartile</b> | <b>Second<br/>Quartile</b> | <b>Third<br/>Quartile</b> | <b>Highest<br/>Quartile</b> |
|--|----------------------------|----------------------------|---------------------------|-----------------------------|
| <b>MEDIAN HUMAN RESOURCE PRACTICES SCORE</b>   | <b>26</b>                  | <b>37</b>                  | <b>46</b>                 | <b>60</b>                   |
| • New Employee Training Component              | 26                         | 35                         | 48                        | 64                          |
| • Key Employee Training                        | 0                          | 13                         | 44                        | 83                          |
| • Proportion of Full-time Employees            | 30                         | 40                         | 34                        | 40                          |
| • Compensation Component                       | 38                         | 47                         | 52                        | 63                          |
| <b>MARKET CHARACTERISTICS</b>                  |                            |                            |                           |                             |
| • Median Population Density (per sq. mi.)      | 122                        | 167                        | 331                       | 533                         |
| • Median Household Income (\$/year)            | \$37,025                   | \$37,568                   | \$40,156                  | \$39,040                    |
| • Percent Located in an SMSA                   | 62                         | 60                         | 70                        | 73                          |
| <b>STORE CHARACTERISTICS (Median)</b>          |                            |                            |                           |                             |
| • Store Age (years)                            | 23                         | 23                         | 21                        | 16                          |
| • Number of Stores in Store Group              | 8                          | 19                         | 41                        | 160                         |
| • Weekly Sales                                 | \$172,656                  | \$210,000                  | \$280,000                 | \$312,000                   |
| • Selling Area (sq. ft.)                       | 25,000                     | 29,000                     | 28,752                    | 36,100                      |
| • Weekly Labor Hours                           | 1,600                      | 2,200                      | 2,100                     | 2,680                       |
| <b>STORE CHARACTERISTICS (Percentage)</b>      |                            |                            |                           |                             |
| • Wholesaler Supplied                          | 68                         | 50                         | 51                        | 23                          |
| • Union Workforce                              | 19                         | 33                         | 39                        | 22                          |
| <b>PERFORMANCE MEASURES (Median)</b>           |                            |                            |                           |                             |
| • Weekly Sales per Square Foot of Selling Area | \$6.50                     | \$7.43                     | \$8.51                    | \$7.75                      |
| • Sales per Labor Hour                         | \$100.00                   | \$100.00                   | \$112.33                  | \$125.64                    |
| • Sales per Transaction                        | \$17.86                    | \$19.09                    | \$22.87                   | \$23.33                     |
| • Annual Inventory Turns                       | 16.0                       | 18.0                       | 17.0                      | 14.5                        |
| • Percentage Employee Turnover                 | 48.4                       | 42.9                       | 40.0                      | 42.3                        |
| • Gross Profit as a Percent of Sales           | 23.0                       | 24.6                       | 25.0                      | 24.1                        |
| • Payroll as a Percent of Sales                | 9.7                        | 10.2                       | 9.5                       | 9.4                         |
| • Annual Percentage Sales Growth               | 0.0                        | 3.4                        | 2.9                       | 3.6                         |

- Failure to adopt moderately progressive human resource practices can adversely affect performance. Once a basic level has been achieved in this area, other areas may offer better opportunities for improving performance.

lowest median level for payroll as a percentage of sales. On the other hand, these top scoring stores have the lowest median level for inventory turns. Consistent with findings for the 2000 Panel, it is noteworthy that stores in the lowest quartile have poor median levels for all performance measures, while differences among stores in the top three quartiles are generally less clear-cut. This suggests that failure to adopt moderately progressive human resource practices can adversely affect performance. Once a basic level has been achieved in this area, though, other areas may offer better opportunities for improving performance.

#### Human Resource Practice Changes for Stores that Participated in the 2000 Panel

Table 4.4 shows how median levels of components of the Human Resource score changed for stores that participated in the Panel in both 2000 and 2001.<sup>1</sup> The compensation component was the only component with a statistically significant change in the median score, with an increase from 38.9 to 47.0. The median score for the new employee training component went down slightly, as did the median percentage of full time employees, but neither change was statistically significant. Data on key employee training were not collected in 2000, so no comparison is possible for this component.

Table 4.4 Changes in Human Resource Practice Component Scores for Continuing Panel Stores

| Human Resource Practice Component | Median Component Score |       |
|-----------------------------------|------------------------|-------|
|                                   | 2000                   | 2001  |
| New Employee Training             | 47.3                   | 40.0  |
| Key Employee Training             | NA                     | 19.0  |
| Proportion of Full-Time Employees | 35.4                   | 34.5  |
| Compensation                      | 38.9                   | 47.0* |
| • Incentive-Based Compensation    | 6.3                    | 25.0* |
| • Non-Cash Benefits               | 65.0                   | 65.0  |

\* Difference in median scores is statistically significant at the 0.10 percent level.

<sup>1</sup> Data were not weighted for this analysis.

The compensation component has two sub-components: use of incentive-based compensation practices and non-cash benefits. The median score for incentive-based compensation increased significantly from 2000 to 2001. This may reflect pressures to make compensation packages more attractive when labor markets are tight, as they were prior to administration of the Panel early in 2001.

#### Summary

Differences in the Human Resources score are relatively small across stores grouped by store group size and by format. Among the components of this score, difference are most pronounced for key employee training and compensation practices. On average, stores in large groups provide more training to key employees, are more likely to offer incentive-based compensation, and offer a wider range of non-cash benefits. Stores in the lowest quartile for the Human Resources score have poor median levels for all performance measures, while differences among stores in the top three quartiles are generally less clear-cut. This suggests that adopting moderately progressive human resource practices is important for all stores. Finally, the analysis of changes in Human Resource practices for stores that participated in the Panel in both 2000 and 2001 showed that, on average, stores are increasing their use of incentive-based compensation.

- Stores in the lowest quartile for the Human Resources score have poor median levels for all performance measures, while differences among stores in the top three quartiles are less clear-cut. This suggests that adopting moderately progressive human resource practices is important for all stores.

## 5. Food Handling

Food safety issues are a primary concern for consumers, retailers, and manufacturers. Food safety is often mentioned as the industry's most important challenge. The Food Handling score measures a store's adoption of practices that promote food safety and quality.<sup>1</sup> It has the following six components, each of which is measured on a 100 point scale. These are unchanged from the 2000 Panel.

1. Target Temperatures – conformity with recommended target temperatures for self service meat, dairy products, and self service deli. Meeting standards results in a score of 100 for this component. The score falls as target temperatures are set above recommended levels.
2. Temperature Checks – conformity with recommended frequency of temperature checks for self service meat, dairy products, self service deli, and frozen foods. Meeting frequency standards results in a score of 100 for this component. The score falls as temperature check frequencies fall below recommended levels.
3. Store Sanitation Audits – conformity with recommended frequency for self audits and third party audits of store sanitation practices. Meeting frequency standards results in a score of 100 for this component. The score falls as audit frequencies fall below recommended levels.
4. Dating Information – use of “sell by” or “use by” dates for poultry, red meat, seafood, and deli products. The score for this component is the percentage of these product categories using recommended dating information.
5. Inventory Practices – conformity with recommended inventory rotation practices for meat, dairy, self-service deli, and frozen foods. Using recommended practices for all products results in a score of 100 for this component.
6. Training – provision of food safety and handling training for the deli manager, deli employees, and meat department employees. The score for this component is the percentage of these employee categories that receive food safety and handling training.

---

<sup>1</sup> This index was developed by Professor Ted Labuza, Department of Food Science and Nutrition, University of Minnesota. It reflects the judgement of academic and industry food scientists on the relative importance of a range of factors related to food safety.

Scores for these six components are combined into an overall score on a 100 point scale.

#### Food Handling Practices for Stores Grouped by Store Group Size

Table 5.1 shows median Food Handling scores for stores across the range of group size categories. In the top row of the table, numbers of stores are estimates for the entire population, while numbers in parentheses are unweighted numbers of stores in the Panel. Scores are high for stores in all group size categories. There is a slight upward trend in median levels for the overall score as store group size increases. This is in contrast to findings for the 2000 Panel, which showed no clear trend in scores associated with group size. There is very little variation in median scores for the first five individual components. For the food safety training component, however, the median score and the percentage of each type employee receiving food safety training is lowest for single store independents. Stores in the largest groups also stand apart in this area by offering more training.

- Food Handling scores are high for stores in all ownership group size categories.
- Stores in the largest groups stand apart by offering more food safety training to their employees.

#### Food Handling Practices for Stores Grouped by Format

Table 5.2 shows detailed information on Food Handling score components for stores grouped by format. Here there is very little variation. Upscale and food/drug combination stores have the highest median scores, but differences are small and median overall scores are notably high for all formats.

Looking more closely at the components of the Food Handling score, differences are greatest for the store audit and training components. Upscale stores are most likely to use recommended store sanitation audit procedures, and food/drug combination stores are much more likely to provide food safety training for each type of employee considered in this component.

- Upscale stores are most likely to use recommended store sanitation audit procedures, and food/drug combination stores provide the most food safety training.

#### Store Characteristics and Performance Measures for Stores Grouped by Food Handling Score

Table 5.3 shows store characteristics and performance measures for stores grouped into quartiles based on the Food Handling score. Differences in median scores across quartiles are much smaller than for the 2000 panel, suggesting that most stores are performing well in this management area. Food safety training is the component that varies the most across quartiles.

Table 5.1 Food Handling Practices for Stores Grouped by Store Group Size

|  | Single<br>Store        | 2 -10<br>Stores        | 11 - 30<br>Stores     | 31 - 60<br>Stores     | > 60<br>Stores          |
|--|------------------------|------------------------|-----------------------|-----------------------|-------------------------|
| <b>NUMBER OF STORES REPRESENTED (FH Score)</b> | <b>3,711<br/>(126)</b> | <b>4,086<br/>(102)</b> | <b>2,498<br/>(46)</b> | <b>1,188<br/>(14)</b> | <b>11,170<br/>(116)</b> |
| <b>MEDIAN FOOD HANDLING PRACTICES SCORE</b>    | <b>79</b>              | <b>86</b>              | <b>87</b>             | <b>92</b>             | <b>92</b>               |
| • Target Temperature Component                 | 100                    | 100                    | 100                   | 100                   | 100                     |
| • Temperature Checking Component               | 100                    | 100                    | 100                   | 100                   | 100                     |
| • Store Audits Component                       | 40                     | 50                     | 50                    | 50                    | 50                      |
| • Dating Information Component                 | 100                    | 100                    | 100                   | 100                   | 100                     |
| • Inventory Practices                          | 100                    | 100                    | 100                   | 100                   | 100                     |
| • Training                                     | 50                     | 75                     | 75                    | 75                    | 100                     |
| <b>TARGET TEMPERATURE COMPONENT: MEDIANS</b>   |                        |                        |                       |                       |                         |
| • Self Service Meat                            | 34                     | 35                     | 34                    | 32                    | 35                      |
| • Dairy  | 38                     | 36                     | 36                    | 34                    | 38                      |
| • Self Service Deli                            | 36                     | 36                     | 38                    | 34                    | 38                      |
| <b>TEMPERATURE CHECKING COMPONENT: MODES</b>   |                        |                        |                       |                       |                         |
| • Self Service Meat                            | 3                      | 3                      | 3                     | 3                     | 3                       |
| • Dairy  | 3                      | 3                      | 3                     | 3                     | 3                       |
| • Self Service Deli                            | 3                      | 3                      | 3                     | 3                     | 3                       |
| • Frozen                                       | 3                      | 3                      | 3                     | 3                     | 3                       |
| <b>STORE AUDITS COMPONENT: MODES</b>           |                        |                        |                       |                       |                         |
| • Self Audit                                   | 4                      | 4                      | 4                     | 4                     | 4                       |
| • 3 <sup>rd</sup> Party Commercial Audit       | 0                      | 0                      | 0                     | 0                     | 0                       |
| <b>DATING INFORMATION COMPONENT: MODES</b>     |                        |                        |                       |                       |                         |
| • Poultry                                      | 2                      | 2                      | 2                     | 2                     | 2                       |
| • Red Meat                                     | 2                      | 2                      | 2                     | 2                     | 2                       |
| • Seafood                                      | 2                      | 2                      | 2                     | 2                     | 2                       |
| • Deli   | 2                      | 2                      | 2                     | 2                     | 2                       |
| <b>INVENTORY PRACTICES COMPONENT: MODES</b>    |                        |                        |                       |                       |                         |
| • Self Service Meat                            | 2                      | 2                      | 2                     | 2                     | 2                       |
| • Dairy  | 2                      | 2                      | 2                     | 2                     | 2                       |
| • Self Service Deli                            | 2                      | 2                      | 2                     | 2                     | 2                       |
| • Frozen                                       | 2                      | 2                      | 2                     | 2                     | 2                       |
| <b>TRAINING COMPONENT: PERCENTAGES</b>         |                        |                        |                       |                       |                         |
| • Deli Manager                                 | 53                     | 63                     | 78                    | 85                    | 92                      |
| • Deli Employees                               | 30                     | 45                     | 57                    | 43                    | 63                      |
| • Meat Manager                                 | 42                     | 55                     | 69                    | 60                    | 71                      |
| • Store Manager                                | 48                     | 58                     | 75                    | 87                    | 94                      |

Table 5.2 Food Handling Practices for Stores Grouped by Format

|  | CON             | US            | FD<br>COMBO   | WH            |
|--|-----------------|---------------|---------------|---------------|
| NUMBER OF STORES REPRESENTED (FH Score)      | 13,869<br>(300) | 2,091<br>(25) | 5,346<br>(60) | 1,347<br>(19) |
| <b>MEDIAN FOOD HANDLING PRACTICES SCORE</b>  | <b>87</b>       | <b>91</b>     | <b>92</b>     | <b>84</b>     |
| • Target Temperature Component               | 100             | 100           | 100           | 100           |
| • Temperature Checking Component             | 100             | 100           | 100           | 100           |
| • Store Audits Component                     | 50              | 70            | 50            | 50            |
| • Dating Information Component               | 100             | 100           | 100           | 100           |
| • Inventory Practices                        | 100             | 100           | 100           | 100           |
| • Training                                   | 75              | 75            | 100           | 75            |
| <b>TARGET TEMPERATURE COMPONENT: MEDIANS</b> |                 |               |               |               |
| • Self Service Meat                          | 34              | 34            | 36            | 35            |
| • Dairy                                      | 36              | 38            | 37            | 38            |
| • Self Service Deli                          | 36              | 36            | 38            | 38            |
| <b>TEMPERATURE CHECKING COMPONENT: MODES</b> |                 |               |               |               |
| • Self Service Meat                          | 3               | 3             | 3             | 3             |
| • Dairy                                      | 3               | 3             | 3             | 3             |
| • Self Service Deli                          | 3               | 3             | 3             | 3             |
| • Frozen                                     | 3               | 3             | 3             | 3             |
| <b>STORE AUDITS COMPONENT: MODES</b>         |                 |               |               |               |
| • Self Audit                                 | 4               | 4             | 4             | 4             |
| • 3 <sup>rd</sup> Party Commercial Audit     | 0               | 2             | 0             | 0             |
| <b>DATING INFORMATION COMPONENT: MODES</b>   |                 |               |               |               |
| • Poultry                                    | 2               | 2             | 2             | 2             |
| • Red Meat                                   | 2               | 2             | 2             | 2             |
| • Seafood                                    | 2               | 2             | 2             | 2             |
| • Deli                                       | 2               | 2             | 2             | 2             |
| <b>INVENTORY PRACTICES COMPONENT: MODES</b>  |                 |               |               |               |
| • Self Service Meat                          | 2               | 2             | 2             | 2             |
| • Dairy                                      | 2               | 2             | 2             | 2             |
| • Self Service Deli                          | 2               | 2             | 2             | 2             |
| • Frozen                                     | 2               | 2             | 2             | 2             |
| <b>TRAINING COMPONENT: PERCENTAGES</b>       |                 |               |               |               |
| • Deli Manager                               | 68              | 89            | 93            | 91            |
| • Deli Employees                             | 43              | 55            | 74            | 47            |
| • Meat Manager                               | 55              | 66            | 78            | 54            |
| • Store Manager                              | 70              | 82            | 91            | 75            |

CON = Conventional  
US = Upscale

FD COMBO = Food/Drug Combination  
WH = Warehouse

**Table 5.3 Characteristics and Performance Measures for Stores Grouped by Food Handling Practices Score**

|  | Lowest<br>Quartile | Second<br>Quartile | Third<br>Quartile | Highest<br>Quartile |
|--|--------------------|--------------------|-------------------|---------------------|
| <b>MEDIAN FOOD HANDLING PRACTICES SCORE</b>    | <b>74</b>          | <b>86</b>          | <b>92</b>         | <b>96</b>           |
| • Target Temperature Component                 | 100                | 100                | 100               | 100                 |
| • Temperature Checking Component               | 100                | 100                | 100               | 100                 |
| • Store Audits Component                       | 40                 | 50                 | 50                | 70                  |
| • Dating Information Component                 | 100                | 100                | 100               | 100                 |
| • Inventory Practices                          | 100                | 100                | 100               | 100                 |
| • Training                                     | 25                 | 75                 | 100               | 100                 |
| <b>MARKET CHARACTERISTICS</b>                  |                    |                    |                   |                     |
| • Median Population Density (per sq. mi.)      | 95                 | 219                | 255               | 836                 |
| • Median Household Income (\$/year)            | \$37,330           | \$38,069           | \$37,836          | \$43,047            |
| • Percent Located in an SMSA                   | 55                 | 72                 | 67                | 77                  |
| <b>STORE CHARACTERISTICS (Median)</b>          |                    |                    |                   |                     |
| • Store Age (years)                            | 23                 | 20                 | 21                | 18                  |
| • Number of Stores in Store Group              | 6                  | 34                 | 100               | 220                 |
| • Weekly Sales                                 | \$183,300          | \$213,756          | \$188,270         | \$310,000           |
| • Selling Area (sq. ft.)                       | 24,500             | 30,000             | 30,600            | 36,000              |
| • Weekly Labor Hours                           | 1,600              | 2,000              | 1,950             | 2,800               |
| <b>STORE CHARACTERISTICS (Percentage)</b>      |                    |                    |                   |                     |
| • Wholesaler Supplied                          | 67                 | 52                 | 40                | 24                  |
| • Union Workforce                              | 26                 | 25                 | 31                | 39                  |
| <b>PERFORMANCE MEASURES (Median)</b>           |                    |                    |                   |                     |
| • Weekly Sales per Square Foot of Selling Area | \$8.28             | \$7.30             | \$7.27            | \$7.43              |
| • Sales per Labor Hour                         | \$107.35           | \$104.62           | \$106.23          | \$114.58            |
| • Sales per Transaction                        | \$19.88            | \$20.59            | \$20.65           | \$24.36             |
| • Annual Inventory Turns                       | 16.0               | 16.0               | 20.0              | 18.0                |
| • Percentage Employee Turnover                 | 47.4               | 44.2               | 44.1              | 40.0                |
| • Gross Profit as a Percent of Sales           | 24.5               | 23.0               | 24.0              | 25.6                |
| • Payroll as a Percent of Sales                | 9.7                | 10.0               | 10.0              | 10.5                |
| • Annual Percentage Sales Growth               | 2.2                | 3.2                | 2.4               | 4.3                 |

On average, stores in the highest quartile for the Food Handling score are newer, larger, and part of a larger ownership group. They tend to be located in communities with greater population density and higher median household income. There are some interesting patterns for the performance measures across the quartiles for this management practice score. Stores in the highest quartile have the best median values for sales per labor hour, sales per transaction, employee turnover, gross profit as a percent of sales, and annual percentage sales growth. On the other hand, stores in the lowest quartile for the Food Handling score have the best median levels for weekly sales per square foot of selling area and payroll as a percent of sales.

#### Food Handling Practice Changes for Stores that Participated in the 2000 Panel

Table 5.4 shows how median levels of components of the Food Handling score changed for stores that participated in the Panel in both 2000 and 2001<sup>1</sup>. The median score for the food safety training component decreased significantly between 2000 and 2001 for these

**Table 5.4 Changes in Mean Food Handling Practice Component Scores for Continuing Panel Stores**

| <u>Food Handling Practice Component</u> | <u>Median Component Score</u> |             |
|---|-------------------------------|-------------|
|   | <b>2000</b>                   | <b>2001</b> |
| Target Temperatures                     | 100                           | 100         |
| Temperature Check Frequency             | 100                           | 100         |
| Store Sanitation Audits                 | 50.0                          | 50.0        |
| Dating Information                      | 100                           | 100         |
| Inventory Practices                     | 100                           | 100         |
| Food Safety Training                    | 100                           | 75.0*       |

\* Difference in median scores is statistically significant at the 0.10 percent level.

<sup>1</sup>Data were not weighted for this analysis.

stores. The mean score for this component actually increased, however, because stores in the lower half of the distribution devoted more resources to food safety training. Medians for all other components were unchanged.

#### Summary

Stores are generally achieving a high standard for food safety and handling, regardless of group size or format. Though differences in scores for this area are slight, stores with higher scores do perform better by most measures. Analysis of changes in food handling practices for stores that participated in the Panel in both 2000 and 2001 suggests that stores are not making significant changes in food safety and handling practices.

## 6. Environmental Practices

Environmental practices have moved well beyond receiving attention from consumers, who are interested in buying more environmentally friendly products and in recycling waste packaging from products purchased in supermarkets. Environmental issues are also a growing concern for store managers in their efforts to better manage energy purchasing and usage. “Brown-outs” and “rolling blackouts” are two terms that are now readily understood throughout the industry. With the prospect of higher energy costs in the coming year and the new complexity of energy procurement in a deregulated market, there is greater interest in energy-saving technologies for refrigeration and lighting.<sup>1</sup>

The Environmental Practices score measures a store’s adoption of practices that promote environmental quality. It has two equally weighted components:

1. A consumer component that measures the store’s offering of environmentally friendly products, organic produce, and recycling services. The score for this component is the percentage of product/service offerings.
2. A store operations component that measures the store’s adoption of energy efficient lighting, refrigeration management, and store waste recycling. The score for this component is the percentage adoption rate for these practices.

Each component is measured on a 100 point scale, as is the overall score.

### Environmental Practices for Stores Grouped by Store Group Size

Table 6.1 shows median Environmental Practices scores for stores in the five store group size categories. In the top row of the table, numbers of stores represented are estimates for the entire population, while numbers in parentheses are unweighted numbers of stores in the Panel. The overall score trends upward with store group size. Scores for both the consumer and operations components also trend upward with group size, but differences are greater for the consumer component than for the operations component. The same pattern holds for nearly all of the individual practices that make up this score.

---

<sup>1</sup> In response to increasing concerns about energy management, a supplemental Energy Management Survey was sent to Panel stores in September 2001. Findings from this study will be available early in 2002.

**Table 6.1 Environmental Practices for Stores Grouped by Store Group Size**

|  | Single<br>Store        | 2 -10<br>Stores        | 11 - 30<br>Stores     | 31 - 60<br>Stores     | > 60<br>Stores          |
|--|------------------------|------------------------|-----------------------|-----------------------|-------------------------|
| <b>NUMBER OF STORES REPRESENTED (EP Score)</b>   | <b>5,989<br/>(185)</b> | <b>5,641<br/>(142)</b> | <b>3,204<br/>(61)</b> | <b>2,170<br/>(24)</b> | <b>14,292<br/>(148)</b> |
| <b>MEDIAN ENVIRONMENTAL PRACTICES SCORE</b>      | <b>50</b>              | <b>66</b>              | <b>66</b>             | <b>66</b>             | <b>83</b>               |
| • Consumer Component                             | 33                     | 33                     | 66                    | 66                    | 100                     |
| • Operations Component                           | 66                     | 66                     | 66                    | 66                    | 100                     |
| <b>CONSUMER ORIENTED PRACTICES: PERCENTAGE</b>   |                        |                        |                       |                       |                         |
| • Environmentally Friendly Products              | 67                     | 70                     | 78                    | 75                    | 88                      |
| • Organic Produce                                | 44                     | 44                     | 60                    | 62                    | 88                      |
| • Recycling (cans, glass, plastic)               | 20                     | 36                     | 27                    | 46                    | 65                      |
| <b>OPERATIONS ORIENTED PRACTICES: PERCENTAGE</b> |                        |                        |                       |                       |                         |
| • Energy Efficient Lighting                      | 67                     | 72                     | 71                    | 67                    | 89                      |
| • Refrigeration Management Program               | 41                     | 50                     | 55                    | 67                    | 84                      |
| • Store Waste Recycling                          | 69                     | 67                     | 75                    | 73                    | 84                      |

#### Environmental Practices for Stores Grouped by Format

Table 6.2 shows detailed information on Environmental Practices for stores grouped by format. Upscale stores have the highest median score, while stores with conventional formats have the lowest. This pattern holds for adoption rates for each of the six individual practices.

#### Store Characteristics and Performance Measures for Stores Grouped by Environmental Practices Score

Table 6.3 shows store characteristics and performance measures for stores grouped into quartiles based on the Environmental Practices score. Stores in the highest quartile have the highest median number of stores in their ownership group and are least likely to be wholesaler supplied. On average, they are newer and larger and are located in areas with higher population density and median household income. They are somewhat more likely to have a union workforce and considerably more likely to be located in a metropolitan area.

**Table 6.2 Environmental Practices: Medians for Stores Grouped by Format**

|  | CON                     | US   | FD<br>COMBO           | WH                    |
|--|-------------------------|--|-----------------------|-----------------------|
| <b>NUMBER OF STORES REPRESENTED (EP Score)</b>   | <b>19,231<br/>(417)</b> | <b>2,814<br/>(33)</b>                              | <b>7,375<br/>(84)</b> | <b>1,876<br/>(26)</b> |
| <b>MEDIAN ENVIRONMENTAL PRACTICE SCORES</b>      | <b>66</b>               | <b>100</b>   | <b>83</b>             | <b>83</b>             |
| • Consumer Component                             | 66                      | 100  | 100                   | 100                   |
| • Operations Component                           | 66                      | 100  | 100                   | 100                   |
| <b>CONSUMER ORIENTED PRACTICES: PERCENTAGE</b>   |                         |  |                       |                       |
| • Environmentally Friendly Products              | 74                      | 90   | 90                    | 76                    |
| • Organic Produce                                | 54                      | 90   | 90                    | 81                    |
| • Recycling (cans, glass, plastic)               | 38                      | 69   | 54                    | 54                    |
| <b>OPERATIONS ORIENTED PRACTICES: PERCENTAGE</b> |                         |  |                       |                       |
| • Energy Efficient Lighting                      | 71                      | 90   | 92                    | 83                    |
| • Refrigeration Management Program               | 59                      | 75   | 76                    | 75                    |
| • Store Waste Recycling                          | 69                      | 96   | 84                    | 92                    |
| CON = Conventional<br>US = Upscale               |                         | FD COMBO = Food/Drug Combination<br>WH = Warehouse |                       |                       |

The strength and direction of association between the Environmental Practices score and performance measures need to be interpreted with caution, since other store characteristics that are correlated with the Environmental Practices score are also associated with better performance. Nevertheless, median performance levels for weekly sales per square foot, sales per labor hour, sales per transaction, and payroll as a percent of sales all improve consistently with increases in the Environmental Practices score.

#### Environmental Practice Changes for Stores that Participated in the 2000 Panel

Table 6.4 shows how adoption rates for individual components of the Environmental Practices score changed for stores that participated in the Panel in both 2000 and 2001.<sup>2</sup> Adoption rates increased slightly for all practices except for consumer oriented recycling and store waste

<sup>2</sup> Data were not weighted for this analysis.

**Table 6.3 Average Characteristics and Performance Measures for Stores Grouped by Environmental Practices Score**

|  | Lowest<br>Quartile | Second<br>Quartile | Third<br>Quartile | Highest<br>Quartile |
|--|--------------------|--------------------|-------------------|---------------------|
| <b>MEDIAN ENVIRONMENTAL PRACTICES SCORE</b>    | <b>33</b>          | <b>50</b>          | <b>83</b>         | <b>100</b>          |
| • Consumer Component                           | 33                 | 33                 | 66                | 100                 |
| • Operations Component                         | 33                 | 66                 | 100               | 100                 |
| <b>MARKET CHARACTERISTICS</b>                  |                    |                    |                   |                     |
| • Median Population Density (per sq. mi.)      | 77                 | 148                | 255               | 631                 |
| • Median Household Income (\$/year)            | \$34,549           | \$36,355           | \$40,292          | \$41,825            |
| • Percent Located in an SMSA                   | 44                 | 58                 | 69                | 81                  |
| <b>STORE CHARACTERISTICS (Median)</b>          |                    |                    |                   |                     |
| • Store Age (years)                            | 26                 | 21                 | 21                | 17                  |
| • Number of Stores in Store Group              | 4                  | 7                  | 48                | 240                 |
| • Weekly Sales                                 | \$95,000           | \$198,977          | \$240,000         | \$370,000           |
| • Selling Area (sq. ft.)                       | 14,652             | 25,250             | 30,000            | 40,000              |
| • Weekly Labor Hours                           | 1,000              | 1,400              | 2,307             | 2,800               |
| <b>STORE CHARACTERISTICS (Percentage)</b>      |                    |                    |                   |                     |
| • Wholesaler Supplied                          | 80                 | 73                 | 46                | 18                  |
| • Union Workforce                              | 13                 | 22                 | 32                | 37                  |
| <b>PERFORMANCE MEASURES: MEDIAN</b>            |                    |                    |                   |                     |
| • Weekly Sales per Square Foot of Selling Area | \$6.18             | \$7.50             | \$7.50            | \$7.88              |
| • Sales per Labor Hour                         | \$93.33            | \$104.80           | \$108.13          | \$121.27            |
| • Sales per Transaction                        | \$15.25            | \$19.42            | \$22.06           | \$24.80             |
| • Annual Inventory Turns                       | 16.0               | 15.0               | 16.0              | 18.0                |
| • Percentage Employee Turnover                 | 45.3               | 42.9               | 40.0              | 44.8                |
| • Gross Profit as a Percent of Sales           | 23.0               | 24.0               | 24.5              | 23.5                |
| • Payroll as a Percent of Sales                | 10.0               | 10.0               | 10.0              | 9.4                 |
| • Annual Percentage Sales Growth               | 1.1                | 3.8                | 2.9               | 3.2                 |

Table 6.4 Changes in Environmental Practice Adoption Rates for Continuing Panel Stores

| Environmental Practice               | Percentage Adoption Rate |       |
|--------------------------------------|--------------------------|-------|
|                                      | 2000                     | 2001  |
| <b>Consumer Oriented Practices</b>   |                          |       |
| • Environmentally Friendly Products  | 72.2                     | 74.2  |
| • Organic Produce                    | 52.3                     | 58.8* |
| • Recycling (cans, glass, plastic)   | 42.1                     | 39.5  |
| <b>Operations Oriented Practices</b> |                          |       |
| • Energy Efficient Lighting          | 75.3                     | 78.0  |
| • Refrigeration Management Program   | 60.5                     | 64.5  |
| • Store Waste Recycling              | 80.7                     | 78.7  |

\* Difference in adoption rate is statistically significant at the 0.10 percent level.

recycling. The change in the percent of stores that offer organic produce is statistically significant at the 0.10 level and reflects continuing growth in the demand for organic products.

#### Summary

Differences in the Environmental Practices score are relatively large across stores grouped by ownership group size and by format. Among the components of this score, differences are more pronounced for consumer oriented practices than for practices related to store operations. Stores in the highest quartile for the Environmental Practices score have superior median levels for most performance measures, but this may reflect strong correlation between environmental practices and other store and market characteristics that are also linked to superior performance. Finally, adoption rates for individual components of the Environmental Practices score changed little for stores that participated in the Panel in both 2000 and 2001.

- The increase in the percent of stores that offer organic produce is statistically significant and reflects continuing growth in the demand for organic products.

## 7. Quality Assurance

The Quality Assurance score measures a store's adoption of quality assurance practices in two areas:

1. Formal assessment of customer satisfaction, with the score for this component being the percentage adoption rate for use of customer focus groups, customer satisfaction surveys, and mystery shopper programs.
2. A food handling component is based on the score for five components of the food handling index: target temperatures, temperature checks, sanitation audits, inventory rotation, and food safety training.

These equally weighted components of the quality assurance score are measured on a 100 point scale, as is the overall index.<sup>1</sup>

### Quality Assurance Practices for Stores Grouped by Store Group Size

Median Quality Assurance scores for stores grouped by store group size are presented in Table 7.1. In the top row of the table, numbers of stores represented are estimates for the entire population, while numbers in parentheses are unweighted numbers of stores in the Panel. Median overall scores increase consistently across the range of store ownership group sizes. Differences across ownership group size are more pronounced for the customer satisfaction component than for the food handling component. Stores in the largest groups are much more likely than stores in the two smallest group size categories to use customer satisfaction surveys and mystery shopper programs. Differences in percentages of stores that use customer focus groups are smaller, and the trend across group sizes is less consistent. Within the food handling component, differences in the food safety training score are largest across the group sizes.

These patterns are consistent with those observed for the 2000 Panel. It is possible that stores in larger groups are more likely to use customer satisfaction surveys and mystery shopper programs and more likely to provide food safety training because their parent companies can spread

---

<sup>1</sup> In 2000 the Quality Assurance score also included a marketing programs component based on responses to questions about perishables excellence and strong service. This component was dropped because of lack of variation in responses.

- Stores in larger ownership groups are much more likely to use customer satisfaction surveys and mystery shopper programs.

the fixed costs of implementing these quality assurance techniques over a larger number of stores. It is also possible that larger groups are using some of these practices to ensure quality standards across stores after an acquisition. On the other hand, managers and owners of stores that belong to smaller groups may spend more time in the store and live in the store's trade area, reducing the need for customer satisfaction surveys and mystery shopper programs.

Table 7.1 Quality Assurance Practices for Stores Grouped by Store Group Size

|  | Single<br>Store        | 2 - 10<br>Stores       | 11 - 30<br>Stores     | 31 - 60<br>Stores     | > 60<br>Stores          |
|--|------------------------|------------------------|-----------------------|-----------------------|-------------------------|
| <b>NUMBER OF STORES REPRESENTED (QA Score)</b>                         | <b>3,788<br/>(128)</b> | <b>4,105<br/>(103)</b> | <b>2,498<br/>(46)</b> | <b>1,188<br/>(14)</b> | <b>11,673<br/>(121)</b> |
| <b>MEDIAN QUALITY ASSURANCE PRACTICES SCORE</b>                        | <b>45</b>              | <b>52</b>              | <b>73</b>             | <b>74</b>             | <b>81</b>               |
| • Customer Satisfaction Component                                      | 0                      | 33                     | 66                    | 33                    | 66                      |
| • Food Handling Component  | 77                     | 84                     | 86                    | 91                    | 91                      |
| <b>USE OF INSTRUMENTS TO ASSESS CUSTOMER SATISFACTION: PERCENTAGES</b> |                        |                        |                       |                       |                         |
| • Customer Focus Groups  | 20                     | 24                     | 50                    | 30                    | 56                      |
| • Customer Satisfaction Surveys  | 29                     | 40                     | 58                    | 60                    | 82                      |
| • Mystery Shopper Programs   | 25                     | 24                     | 59                    | 58                    | 85                      |
| <b>FOOD HANDLING PRACTICES: MEDIANS</b>                                |                        |                        |                       |                       |                         |
| • Target Temperature Score   | 100                    | 100                    | 100                   | 100                   | 100                     |
| • Temperature Check Score  | 100                    | 100                    | 100                   | 100                   | 100                     |
| • Sanitation Audit Score   | 40                     | 50                     | 50                    | 50                    | 50                      |
| • Inventory Rotation Score   | 100                    | 100                    | 100                   | 100                   | 100                     |
| • Food Safety Training Score   | 50                     | 75                     | 75                    | 75                    | 100                     |

### Quality Assurance Practices for Stores Grouped by Format

Table 7.2 shows detailed information on Quality Assurance practices for stores grouped by format. Upscale, warehouse, and food/drug combination stores have median overall scores that are well above those for conventional stores. This is largely due to greater use of formal methods for assessing customer satisfaction.

**Table 7.2 Quality Assurance Practices for Stores Grouped by Format**

|  | CON             | US            | FD<br>COMBO   | WH            |
|--|-----------------|---------------|---------------|---------------|
| NUMBER OF STORES REPRESENTED (QA Score)                                | 14,061<br>(304) | 2,175<br>(26) | 5,669<br>(63) | 1,347<br>(19) |
| <b>MEDIAN QUALITY ASSURANCE PRACTICES SCORE</b>                        | <b>63</b>       | <b>77</b>     | <b>81</b>     | <b>81</b>     |
| • Customer Satisfaction Component                                      | 33              | 66            | 66            | 66            |
| • Food Handling Component  | 86              | 88            | 91            | 83            |
| <b>USE OF INSTRUMENTS TO ASSESS CUSTOMER SATISFACTION: PERCENTAGES</b> |                 |               |               |               |
| • Customer Focus Groups  | 35              | 40            | 55            | 45            |
| • Customer Satisfaction Surveys  | 51              | 75            | 76            | 74            |
| • Mystery Shopper Programs   | 45              | 66            | 86            | 66            |
| <b>FOOD HANDLING PRACTICES: MEDIANS</b>                                |                 |               |               |               |
| • Target Temperature Score   | 100             | 100           | 100           | 100           |
| • Temperature Check Score  | 100             | 100           | 100           | 100           |
| • Sanitation Audit Score   | 50              | 70            | 50            | 50            |
| • Inventory Rotation Score   | 100             | 100           | 100           | 100           |
| • Food Safety Training Score   | 75              | 75            | 100           | 75            |

CON = Conventional  
US = Upscale

FD COMBO = Food/Drug Combination  
WH = Warehouse

### Store Characteristics and Performance Measures for Stores Grouped by Quality Assurance Score

Median store characteristics and performance measures for stores grouped into quartiles based on the Quality Assurance score are summarized in Table 7.3. The customer satisfaction component has the widest range in median scores for the three components of this score.

Stores in the highest quartile tend to be located in more densely populated, affluent market areas. They are larger, members of larger store groups, and less likely to be wholesaler supplied. For most performance measures there is not a clear trend in median levels across quartiles for the Quality Assurance score. For many measures, though, performance of stores in the top three quartiles is considerably better than that for stores in the lowest quartile.

### Quality Assurance Practice Changes for Stores that Participated in the 2000 Panel

Table 7.4 shows how median levels of components of the Food Handling score changed for stores that participated in the Panel in both 2000 and 2001.<sup>2</sup> The median customer satisfaction component was unchanged, but the percentage of stores using customer focus groups and mystery shopper programs increased significantly between 2000 and 2001. The median score for the food safety component increased significantly, though there were few changes in sub-component scores. Overall, continuing stores' use of quality assurance practices increased moderately but significantly over the past year.

### Summary

Stores in larger ownership groups tend to place greater emphasis on both the customer satisfaction and the food handling components of the Quality Assurance score, with differences being greatest for formal customer satisfaction assessment techniques. Trends across quartiles based on the Quality Assurance score are not strong for most performance measures. The fact that stores in the lowest quartile for this score have the poorest median performance levels for nearly all performance measures suggests that inattention to quality assurance may lead to performance problems. Finally, stores that participated in the Panel in both 2000 and 2001 made moderate progress in this area.

---

<sup>2</sup> Data were not weighted for this analysis.

**Table 7.3 Characteristics and Performance Measures for Stores Grouped by Quality Assurance Practices Score**

|   | <b>Lowest<br/>Quartile</b> | <b>Second<br/>Quartile</b> | <b>Third<br/>Quartile</b> | <b>Highest<br/>Quartile</b> |
|---|----------------------------|----------------------------|---------------------------|-----------------------------|
| <b>MEDIAN QUALITY ASSURANCE PRACTICES SCORE</b> | <b>41</b>                  | <b>63</b>                  | <b>79</b>                 | <b>96</b>                   |
| • Customer Satisfaction Component               | 0                          | 33                         | 66                        | 100                         |
| • Food Handling Component                       | 77                         | 83                         | 88                        | 92                          |
| <b>MARKET CHARACTERISTICS</b>                   |                            |                            |                           |                             |
| • Median Population Density (per sq. mi.)       | 71                         | 333                        | 446                       | 956                         |
| • Median Household Income (\$/year)             | \$35,933                   | \$40,444                   | \$38,570                  | \$44,860                    |
| • Percent Located in an SMSA                    | 46                         | 71                         | 69                        | 80                          |
| <b>STORE CHARACTERISTICS (Median)</b>           |                            |                            |                           |                             |
| • Store Age (years)                             | 30                         | 20                         | 17                        | 18                          |
| • Number of Stores in Store Group               | 2                          | 85                         | 160                       | 265                         |
| • Weekly Sales                                  | \$96,000                   | \$220,000                  | \$250,000                 | \$370,000                   |
| • Selling Area (sq. ft.)                        | 16,000                     | 31,000                     | 32,000                    | 41,000                      |
| • Weekly Labor Hours                            | 1,080                      | 2,250                      | 2,395                     | 2,800                       |
| <b>STORE CHARACTERISTICS (Percentage)</b>       |                            |                            |                           |                             |
| • Wholesaler Supplied                           | 93                         | 44                         | 30                        | 20                          |
| • Union Workforce                               | 13                         | 36                         | 33                        | 37                          |
| <b>PERFORMANCE MEASURES: MEDIANS</b>            |                            |                            |                           |                             |
| • Weekly Sales per Square Foot of Selling Area  | \$6.05                     | \$8.19                     | \$7.35                    | \$7.32                      |
| • Sales per Labor Hour                          | \$97.19                    | \$115.00                   | \$112.50                  | \$110.71                    |
| • Sales per Transaction                         | \$15.91                    | \$20.16                    | \$21.60                   | \$24.71                     |
| • Annual Inventory Turns                        | 19.0                       | 18.0                       | 15.0                      | 14.0                        |
| • Percentage Employee Turnover                  | 42.3                       | 43.9                       | 49.8                      | 40.4                        |
| • Gross Profit as a Percent of Sales            | 24.5                       | 24.1                       | 24.5                      | 24.5                        |
| • Payroll as a Percent of Sales                 | 10.0                       | 10.0                       | 9.9                       | 9.8                         |
| • Annual Percentage Sales Growth                | 2.4                        | 3.4                        | 2.9                       | 3.1                         |

**Table 7.4 Changes in Quality Assurance Practices for Continuing Panel Stores**

| <b>Quality Assurance Practice Component</b> | <b>Median Component Score</b> |              |
|---|-------------------------------|--------------|
|   | <b>2000</b>                   | <b>2001</b>  |
| <b>Customer Satisfaction</b>                | <b>33.3</b>                   | <b>33.3</b>  |
| • Customer Focus Groups (% of use)          | 27.5                          | 33.6*        |
| • Customer Satisfaction Surveys (% of use)  | 47.7                          | 50.3         |
| • Mystery Shopper Programs (% of use)       | 51.3                          | 45.4*        |
| <b>Food Handling Practices</b>              | <b>78.4</b>                   | <b>81.3*</b> |
| • Target Temperature                        | 100                           | 100          |
| • Temperature Check Frequency               | 100                           | 100          |
| • Store Sanitation Audits                   | 50.0                          | 50.0         |
| • Inventory Practices                       | 100                           | 100          |
| • Food Safety Training                      | 100                           | 75.0*        |

\* Difference in adoption rate is statistically significant at the 0.10 percent level.

## 8. Service Offerings

From the customer's viewpoint, service offerings are the basis for differentiation of stores in a local market area. In assessing their range of service offerings, stores must balance the benefits of becoming a one-stop destination for their customers against the fact that the cost of adding services can increase costs and make it more difficult to be price-competitive.

The Service Offerings score measures the adoption rate for thirteen services listed in Table 8.1. They range from bagging and carryout to teller banking and videos. Measured on a 100 point scale, a store's score is simply the percentage of these services that it offers.

Table 8.1 Service Offerings for Stores Grouped by Store Group Size

|  | Single<br>Store        | 2 -10<br>Stores        | 11 - 30<br>Stores     | 31 - 60<br>Stores     | > 60<br>Stores          |
|--|------------------------|------------------------|-----------------------|-----------------------|-------------------------|
| <b>NUMBER OF STORES REPRESENTED (SO Score)</b> | <b>5,989<br/>(185)</b> | <b>5,648<br/>(143)</b> | <b>3,204<br/>(61)</b> | <b>2,170<br/>(24)</b> | <b>14,292<br/>(148)</b> |
| <b>MEDIAN SERVICE OFFERINGS SCORE</b>          | <b>30</b>              | <b>38</b>              | <b>46</b>             | <b>38</b>             | <b>38</b>               |
| <b>PERCENTAGE THAT OFFER EACH SERVICE</b>      |                        |                        |                       |                       |                         |
| • Bagging Service                              | 89                     | 92                     | 88                    | 96                    | 90                      |
| • Carryout Service                             | 84                     | 83                     | 85                    | 84                    | 82                      |
| • Custom Meat Cutting/Service Meats            | 88                     | 84                     | 85                    | 82                    | 84                      |
| • Fax Ordering by Customer                     | 25                     | 25                     | 19                    | 31                    | 21                      |
| • Gasoline                                     | 3                      | 3                      | 8                     | 9                     | 10                      |
| • Home Delivery                                | 32                     | 19                     | 18                    | 13                    | 11                      |
| • Hot Meals or Meal Components (HMR)           | 49                     | 61                     | 59                    | 63                    | 73                      |
| • HMR Meals – Special Checkout Lane            | 16                     | 17                     | 25                    | 11                    | 16                      |
| • Internet Ordering by Customer                | 8                      | 8                      | 7                     | 21                    | 19                      |
| • Pharmacy, Prescriptions                      | 8                      | 13                     | 44                    | 33                    | 60                      |
| • Post Office, Mailing Services                | 28                     | 25                     | 42                    | 30                    | 22                      |
| • Teller Banking/In-store Banking              | 11                     | 18                     | 37                    | 26                    | 38                      |
| • Video Department                             | 24                     | 15                     | 23                    | 30                    | 35                      |

### Service Offerings Scores for Stores Grouped by Store Group Size

Table 8.1 presents Service Offerings scores for stores grouped by store group size. In the top row of the table, numbers of stores represented are estimates for the entire population, while numbers in parentheses are unweighted numbers of stores in the Panel. The median score is similar across all group sizes, being lowest for single store independents and highest for stores in ownership groups of 11 - 30 stores. There are few dramatic differences in percentages of stores offering individual services. However, single store independents are most likely to offer home delivery, stores in the two largest groups are most likely to offer Internet ordering, and stores in the largest groups are most likely to have a pharmacy.

### Service Offerings Scores for Stores Grouped by Format

Service Offerings scores are summarized for stores grouped by format in Table 8.2. Upscale and food/drug combination stores have the highest median scores. The upscale stores place greater emphasis on custom meats and fax and Internet ordering by customers, while the food/drug combination stores are more likely to offer a pharmacy and videos. As expected, warehouse stores have a very low adoption rate for bagging and carryout services, but they have fairly high adoption rates for home meal replacement services, pharmacy, and teller banking.

### Store Characteristics and Performance Measures for Stores Grouped by Service Offerings Score

Table 8.3 presents median store characteristics and performance measures for stores grouped into quartiles based on the Service Offerings score. On average, stores in the highest quartile are located in more densely populated areas. They are newer and larger than stores in the other three quartiles, tend to belong to much larger store groups, and are less likely to be wholesaler supplied. Stores in the upper quartile have strong if not superior median levels for most performance measures. It is noteworthy that they have the highest sales per labor hour and lowest payroll as a percent of sales, suggesting that it is possible to maintain labor productivity while increasing services. Overall, it appears that expansion of service offerings has been worthwhile for larger stores, but this may be a more difficult strategy to pursue for small, older stores in less attractive markets.

- It is noteworthy that stores in the highest quartile for the Service Offerings score have the highest sales per labor hour and lowest payroll as a percent of sales, suggesting that it is possible to maintain labor productivity while increasing services.

Table 8.2 Service Offerings for Stores Grouped by Format

|   | CON            | US           | FD<br>COMBO  | WH           |
|---|----------------|--------------|--------------|--------------|
| NUMBER OF STORES REPRESENTED (SO Score)   | 19238<br>(418) | 2814<br>(33) | 7375<br>(84) | 1876<br>(26) |
| MEDIAN SERVICE OFFERINGS SCORE            | 30             | 46           | 53           | 38           |
| <u>PERCENTAGE THAT OFFER EACH SERVICE</u> |                |              |              |              |
| • Bagging Service                         | 93             | 100          | 94           | 32           |
| • Carryout Service                        | 84             | 87           | 91           | 32           |
| • Custom Meat Cutting/Service Meats       | 83             | 97           | 90           | 57           |
| • Fax Ordering by Customer                | 22             | 43           | 18           | 26           |
| • Gasoline                                | 4              | 5            | 14           | 15           |
| • Home Delivery                           | 20             | 20           | 13           | 0            |
| • Hot Meals or Meal Components (HMR)      | 57             | 79           | 79           | 58           |
| • HMR Meals – Special Checkout Lane       | 14             | 27           | 20           | 22           |
| • Internet Ordering by Customer           | 9              | 30           | 17           | 24           |
| • Pharmacy, Prescriptions                 | 19             | 37           | 86           | 50           |
| • Post Office, Mailing Services           | 24             | 31           | 27           | 44           |
| • Teller Banking/In-store Banking         | 14             | 46           | 52           | 54           |
| • Video Department                        | 21             | 30           | 46           | 21           |

CON = Conventional  
US = Upscale

FD COMBO = Food/Drug Combination  
WH = Warehouse

**Table 8.3 Characteristics and Performance Measures for Stores Grouped by Service Offerings Score**

|  | <u>Lowest<br/>Quartile</u> | <u>Second<br/>Quartile</u> | <u>Third<br/>Quartile</u> | <u>Highest<br/>Quartile</u> |
|--|----------------------------|----------------------------|---------------------------|-----------------------------|
| <b>MEDIAN SERVICE OFFERINGS SCORE</b>          | <b>23</b>                  | <b>38</b>                  | <b>46</b>                 | <b>69</b>                   |
| <b>MARKET CHARACTERISTICS</b>                  |                            |                            |                           |                             |
| • Median Population Density (per sq. mi)       | 212                        | 113                        | 215                       | 324                         |
| • Median Household Income (\$/year)            | \$37,328                   | \$36,255                   | \$40,137                  | \$39,455                    |
| • Percent Located in an SMSA                   | 64                         | 58                         | 69                        | 74                          |
| <b>STORE CHARACTERISTICS (Median)</b>          |                            |                            |                           |                             |
| • Store Age (years)                            | 23                         | 25                         | 18                        | 15                          |
| • Number of Stores in Store Group              | 14                         | 63                         | 57                        | 125                         |
| • Weekly Sales                                 | \$140,088                  | \$226,500                  | \$312,000                 | \$380,000                   |
| • Selling Area (sq. ft.)                       | 24,000                     | 30,000                     | 35,000                    | 42,658                      |
| • Weekly Labor Hours                           | 1,500                      | 1,851                      | 2,800                     | 3,350                       |
| <b>STORE CHARACTERISTICS (Percentage)</b>      |                            |                            |                           |                             |
| • Wholesaler Supplied                          | 61                         | 45                         | 44                        | 31                          |
| • Union Workforce                              | 23                         | 33                         | 29                        | 32                          |
| <b>PERFORMANCE MEASURES: MEDIANS</b>           |                            |                            |                           |                             |
| • Weekly Sales per Square Foot of Selling Area | \$7.00                     | \$7.74                     | \$8.19                    | \$7.88                      |
| • Sales per Labor Hour                         | \$107.35                   | \$110.71                   | \$104.75                  | \$112.89                    |
| • Sales per Transaction                        | \$19.03                    | \$22.06                    | \$21.88                   | \$24.36                     |
| • Annual Inventory Turns                       | 16.0                       | 18.0                       | 16.0                      | 15.0                        |
| • Percentage Employee Turnover                 | 50.0                       | 40.0                       | 43.9                      | 37.8                        |
| • Gross Profit as a Percent of Sales           | 22.9                       | 24.1                       | 24.7                      | 25                          |
| • Payroll as a Percent of Sales                | 9.5                        | 10.0                       | 10.3                      | 9.8                         |
| • Annual Percentage Sales Growth               | 2.4                        | 1.9                        | 3.5                       | 3.1                         |

### Changes in Service Offerings for Stores that Participated in the 2000 Panel

Table 8.4 shows how the percentage of stores offering each service in the Service Offerings score changed for stores that participated in the Panel in both 2000 and 2001.<sup>1</sup> It is not surprising that there were few significant changes, since a major change in service offerings may not be possible without remodeling the store. The percent of stores offering fax ordering by the customer increased significantly, while the percentage of stores offering home meal replacement products declined significantly. Changes for most other services were small. Often changes were negative, suggesting that store may be scaling back slightly on services – perhaps due to labor shortages or increased price competition.

Table 8.4 Changes in Service Offerings for Continuing Panel Stores

| Service Offering                   | Percentage of Stores Offering |       |
|------------------------------------|-------------------------------|-------|
|                                    | 2000                          | 2001  |
| Bagging Service                    | 88.7                          | 88.0  |
| Carryout Service                   | 83.0                          | 82.4  |
| Custom Meat Cutting/Service Meats  | 81.0                          | 83.6  |
| Fax Ordering by Customer           | 15.8                          | 23.0* |
| Gasoline                           | NA                            | 5.2   |
| Home Delivery                      | NA                            | 15.6  |
| Hot Meals or Meal Components (HMR) | 73.2                          | 65.4* |
| HMR Meals – Special Checkout Lane  | 20.3                          | 17.1  |
| Internet Ordering by Customer      | 8.6                           | 9.9   |
| Pharmacy, Prescriptions            | 32.9                          | 30.9  |
| Post Office, Mailing Services      | 27.3                          | 28.0  |
| Teller Banking/In-store Banking    | 30.1                          | 27.5  |
| Video Department                   | 25.7                          | 23.0  |

\* Difference in adoption rate is statistically significant at the 0.10 percent level.

<sup>1</sup> Data were not weighted for this analysis.

## Summary

Choices about the range of service offerings are an important, visible component of a store's competitive strategy. Differences across stores categorized by store group size are less pronounced in this management area than in others. As expected, upscale and food/drug combination stores offer the widest range of services, though the areas they emphasize differ. For most measures, stores with higher Service Offerings scores have superior median performance levels. However, the analysis for stores that participated in the Panel in both 2000 and 2001 suggests that it is difficult to make rapid changes in service offerings.

## 9. Statistical Analysis of Performance Drivers

The descriptive profile of the Panel and the analysis of store characteristics and performance for each of the six key management areas provide useful insights on the structure of the supermarket industry and factors associated with strong performance. However, exploring the data from a series of unidimensional perspectives ignores the fact that performance is actually the product of complex interactions among store and market characteristics and management strategies and practices.

This section presents findings from a multivariate regression analysis of five key performance measures.<sup>1</sup>

1. Weekly Sales per Square Foot
2. Sales per Labor Hour
3. Payroll as a Percent of Sales
4. Gross Profit as a Percent of Sales
5. Annual Percentage Sales Growth

Each of these measures was regressed on independent variables that are grouped into four broad sets of performance drivers.

1. **Market Characteristics** include population density and median household income in the zip code where the store is located and a binary (i.e., zero/one) variable that is set to one if the store is in a metropolitan area (SMSA) and zero otherwise. These are factors that cannot be changed once a store has been built, but it is important to control for them because they can have important influences on store performance.
2. **Store Characteristics** include store selling area, a set of binary variables for alternative formats (upscale, food/drug combination, and warehouse, with conventional being considered the “base case”), store group size, a binary variable that is set to one if the store is part of a self-distributing group and zero otherwise, and a binary variable set to one if the store has a union workforce and zero otherwise. Although it may be

---

<sup>1</sup> Inventory turns was one of the performance drivers analyzed in the annual report for the 2000 Panel. In 2001 many stores did not respond to the question about inventory turns, and some of the responses that were provided were judged to be unreasonably low or high. This year, gross profit as a percent of sales was added to the list of performance drivers in place of inventory turns.

difficult, if not impossible, for a store manager to change store characteristics in the short run, it is important to control for these factors in analyzing store performance. Also quantifying the effects of these variables can be useful in “what-if” analyses of the effects of store group mergers or a shift to a union workforce.

3. **Competitive Strategy** performance drivers include binary variables indicating whether the manager identifies the store as a price leader, quality leader, service leader, and/or variety leader. These strategies are not mutually exclusive – a store could be both quality and service leader, for example. Also, they are not fully under the manager’s control, since a new competitor could take away leadership in one or more areas. Nevertheless, it is useful to examine how a store’s competitive strategy and position in each of these areas is associated with alternative performance dimensions.
4. **Management Practices** are summarized by the store’s scores for the six key management areas: supply chain, human resources, food handling, environmental practices, quality assurance, and service offerings. These are performance drivers that can be affected by conscious management decisions, either at the store level or in store group headquarters.

Table 9.1 presents summary information on all the variables in this analysis, along with variable name abbreviations used in subsequent tables. All twenty explanatory variables were included in the regression analysis for each of the five performance measures. With so many variables in the analysis, there were often missing values. In fact, only 231 stores had valid responses for all performance measures and all explanatory variables. Therefore, two sets of regressions were run. The first used only the 231 stores with no missing values. The second used as many stores as possible for each performance regression. Results of the two sets of regressions were quite similar from a qualitative standpoint, so only results for the stores that had valid responses for all performance measures and explanatory variables are reported here.

**Table 9.1 Summary Information for Explanatory Variables in Store Performance Analysis**

| <u>Variable</u>                      | <u>Abbreviation</u> | <u>Comments</u>            |
|--------------------------------------|---------------------|----------------------------|
| <b><u>MARKET CHARACTERISTICS</u></b> |                     |                            |
| • Population Density (per sq. mi)    | PopDen              | Based on Census data       |
| • Median Household Income (\$/year)  | HHInc               | Based on Census data       |
| • Located in an SMSA                 | SMSA                | 1 if SMSA, 0 otherwise     |
| <b><u>STORE CHARACTERISTICS</u></b>  |                     |                            |
| • Selling Area (sq. ft.)             | SellSize            |                            |
| • Upscale                            | US                  | 1 if US, 0 otherwise       |
| • Food/Drug Combination              | FD                  | 1 if FD, 0 otherwise       |
| • Warehouse                          | WH                  | 1 if WH, 0 otherwise       |
| • Store Group Size                   | GSize               |                            |
| • Self Distributing Group            | SelfDist            | 1 if SelfDist, 0 otherwise |
| • Union Workforce                    | Union               | 1 if Union, 0 otherwise    |
| <b><u>COMPETITIVE STRATEGY</u></b>   |                     |                            |
| • Price Leader                       | PLeader             | 1 if PLeader, 0 otherwise  |
| • Quality Leader                     | QLeader             | 1 if QLeader, 0 otherwise  |
| • Service Leader                     | SLeader             | 1 if SLeader, 0 otherwise  |
| • Variety Leader                     | VLeader             | 1 if VLeader, 0 otherwise  |
| <b><u>MANAGEMENT PRACTICES</u></b>   |                     |                            |
| • Supply Chain Score                 | SCScr               | Scale from 0 to 100        |
| • Human Resources Score              | HRSr                | Scale from 0 to 100        |
| • Food Handling Score*               | FHSr                | Scale from 0 to 100        |
| • Environmental Practices Score      | EPSr                | Scale from 0 to 100        |
| • Quality Assurance Score*           | QASr                | Scale from 0 to 100        |
| • Service Offerings Score            | SOSr                | Scale from 0 to 100        |

\*The target temperature component was removed from the Food Handling and Quality Assurance scores. There were many missing observations for this component, and there was almost no variation in the score for this component among stores that did respond.

Table 9.2 summarizes qualitative results for the five regression models. Each performance measure is associated with a column in the table, while each explanatory variable is associated with a table row. When the regression coefficient for an explanatory variable is statistically significant at the 95% confidence level, two pluses or minuses are placed in the appropriate performance variable column to indicate the sign of the coefficient. One plus or minus indicates statistical significance at the 85% confidence level. For example, the relationship between population density and sales per square foot is positive and statistically significant at the 95% level, so there are two pluses in the cell at the intersection for the row and column for these variables.

It is important to note that regression results measure statistical association between variables, while controlling for all other factors. Also, they indicate correlation but not causation. Only with multiple years of data for the same stores will it be possible to attribute a change in performance to a change in store characteristics or management practices.

#### Weekly Sales per Square Foot

This measure is higher in markets with higher population density, but there is not a statistically significant relationship between sales per square foot and median household income or location in an SMSA. The relationship between this measure and workforce unionization is positive and statistically significant. Relative to conventional stores, which are treated as the base format in this analysis, stores in the other three major format categories have significantly higher sales per square foot. In general, stores in these formats are larger than conventional stores. Within any format, however, increases in selling area have a significant negative association with sales per square foot.

The relationship between ownership group size and sales per square foot is statistically significant and negative, but this is offset by the statistically significant, positive relationship between this performance measure and the binary variable indicating membership in a self distributing group. Taken together, these results suggest that stores that are part of a self distributing group have superior performance that diminishes with group size. Based on parameter estimates reported in

- Relative to conventional stores, stores in the other three major format categories have significantly higher sales per square foot. Within any format, however, increases in selling area have a significant negative association with sales per square foot.
- Stores that are part of a self distributing group have superior sales per square foot, but this diminishes as ownership group size increases.

Table 9.2 Qualitative Results for Performance Driver Regressions<sup>1</sup>

| Explanatory Variable <sup>2</sup> | Weekly Sales per Square Foot | Sales per Labor Hour | Payroll as a Percent of Sales | Gross Profit as a Percent of Sales | Annual Percentage Sales Growth |
|-----------------------------------|------------------------------|----------------------|-------------------------------|------------------------------------|--------------------------------|
| <b>MARKET CHARACTERISTICS</b>     |                              |                      |                               |                                    |                                |
| • PopDen                          | ++                           | +                    |                               | +                                  | +                              |
| • HHInc                           |                              | ++                   |                               |                                    | ++                             |
| • SMSA                            |                              |                      |                               |                                    | +                              |
| <b>STORE CHARACTERISTICS</b>      |                              |                      |                               |                                    |                                |
| • SellSize                        | --                           |                      |                               | -                                  |                                |
| • US                              | ++                           |                      | ++                            |                                    |                                |
| • FD                              | ++                           |                      |                               |                                    |                                |
| • WH                              | ++                           | ++                   | --                            | -                                  |                                |
| • GSize                           | --                           | --                   |                               |                                    |                                |
| • SelfDist                        | +                            | ++                   |                               | +                                  |                                |
| • Union                           | ++                           | ++                   |                               |                                    | --                             |
| <b>COMPETITIVE STRATEGY</b>       |                              |                      |                               |                                    |                                |
| • PLeader                         | ++                           |                      | --                            | --                                 | ++                             |
| • QLeader                         |                              |                      |                               |                                    | --                             |
| • SLeader                         |                              |                      |                               |                                    | +                              |
| • VLeader                         |                              |                      |                               | +                                  |                                |
| <b>MANAGEMENT PRACTICES</b>       |                              |                      |                               |                                    |                                |
| • SCScr                           |                              | ++                   | --                            |                                    |                                |
| • HRScr                           |                              | ++                   |                               |                                    | ++                             |
| • FHScr                           |                              |                      |                               |                                    | ++                             |
| • EPScr                           | +                            |                      | ++                            |                                    |                                |
| • QAScr                           |                              |                      |                               |                                    | --                             |
| • SOScr                           |                              |                      |                               |                                    |                                |

<sup>1</sup>The symbol "++" indicates a positive relationship that is statistically significant at the 95% confidence level, while the symbol "--" indicates a negative relationship that is statistically significant at the 95% confidence level. The symbol "+" and "-" indicate positive and negative relationships that are statistically significant at the 85% confidence level.

<sup>2</sup>See Table 9.1 for full variable names and variable definitions.

Appendix B, the performance advantage for self distributing stores is outweighed by the negative group size effect when ownership group size exceeds approximately 1,150 stores.

Of the four management strategy variables, price leadership has a statistically significant, positive relationship with sales per square foot. Of the six management area scores, only Environmental Practices has a statistically significant relationship with weekly sales per square foot, and it is positive.

#### Sales per Labor Hour

This measure of labor efficiency is significantly higher in markets with higher population density and median household income and in stores with a warehouse format and a union workforce. Once again, group size and membership in a self distributing group have statistically significant but offsetting relationships with performance. The performance advantage for stores in self distributing groups is quite large, however. Though it declines significantly with group size, it is not completely offset even for stores in the very largest groups.

The Supply Chain and Human Resources scores have statistically significant, positive relationships with sales per labor hour, suggesting that improved practices in these areas are linked to higher labor productivity. None of the competitive strategy variables has a statistically significant relationship with sales per labor hour.

#### Payroll as a Percent of Sales

This second measure of labor productivity takes both labor time and the wage rate paid to workers into account. It is the only one of the five performance measures that stores try to minimize rather than maximize. So in this case negative signs for explanatory variables indicate an association with better performance.

Among the market and store characteristics, only the binary variables indicating the upscale and warehouse formats have a statistically significant relationship with payroll as a percent of sales. The positive relationship for the upscale stores and negative relationship for warehouse stores are consistent with expectations. The fact that there is not a statistically significant relationship between union workforce and payroll as a percent of sales is also noteworthy. It suggests that the higher labor productivity per hour noted in the results for sales per labor hour is offset by higher wages paid to union workers. Finally, of the four

- The Supply Chain and Human Resources scores have statistically significant, positive relationships with sales per labor hour, suggesting that improved practices in these areas are linked to higher labor productivity.

- The Supply Chain score has a statistically significant, negative relationship with payroll as a percent of sales. Again, this suggests that adoption of supply chain management technologies and business practices improves labor efficiency.

- None of the six management scores has a statistically significant relationship with gross profit as a percent of sales. This may indicate that stores have relatively little control over this aspect of profitability at the store level.

- Stores that identify themselves as price or service leaders have significantly higher growth rates.

management strategy variables, only price leadership has a statistically significant relationship with payroll as a percent of sales. Consistent with expectations, the relationship is negative.

A higher level for the Supply Chain score has a statistically significant, negative relationship with payroll as a percent of sales. Again, this suggests that adoption of supply chain management technologies and business practices improves labor efficiency. On the other hand, a higher score for environmental practices is associated with higher levels of payroll as a percent of sales.

#### Gross Profit as a Percent of Sales

This productivity measure – the difference between sales and cost of good sold divided by sales – can indicate success in being able to charge higher prices while maintaining sales levels and/or greater efficiency in procurement. Among the market characteristics, only population density has a statistically significant relationship with gross profit as a percent of sales, and it is positive. Turning to store characteristics, membership in a self distributing group has a statistically significant, positive relationship with gross profit as a percent of sales. On the other hand, both store selling area and warehouse format have statistically significant, negative relationships. This is not surprising for warehouse stores, since low prices and high sales volume are central to their competitive strategy. This is reinforced by the negative relationship between price leadership and gross profit as a percent of sales.

Finally, it is noteworthy that none of the six management scores has a statistically significant relationship with gross profit as a percent of sales. This may indicate that stores have relatively little control over this important indicator of profitability at the store level.

#### Annual Percentage Sales Growth

The annual rate of sales growth is generally higher for stores located in areas with higher population density and household income and for stores located in a metropolitan area. On the other hand, the relationship between sales growth and union workforce is negative and statistically significant. All other factors being equal, sales growth is significantly higher for stores that identify themselves as price or service leaders and negative for stores that identify themselves as quality leaders.

Among the management practices, only the Human Resource and Food Handling scores have a statistically significant, positive relationships with sales growth, suggesting that increased attention in these areas can

foster sales growth. On the other hand, the quality assurance score has a statistically significant, negative relationship with sales growth. One interpretation for this somewhat surprising finding is that stores with slow or negative growth place greater emphasis on the customer satisfaction component of this score in order to determine how to improve sales growth.

#### Results Across Performance Measures

While the regression analysis is designed to measure the effects of the performance drivers on one performance measure at a time, it is also useful to look at the qualitative results across performance measures. For example, market characteristics clearly have important impacts on most dimensions of performance. In general, stores in more densely populated metropolitan areas perform better.

There are several interesting patterns for store characteristics. The counterbalancing effects of membership in a self distributing group and ownership group size in the regression models for sales per square foot and sales per labor hour are noteworthy. On the one hand, these results point to operating advantages for stores that are part of a self distributing group. On the other hand, they indicate that performance at the store level suffers as the overall size of the ownership group expands.

Also noteworthy, however, are the strong positive relationship between membership in a self distributing group and gross profit as a percent of sales and the lack of relationships between membership in a self distributing group and payroll as a percent of sales and annual sales growth. Considered together, these findings highlight the advantages of having the store and its primary distribution center under common ownership. They also suggest continuing expansion of the size of self distributing groups through consolidation may be having a harmful effect on store level performance. It should be noted, though, that these store level effects may be offset by efficiency gains in procurement and distribution.

Finally, among the management areas, emphasis on supply chain and human resource practices have the most significant link to strong performance. This is consistent with findings for the 2000 Panel and suggests these are areas where increased management may have the greatest payoffs.

- Store level performance is stronger when the store and its distribution center are under common ownership. However, continuing expansion of the size of self distributing groups may have a harmful effect on store level performance.

- Consistent with findings from the 2000 Panel, supply chain and human resource practices have the most significant link to strong performance.

## 10. A Closer Look at Key Issues

The detailed store-level, multiyear data that are unique to the Supermarket Panel make it possible to analyze the processes by which new technologies, competitive forces, and management practices are changing the industry over time. The following six issues are among the most important facing supermarket operators and others in the industry.

1. Technology Adoption
2. New Service Offerings
3. Performance of Wholesaler Supplied Stores Relative to Stores in Self Distributing Chains
4. Impacts of Supercenter Competition
5. Impacts of Remodeling
6. Characteristics of Outstanding Stores

### Technology Adoption

Stores that participate in the Panel provide information not only on current technology use but also on their past experience with and plans for future adoption of technologies. This makes it possible to characterize trends that are likely to affect store operations over the next few years. Table 10.1 summarizes adoption patterns for three key supply chain and two key energy management technologies for stores grouped by ownership group size. Here and in other tables in this section (unless noted otherwise), numbers of stores represented are estimates for the entire population, while numbers in parentheses are unweighted numbers of stores in the Panel.

The first of the supply chain technologies – Internet/Intranet link to corporate headquarters and/or key suppliers – is a prerequisite for many of the e-commerce and supply chain initiatives in the industry. The second and third supply chain technologies – scan-based trading and use of scanning data for automatic inventory refill – help shift store level inventory management processes toward a much higher level of collaboration and coordination with suppliers.

For all three supply chain technologies, stores in larger groups are much more likely to have more than one year of experience than stores in groups of ten or fewer stores. Stores in smaller groups are quickly closing the gap in adoption of Internet/Intranet links, but more than one-third of single store operators have no plans to adopt this technology. For scan-based trading, the current level of adoption is

- Stores in smaller ownership groups are quickly closing the gap with stores in larger groups for adoption of Internet/Intranet links, but more than one-third of single store operators have no plans to adopt this technology.

**Table 10.1 Adoption Patterns for Selected Supply Chain and Energy Management Technologies for Stores Grouped by Store Group Size**

|  | <u>Single Store</u> | <u>2 - 10 Stores</u> | <u>11 - 30 Stores</u> | <u>31 - 60 Stores</u> | <u>&gt; 60 Stores</u> |
|--|---------------------|----------------------|-----------------------|-----------------------|-----------------------|
| <b>NUMBER OF STORES REPRESENTED</b>  | <b>5,989 (185)</b>  | <b>5,802 (145)</b>   | <b>3,204 (61)</b>     | <b>2,170 (24)</b>     | <b>14,292 (148)</b>   |
| <b>Internet/Intranet Link to Corporate Headquarters and/or Key Suppliers</b> |                     |                      |                       |                       |                       |
| • More than 1 Year (%)   | 34.9                | 38.4                 | 62.6                  | 65.2                  | 77.2                  |
| • Started in Past Year (%)   | 17.9                | 10.1                 | 19.0                  | 4.4                   | 5.3                   |
| • Plan to Start Next Year (%)  | 12.5                | 22.6                 | 7.8                   | 4.4                   | 6.3                   |
| • No Plans to Use/Don't Know (%)   | 34.7                | 23.7                 | 10.6                  | 21.6                  | 11.1                  |
| <b>Scan-Based Trading</b>  |                     |                      |                       |                       |                       |
| • More than 1 Year (%)   | 10.3                | 9.4                  | 22.5                  | 29.4                  | 34.1                  |
| • Started in Past Year (%)   | 3.5                 | 2.0                  | 7.6                   | 0.0                   | 4.8                   |
| • Plan to Start Next Year (%)  | 4.1                 | 4.6                  | 7.5                   | 3.5                   | 5.5                   |
| • No Plans to Use/Don't Know (%)   | 82.0                | 80.5                 | 62.4                  | 60.5                  | 54.7                  |
| <b>Scanning Data Used for Automatic Inventory Refill</b>                     |                     |                      |                       |                       |                       |
| • More than 1 Year (%)   | 3.3                 | 1.4                  | 2.4                   | 6.6                   | 26.3                  |
| • Started in Past Year (%)   | 1.4                 | 2.0                  | 0.0                   | 0.0                   | 2.7                   |
| • Plan to Start Next Year (%)  | 6.1                 | 5.5                  | 17.2                  | 0.0                   | 14.3                  |
| • No Plans to Use/Don't Know (%)   | 89.2                | 88.4                 | 80.4                  | 93.4                  | 56.6                  |
| <b>Energy Efficient Lighting</b>   |                     |                      |                       |                       |                       |
| • More than 1 Year (%)   | 64.7                | 66.7                 | 65.8                  | 58.7                  | 79.4                  |
| • Started in Past Year (%)   | 2.1                 | 5.1                  | 5.2                   | 8.3                   | 9.3                   |
| • Plan to Start Next Year (%)  | 8.9                 | 4.7                  | 7.3                   | 6.6                   | 2.5                   |
| • No Plans to Use/Don't Know (%)   | 23.1                | 20.0                 | 21.7                  | 22.9                  | 7.2                   |
| <b>Refrigeration Management Program</b>                                      |                     |                      |                       |                       |                       |
| • More than 1 Year (%)   | 34.4                | 45.5                 | 54.7                  | 59.2                  | 81.5                  |
| • Started in Past Year (%)   | 6.1                 | 4.2                  | 0.0                   | 7.9                   | 2.3                   |
| • Plan to Start Next Year (%)  | 7.7                 | 10.8                 | 4.5                   | 7.0                   | 2.3                   |
| • No Plans to Use/Don't Know (%)   | 50.1                | 35.7                 | 40.9                  | 25.9                  | 14.0                  |

much higher for stores in groups with more than eleven stores. Differences across store group sizes in the percentage of stores with no plans to adopt suggest this pattern will continue. The difference is even more striking for use of scanning data for automatic inventory refill. Stores in the largest groups are adopting this technology rapidly, while few stores in the four smaller group size categories have adopted this technology or plan to in the coming year.

- Stores in the largest ownership groups are rapidly adopting the use of scanning data for automatic inventory refill.

These results suggest it may be difficult for wholesaler supplied stores and wholesalers to take advantage of supply chain initiatives. However, the innovativeness of stores in groups with eleven to thirty stores is noteworthy.

Energy efficient lighting and refrigeration management programs are probably the most widely recognized and important technologies for managing energy costs at the store level. Adoption patterns for these technologies are summarized in the lower portion of Table 10.1.

- Stores in ownership groups with more than sixty stores are far ahead of other stores in adopting energy efficient lighting and refrigeration management programs.

Stores in ownership groups with more than sixty stores are far ahead of other stores in adopting both technologies. One possible explanation for this is that effective use of energy management technologies may require expertise that few stores are able to develop and maintain in-house. Large groups may be able to develop that expertise at the corporate level along with systems to deliver it at the store level. Because energy management will continue to be an important management issue, however, stores in smaller ownership groups may close this gap by using wholesaler supplied or independent energy management services.

#### **New Service Offerings**

Adoption patterns for three important new service offerings are summarized in Table 10.2. Customer self-scanning has the potential to save customers time in the checkout lane and help stores make better use of labor that is currently in short supply. Nearly all the current and most of the planned adoption of this technology is in stores that belong to groups with more than sixty stores.

“Internet-only” grocers have struggled to develop viable business models for procurement, fulfillment, and delivery. As a result, there has been increased interest in the “bricks and clicks” strategy for providing Internet-based home shopping services that combine Internet ordering with fulfillment and perhaps pickup from a traditional store. Stores in larger groups lead in offering Internet ordering to their customers, but the fact that a large percentage of stores in other size groups are considering introduction of this service suggests that differences across group sizes may soon begin to disappear. On the other hand, uncertainty about how widespread consumer acceptance of Internet-based home shopping will make it difficult to predict how this segment of the industry will develop.

**Table 10.2 Adoption Patterns for Selected Service Offerings for Stores Grouped by Store Group Size**

|                                      | Single Store       | 2 - 10 Stores      | 11 - 30 Stores    | 31 - 60 Stores    | > 60 Stores         |
|--------------------------------------|--------------------|--------------------|-------------------|-------------------|---------------------|
| <b>NUMBER OF STORES REPRESENTED</b>  | <b>5,989 (185)</b> | <b>5,802 (145)</b> | <b>3,204 (61)</b> | <b>2,170 (24)</b> | <b>14,292 (148)</b> |
| <b>Customer Self-Scanning</b>        |                    |                    |                   |                   |                     |
| • More than 1 Year (%)               | 1.6                | 0.2                | 0.0               | 0.0               | 10.5                |
| • Started in Past Year (%)           | 1.3                | 0.0                | 2.4               | 0.0               | 8.2                 |
| • Plan to Start Next Year (%)        | 2.1                | 4.2                | 9.7               | 0.0               | 15.6                |
| • No Plans to Use/Don't Know (%)     | 93.6               | 92.8               | 87.9              | 100               | 64.1                |
| <b>Internet Ordering by Customer</b> |                    |                    |                   |                   |                     |
| • Currently Offer                    | 8.3                | 8.0                | 7.3               | 21.1              | 19.1                |
| • Considering Introduction           | 24.7               | 36.9               | 16.2              | 28.2              | 16.4                |
| • Not Used, No Plan to Offer         | 66.8               | 52.2               | 76.5              | 50.7              | 64.5                |
| <b>Gasoline</b>                      |                    |                    |                   |                   |                     |
| • Currently Offer                    | 3.3                | 3.1                | 8.0               | 8.8               | 9.7                 |
| • Considering Introduction           | 4.4                | 10.7               | 20.1              | 12.4              | 22.6                |
| • Not Used, No Plan to Offer         | 92.2               | 83.5               | 71.7              | 78.8              | 67.7                |

Strong growth in convenience store sales can be partly explained by the fact that customers often view a stop for gasoline as an opportunity to purchase some of their food needs. Until recently few supermarkets have offered gasoline sales as a service to their customers. The results in Table 10.2 suggest this may be changing, especially for stores in larger groups. While approximately 9% of stores in groups with eleven or more stores currently offer gasoline, more than 20% of remaining stores in these larger groups are considering introduction of this service. As with other major investments, large companies' access to capital and ability to spread the "learning investment" over many stores may give them an advantage in adding this new service.

- Approximately 9% of stores in groups with eleven or more stores currently offer gasoline, and more than 20% of remaining stores in these larger groups are considering introduction of this service.

#### **Performance of Wholesaler Supplied Stores Relative to Stores in Self Distributing Chains**

Over the past decade, significant supply chain initiatives have been based on closer linkages between stores and distribution centers. Often, the adoption of new technologies and business practices that strengthen these linkages is easier when the store and distribution center are under common ownership. Table 10.3 compares store characteristics and performance for stores that are wholesaler supplied and stores that are part of self distributing chains.

**Table 10.3 Store Characteristics and Performance for Stores Grouped by Relationship with Distribution Center**

|  | Wholesaler<br>Supplied | Member of a Self<br>Distributing Chain |
|--|------------------------|--|
| <b>NUMBER OF STORES REPRESENTED</b>      | <b>15,707 (394)</b>    | <b>15,578 (167)</b>                    |
| <b>MARKET CHARACTERISTICS</b>            |                        |  |
| • Median Population Density (per sq. mi) | 195                    | 833*                                   |
| • Median Household Income (\$/year)      | \$37,889               | \$42,594*                              |
| • Percent Located in an SMSA             | 55                     | 77*                                    |
| <b>STORE CHARACTERISTICS</b>             |                        |  |
| • Median Store Age (years)               | 25                     | 17*                                    |
| • Median Number of Stores in Store Group | 3                      | 265*                                   |
| • Median Weekly Sales                    | \$125,000              | \$318,000*                             |
| • Median Selling Area (sq.ft.)           | 20,000                 | 38,000*                                |
| • Percent with Union Workforce           | 18                     | 41*                                    |
| <b>MANAGEMENT SCORES (Median)</b>        |                        |  |
| • Supply Chain                           | 45                     | 80*                                    |
| • Human Resources                        | 37                     | 45*                                    |
| • Food Handling                          | 85                     | 92*                                    |
| • Environmental Practices                | 50                     | 83*                                    |
| • Quality Assurance                      | 55                     | 81*                                    |
| • Service Offerings                      | 38                     | 46*                                    |
| <b>PERFORMANCE MEASURES (Median)</b>     |                        |  |
| • Weekly Sales per Square Foot           | \$7.00                 | \$7.83*                                |
| • Sales per Labor Hour                   | \$96.00                | \$124.07*                              |
| • Sales per Transaction                  | \$17.25                | \$23.81*                               |
| • Annual Inventory Turns                 | 17.0                   | 16.0                                   |
| • Percentage Employee Turnover           | 42.9                   | 44.1                                   |
| • Gross Profit as a Percent of Sales     | 23.7                   | 24.1                                   |
| • Payroll as a Percent of Sales          | 10.0                   | 9.7*                                   |
| • Annual Percentage Sales Growth         | 2.9                    | 3.2                                    |

\* Difference is statistically significant at the 0.10 level.

Based on weighted responses, approximately equal proportions of the supermarket population are wholesaler supplied and part of self distributing chains. However, there are statistically significant differences between stores in these two groups for almost every characteristic and performance measure.

On average, wholesaler supplied stores in the Panel are located in less densely populated areas with lower median household incomes. These stores are older, smaller, and less likely to have a union workforce. Wholesaler supplied stores have lower median scores for each of the six

management indices. Differences in median management scores for the two groups are especially large for supply chain, environmental, and quality assurance practices.

Wholesaler supplied stores have lower median levels for sales per square foot, sales per labor hour, and sales per transaction, and they have higher payroll as a percent of sales. However, for inventory turns, employee turnover, gross profit as a percent of sales, and annual sales growth median performance levels do not differ significantly for the two groups.

These results highlight the differences between wholesaler supplied stores and those that are part of self distributing chains, but they do not necessarily imply that wholesaler supplied stores cannot be competitive. Wholesaler supplied stores – with older buildings in areas that often have lower property values – are likely to have lower fixed costs. This, combined with a comparable median level for gross profit as a percent of sales and a similar median level for payroll as a percent of sales, may yield an overall return on investment that compares favorably with that of stores in self distributing chains. In the future, however, the key challenge for wholesaler supplied stores and for their wholesalers will be to match efficiency gains made by stores in self distributing chains and maintain a comparable level of sales growth.

### **Impacts of Supercenter Competition**

Supercenters are an increasingly important competitive force in the supermarket industry. Stores that participated in the Panel were asked to identify their three most important competitors by store name and by format. Store characteristics and performance levels for stores that did and did not identify a supercenter as one of their three most important competitors are presented in Table 10.4.

Based on weighted responses, approximately one-third of the supermarket population recognizes significant competition from a supercenter. Stores in the two groups are similar in terms of market and store characteristics, though stores reporting supercenter competition are, on average, slightly larger. Comparing performance levels, however, stores that report supercenter competition have significantly lower sales per labor hour and sales growth.

- Approximately one-third of the supermarket population recognizes significant competition from a supercenter. Stores that report supercenter competition have significantly lower sales per labor hour and sales growth.

Table 10.4 Store Characteristics and Performance for Stores Grouped by Competition with Supercenters

|                                   | No Supercenter Competition | Supercenter Competition |
|-----------------------------------|----------------------------|-------------------------|
| NUMBER OF STORES REPRESENTED      | 19,969(327)                | 9,276 (204)             |
| STORE CHARACTERISTICS             |                            |                         |
| • Median Selling Area             | 28,752                     | 34,000*                 |
| • Median Group Size               | 40                         | 50                      |
| • Median Household Income         | \$40,493                   | \$38,019                |
| • Percent Located in an SMSA      | 66.2                       | 65.5                    |
| STORE PERFORMANCE LEVELS (Median) |                            |                         |
| • Weekly Sales per Square Foot    | \$7.67                     | \$7.10                  |
| • Sales per Labor Hour            | \$109.63                   | \$100.37*               |
| • Percentage Employee Turnover    | 42.3                       | 46.4                    |
| • Payroll as a Percent of Sales   | 9.9                        | 9.85                    |
| • Annual Percentage Sales Growth  | 3.8                        | 2.2*                    |

\* Difference is statistically significant at the 0.10 percent level.

Results from an analysis of data for stores that participated in both the 2000 and 2001 Panels – presented in Table 10.5 – offer additional insights on the effects of supercenter competition.<sup>1</sup> Of 139 stores that provided information on competitors in both years, eighty-three did not report supercenter competition in either year, twenty-four stores reported it in both 1999 and 2000, seven stores reported it in 1999 but not 2000, and twenty-five stores reported new supercenter competition in 2000.

Median changes in performance levels for these four groups are summarized in the middle section of the table. Differences in changes in sales per labor hour and employee turnover are especially noteworthy. Stores that reported supercenter competition for the first time in 2000 experienced a large drop in median sales per labor hour and a large increase in employee turnover. This suggests that loss of employees and

<sup>1</sup> Data were not weighted for this analysis.

a decline in labor productivity are important initial impacts of new competition from a supercenter. Median sales per labor hour also declined for stores that reported supercenter competition in 1999 and 2000, but the magnitude of the change was smaller. Median employee turnover was essentially unchanged for these stores. In contrast, stores that reported supercenter competition in 1999 but not in 2000 had a sharp increase in median sales per labor hour and a large decline in median employee turnover. These stores also had a 7.0% increase in median weekly sales – well above the median sales growth rate for the other three groups.

- Loss of employees and a decline in labor productivity are important initial impacts of new competition from a supercenter.

Results summarized in the lower portion of Table 10.5 point to a possible strategic response by stores reporting supercenter competition – remodeling. Stores that reported supercenter competition in 1999 but not in 2000 and stores that reported new supercenter competition in 2000 remodeled at a much higher rate than stores in the other two

**Table 10.5 Percentage Changes in Performance for Continuing Panel Stores Grouped by Supercenter Competition**

|   | No<br>Supercenter<br>Competition | Supercenter<br>Competition in<br>1999 but not<br>in 2000 | Supercenter<br>Competition in<br>1999 and<br>2000 | Supercenter<br>Competition in 2000 |
|---|----------------------------------|--|---|------------------------------------|
| <b>NUMBER OF STORES</b>                                       | <b>83</b>                        | <b>7</b>   | <b>24</b>   | <b>25</b>                          |
| <b>MEDIAN CHANGE IN<br/>PERFORMANCE FROM<br/>1999 TO 2000</b> |                                  |  |   |                                    |
| • Weekly Sales per Square Foot                                | \$0.14                           | \$0.40   | \$0.01  | \$0.25                             |
| • Sales per Labor Hour  | \$5.40                           | \$12.60  | -\$1.02   | -\$7.25                            |
| • Percent Employee Turnover                                   | 1.6%                             | -15.6%   | -0.4%   | 15.9%                              |
| • Weekly Sales (% change)                                     | 2.2%                             | 7.0%   | 1.1%  | 2.9%                               |
| <b>PERCENT OF STORES WITH A<br/>MAJOR REMODELING</b>          |                                  |  |   |                                    |
| • Remodel in 1999   | 10.8%                            | 28.5%  | 4.2%  | 12%                                |
| • Remodel in 2000   | 7.2%                             | 0%   | 4.2%  | 24%                                |

groups. This suggests that remodeling may help a store overcome supercenter competition and that it can be a preemptive or initial response to new competition from a supercenter. These results need to be considered with caution, because they are based on responses from such a small number of stores. However, they do point to the value of collecting information from the same stores over time.

### Impacts of Remodeling

- More than two-thirds of the Panel stores have had at least one major remodeling, and approximately 18% underwent a major remodeling in 1999 or 2000.

The median age of all stores participating in the 2001 Panel was twenty-one years, and 75% of the stores were built before 1990. Remodeling is often a key element of an existing store's response to competitive pressures and opportunities offered by the development of new products and services. More than two-thirds of the Panel stores have had at least one major remodeling, and approximately 18% underwent a major remodeling in 1999 or 2000. Table 10.6 presents descriptive information and median performance levels for stores that did not have a major remodeling in 1999 or 2000, those that were remodeled in 1999, and those that were remodeled in 2000.

Table 10.6 Store Characteristics and Performance for Stores Grouped by Major Remodeling Activity

|  | No Major<br>Remodeling in<br>1999 or 2000 | Major Remodeling<br>in 1999 | Major Remodeling<br>in 2000 |
|--|---|-----------------------------|-----------------------------|
| <b>NUMBER OF STORES REPRESENTED</b>      | 25,848 (461)                              | 2,961 (54)                  | 2,648 (48)                  |
| <b>STORE CHARACTERISTICS</b>             |   |                             |                             |
| • Median Selling Area                    | 29,000                                    | 35,000                      | 28,000                      |
| • Median Group Size                      | 40  | 57                          | 9                           |
| • Median Household Income                | \$39,679                                  | \$40,691                    | \$39,896                    |
| • Percent Located in an SMSA             | 66.4                                      | 64.9                        | 64.5                        |
| • Percent Facing Supercenter Competition | 31.6                                      | 29.7                        | 34.8                        |
| <b>STORE PERFORMANCE LEVELS (Median)</b> |   |                             |                             |
| • Weekly Sales per Square Foot           | \$7.43                                    | \$8.06                      | \$7.50                      |
| • Sales per Labor Hour                   | \$107.14                                  | \$125.00                    | \$115.00                    |
| • Percentage Employee Turnover           | 44.0                                      | 44.1                        | 40.0                        |
| • Payroll as a Percent of Sales          | 9.8                                       | 10.0                        | 10.0                        |
| • Annual Percentage Sales Growth         | 2.7                                       | 3.8                         | 3.0                         |

Differences in store and market characteristics and performance levels across the three groups are not striking, and few are statistically significant. Stores that remodeled in 1999 have significantly larger selling area and higher sales per labor hour than stores in the other two groups. Stores that remodeled in 1999 and 2000 were significantly less likely to be located in a metropolitan area than stores that were not remodeled in either year. Finally, relative to stores that were not remodeled in 1999 or 2000, stores that remodeled in 1999 were significantly less likely to report supercenter competition in 2000, while stores remodeled in 2000 were significantly more likely to report supercenter competition.

More interesting insights on the motivation for and effect of remodeling can be gained from an analysis of the stores that participated in the Panel in 2000 and 2001. Descriptive information and median changes in performance levels for these stores are presented in Table 10.7.<sup>2</sup> Once again, these results need to be interpreted with caution due to the small number of stores in the analysis.

Differences in store selling area, ownership group size, and median household income in the store's zip code are relatively small across the three groups of stores. Stores that were remodeled in 1999 or 2000 were more likely to be located in a metropolitan area. Finally, stores that were remodeled in 2000 were much less likely to report supercenter competition in 1999 and much more likely to report it in 2000.

Turning attention to the median changes in performance levels reported in the bottom portion of the table, the relationships between remodeling and changes in the two labor productivity are striking. On average, stores remodeled in 1999 or 2000 experienced large reductions in sales per labor hour and large increases in employee turnover between 1999 and 2000. In contrast, sales per labor hour grew and employee turnover remained steady for stores that were not remodeled in 1999 or 2000. Also noteworthy are the higher levels of sales growth for stores that remodeled, but the fact that median changes in weekly sales per square foot are essentially constant across groups suggests that sales growth is closely linked to expansion in selling area. Taken together, these results suggest that remodeling has adverse effects on labor

- On average, stores that remodeled in 1999 or 2000 experienced large reductions in sales per labor hour and large increases in employee turnover between 1999 and 2000.

---

<sup>2</sup> Data were not weighted for this analysis.

**Table 10.7 Percentage Changes in Performance for Continuing Panel Stores Grouped by Major Remodeling Activity**

|   | No Major<br>Remodeling in<br>1999 or 2000 | Major<br>Remodeling in<br>1999 | Major<br>Remodeling in<br>2000 |
|---|---|--------------------------------|--------------------------------|
| <b>NUMBER OF STORES</b>                               | <b>127</b>                                | <b>15</b>                      | <b>13</b>                      |
| <b>STORE CHARACTERISTICS</b>                          |   |                                |                                |
| • Median Selling Area                                 | 25,000                                    | 30,000                         | 28,000                         |
| • Median Group Size                                   | 15  | 35                             | 17                             |
| • Median Household Income                             | \$38,241                                  | \$40,913                       | \$37,611                       |
| • Percent Located in an SMSA                          | 58.7                                      | 73.3                           | 76.9                           |
| • Percent Facing Supercenter Competition in 1999      | 26.1                                      | 20.0                           | 7.7                            |
| • Percent Facing Supercenter Competition in 2000      | 34.5                                      | 26.7                           | 53.8                           |
| <b>MEDIAN CHANGE IN PERFORMANCE FROM 1999 TO 2000</b> |   |                                |                                |
| • Weekly Sales per Square Foot                        | \$0.07                                    | \$0.10                         | -\$0.15                        |
| • Sales per Labor Hour                                | \$4.04                                    | -\$4.73                        | -\$4.17                        |
| • Percent Employee Turnover                           | 0.2%                                      | 16.3%                          | 12.3%                          |
| • Weekly Sales (% change)                             | 1.1%                                      | 2.5%                           | 4.6%                           |

productivity for at least two years and that most of the sales growth stores realize after remodeling can be attributed to expansion in selling area.

### **Characteristics of Outstanding Stores**

Understanding the linkages among store characteristics, store operating practices, and store performance is a key long run goal for the Supermarket Panel. Much of the analysis in this report focuses on these linkages. We examine these linkages from a different perspective here by separating out stores that have above average levels for each of three key performance measures: weekly sales per square foot, sales per labor hour, and annual percentage sales growth. Of the 563 stores in the 2001 Panel, forty stores meet this criterion. These outstanding stores come from all

five store group sizes, all four formats, and all four regions used in this report. Table 10.8 presents a descriptive profile for stores grouped by performance category and group size. Only two ownership group size categories are used in this analysis – groups with ten or fewer stores and groups with more than ten stores.

The top stores are almost equally divided between these two categories traditionally associated with “independent operators” and “chain stores.” On closer examination, it is noteworthy that fifteen of the seventeen top stores in the independent operator category are in ownership groups with four or fewer stores, while only three of the twenty-three top stores in the chain store category are in ownership groups with fewer than sixty stores. This suggests that not expanding beyond the number of stores that can be adequately overseen with existing supervisory and support systems may be a key to success for independent operators. On the other hand, quality of company-wide support services and systems, along with procurement advantages, may be the key to outstanding performance for chain stores.

Top stores in both categories operate in markets with dramatically higher median household income, and top chain stores operate in more densely populated areas. This suggests that market characteristics – a factor that cannot be changed for an existing store – are a key driver of superior performance. Turning to store characteristics, top stores in smaller groups are newer, slightly larger, and slightly less likely to have a union workforce. Median group size is slightly larger and the likelihood of having a union workforce is higher for top chain stores. Of course, the median level for weekly sales is considerably higher for top stores in both group size categories, since weekly sales is a component in each of the performance measures used to identify top stores.

Top independently operated stores have higher median scores for each of management practice indices except Food Handling. On the other hand, with the exception of Supply Chain and Service Offerings, median management practice scores for top chain stores are essentially equal to or smaller than those for regular stores. This suggests that store level decisions about management practices are more closely linked to top performance for independent operators than for chain stores.

- Top stores are almost equally divided between “Independent operators” and “chain stores.”

- Market characteristics are a key driver of superior performance.

- Store level decisions about management practices are more closely linked to top performance for independent operators than for chain stores.

Table 10.8 Descriptive Profile for Stores Grouped by Performance

|   | Independent Operators<br>(10 or fewer stores) |            | Chain Stores<br>(more than 10 stores) |            |
|---|---|------------|---------------------------------------|------------|
|   | Regular<br>Stores                             | Top Stores | Regular<br>Stores                     | Top Stores |
| NUMBER OF STORES REPRESENTED              | 10,955 (313)                                  | 836 (17)   | 17,356 (210)                          | 2,310 (23) |
| <b>MARKET CHARACTERISTICS</b>             |   |            |                                       |            |
| • Median Population Density (per sq. mi)  | 150   | 169        | 742                                   | 1433       |
| • Median Household Income (\$/year)       | \$36,688                                      | \$54,784   | \$41,263                              | \$52,724   |
| • Percent Located in an SMSA              | 52  | 63         | 73                                    | 78         |
| <b>STORE CHARACTERISTICS (Median)</b>     |   |            |                                       |            |
| • Store Age (years)                       | 26  | 16         | 17                                    | 18         |
| • Number of Stores in Store Group         | 1   | 2          | 168                                   | 180        |
| • Weekly Sales                            | \$111,059                                     | \$315,156  | \$280,000                             | \$425,000  |
| • Selling Area (sq.ft.)                   | 18,000  | 22,000     | 37,000                                | 35,000     |
| <b>STORE CHARACTERISTICS (Percentage)</b> |   |            |                                       |            |
| • Wholesaler Supplied                     | 98  | 100        | 23                                    | 3          |
| • Union Workforce                         | 15  | 8          | 35                                    | 53         |
| <b>MANAGEMENT SCORES (Median)</b>         |   |            |                                       |            |
| • Supply Chain                            | 37  | 42         | 75                                    | 80         |
| • Human Resources                         | 35  | 43         | 44                                    | 44         |
| • Food Handling                           | 83  | 76         | 90                                    | 91         |
| • Environmental Practices                 | 50  | 66         | 83                                    | 83         |
| • Quality Assurance                       | 46  | 54         | 80                                    | 76         |
| • Service Offerings                       | 38  | 46         | 38                                    | 46         |
| <b>PERFORMANCE MEASURES (Median)</b>      |   |            |                                       |            |
| • Weekly Sales per Square Foot            | \$6.50  | \$10.00    | \$7.32                                | \$11.17    |
| • Sales per Labor Hour                    | \$92.40                                       | \$125.64   | \$110.71                              | \$137.58   |
| • Sales per Transaction                   | \$15.33                                       | \$24.50    | \$22.14                               | \$29.71    |
| • Annual Inventory Turns                  | 17.0  | 21.0       | 15.0                                  | 20.0       |
| • Percentage Employee Turnover            | 44.1  | 36.8       | 44.4                                  | 40.0       |
| • Gross profit as a Percent of Sales      | 24.0  | 26.0       | 23.6                                  | 24.7       |
| • Payroll as a Percent of Sales           | 10.0  | 10.5       | 9.9                                   | 8.8        |
| • Annual Percentage Sales Growth          | 2.7   | 7.7        | 0.5                                   | 5.8        |

Median performance measures are presented in the lower portion of Table 10.8. As expected, median levels for weekly sales per square foot, sales per labor hour, and annual percentage sales growth are dramatically higher for top stores in each group size category, since these are the performance measures used to identify the top stores. It is noteworthy, however that top stores outperform regular stores for every other measure except payroll as a percent of sales for stores in the independent operator category. Comparing top stores in the two ownership group size categories, chain stores have higher weekly sales per square foot and sales per labor hour and much lower payroll as a percent of sales, but stores in smaller groups have lower employee turnover and higher sales growth, gross profit as a percent of sales, and inventory turns. Overall, then, it is not possible to conclude that top stores in one ownership group size category outperform those in the other.

- Top chain stores have higher weekly sales per square foot and sales per labor hour and much lower payroll as a percent of sales, but top stores in smaller groups have lower employee turnover and higher sales growth, gross profit as a percent of sales, and inventory turns.

For stores in smaller groups, differences in median scores for Supply Chain, Human Resources, and Environmental Practices are noteworthy. Median levels for the components of these three management indices are presented in Table 10.9.

Top stores in both ownership group size categories have higher scores for the decision sharing component of the Supply Chain score, which measures collaboration with parties outside the store for decisions about pricing, advertising, space allocation, display merchandising, and promotions. The difference is especially large in percentage terms for the independent operator stores.

Top stores in the chain store category have considerably higher median scores for the key employee training component of the Human Resources score.<sup>3</sup> This measures hours devoted to training for store managers, grocery department manager, and scanning coordinator. The difference in median levels for this component between the two group size categories is also striking. As noted earlier in the section on human resources, stores in larger groups are placing much more emphasis on key employee training. Top stores in both ownership group size categories are less likely than regular stores to use incentive-based compensation, and top stores in smaller groups offer a wider range of non-cash benefits than regular stores.

---

<sup>3</sup> While the absolute difference is small for stores in smaller groups, the percentage difference is large.

**Table 10.9 Human Resource and Environmental Practice Component Scores for Stores Grouped by Performance**

|  | Independent Operators<br>(10 or fewer stores) |            | Chain Stores<br>(more than 10 stores) |            |
|--|---|------------|---------------------------------------|------------|
|  | Regular<br>Stores                             | Top Stores | Regular<br>Stores                     | Top Stores |
| <b>MEDIAN SCORES FOR SUPPLY CHAIN COMPONENTS</b>           |   |            |                                       |            |
| • Technology Component                                     | 40  | 40         | 60                                    | 60         |
| • Decision Sharing Component                               | 35  | 45         | 95                                    | 100        |
| <b>MEDIAN SCORES FOR HUMAN RESOURCE COMPONENTS</b>         |   |            |                                       |            |
| • New Employee Training                                    | 40  | 45         | 40                                    | 40         |
| • Key Employee Training                                    | 8   | 0          | 26                                    | 60         |
| • Proportion of Full-time Employees                        | 37  | 43         | 35                                    | 32         |
| • Use of Incentive-based Compensation                      | 19  | 13         | 31                                    | 25         |
| • Noncash Benefits   | 50  | 65         | 80                                    | 80         |
| <b>MEDIAN SCORES FOR ENVIRONMENTAL PRACTICE COMPONENTS</b> |   |            |                                       |            |
| • Consumer Oriented Practices                              | 33  | 66         | 66                                    | 100        |
| • Operations Oriented Practices                            | 66  | 66         | 100                                   | 100        |

The higher median Environmental Practices score for top stores in the independent operator category is attributable entirely to greater emphasis on consumer oriented environmental practices.

Taken together, these results confirm the conventional wisdom that market characteristics are key drivers of success in retailing. Of greater interest are the findings that store level management practices are more closely linked to superior performance for independent operators and that overall performance of top stores is comparable for stores in both ownership group size categories.

## 11. Looking Ahead to the 2002 Panel

Work on the 2002 Panel is under way as this report is being completed. In addition to the 563 stores in the 2001 Panel, an additional 1,400 randomly selected stores will be asked to participate. Our objective is to continue expanding the size of the Panel. This will increase the accuracy of our industry profile and make it possible to examine emerging trends in greater detail.

With a third year of data from a randomly selected panel of stores, we will be able to more fully take advantage of the unique capabilities the Panel offers for longitudinal analysis. We will continue to place particular emphasis on the following questions.

- **What are the characteristics of stores that are leaders across the entire range of performance measures?** This year we looked at the characteristics of top stores for the first time. Next year we will be able to expand that analysis to include characteristics of stores with outstanding performance in two consecutive years.
- **What are the key determinants of labor productivity?** Findings from the 2001 Panel yielded new insights about factors affecting labor productivity. For example, new supercenter competition and a major remodeling both have significant adverse effects on labor productivity in the short run, while adoption of supply chain practices and attention to key employee training are associated with higher labor productivity. Longitudinal data for more stores will make it possible to explore links between management practices and labor productivity more thoroughly.
- **How are food system-wide supply chain and e-commerce initiatives being reflected in investment and technology adoption at the store level?** Full implementation of system-wide efforts in supply chain management and e-commerce will require new front-end and backroom information technology in supermarkets. We will continue to track the adoption process and examine the linkages between new technologies and store performance. With more stores participating in the Panel for more than a single year, we will be able to expand our analysis of relationships between technology adoption and productivity changes.

## **Appendix A**

### **Data Collection Procedures**

#### **Sampling Procedures**

Data collection for the 2001 Supermarket Panel began in the fall of 2000 with establishment of the sampling frame and drawing of a random sample of stores from that frame.

The process began with a computer file provided by the Food Stamp Program of USDA, which lists the 158,168 establishments in the United States that accept food stamps. The data fields for each store were:

- Name of Establishment
- Street Address
- City
- State
- Zip Code
- Area Code
- Phone Number
- Open 24 Hours
- Not Open 24 Hours
- Type of Establishment

Of the 158,168 establishments, 31,356 were classified as supermarkets. These became the relevant population for the 2001 Panel.

Based on experience in 1999 and 2000, we expected response rates to vary with store group size. In 2000 single store independents and stores in groups with two to ten stores had a considerably higher response rate than those in larger groups. In 2000 the population was grouped into five store group size strata, and stores in strata associated with larger group sizes were sampled more intensively. A much simpler proportional sampling scheme was used in 2001. Weights based on sampling intensity and response rates were then used in the analysis to correct for response imbalances in the final data set. Procedures for determining appropriate weights are described in the final section of this appendix.

The 344 randomly selected stores that participated in the 2000 Panel were automatically included in the sample for 2001. Forty-two non-randomly selected stores that were part of the 1999 pilot test of the

Panel were also included in the sample.<sup>1</sup> Of these 386 stores, eighteen had either ceased operation or declined to participate again, leaving 368 stores that had previously participated in the Panel. An additional 1,632 stores were then drawn at random from the remaining 30,970 stores in the population, yielding a total sample of 2,000 stores.

In late fall of 2000 the Food Industry Center and IGA agreed to send the 2001 Panel to all of the 1,674 IGA stores in the United States. Of these, 73 stores were already in the random sample or had been part of the pilot test in 1999. Therefore this increased the total sample size by 1,601 stores to 3,601 stores.

#### Data Collection Procedures

Data collection, coding, and entry were administered and performed by the Minnesota Center for Survey Research (MCSR) at the University of Minnesota. This helped ensure not only smooth operations during a complex data collection process but also strict confidentiality for the Panel data.

The data collection process was based on mail survey methods developed by Dillman.<sup>2</sup> It began in November 2000, when MCSR personnel called each of the 2,000 randomly selected stores to verify the store name and address and to ask for the store manager's name and title. This helped reduce mailing errors and made it possible to address Panel correspondence directly to the store manager.

On January 9, 2001 letters were mailed to the 2,000 stores in the sample constructed prior to the agreement with IGA. These letters introduced the Panel, indicated that the Panel data booklets would be mailed the following week, and asked for a prompt response.

On January 16, 2001 panel data booklets were mailed to all the stores in the sample. The mailing packet also included a cover letter encouraging participation and a return envelope addressed to the Minnesota Center for Survey Research. On January 23, 2001, a follow-up postcard was sent to all stores in the sample. Then on February 6, 2001, a second data

---

<sup>1</sup> Non-randomly selected stores are not used in the statistical analysis presented in this report.

<sup>2</sup> Dillman, Don A. *Mail and Telephone Surveys: The Total Design Method*. New York: Wiley, 1978.

booklet and cover letter were mailed to all stores that had not yet responded. Follow-up telephone calls were made to non-respondents between February 19 and March 2, 2001. Data booklets were re-mailed to store managers requesting another survey. Data collection for the stores in the original sample ended in mid March.

Data booklets for IGA stores were mailed in March from IGA headquarters in Chicago, IL. A separate IGA survey was also included in the mailing packet. The cover letter, which was printed on IGA letterhead, strongly encouraged store managers to participate in the Panel and instructed them to return the completed booklets to IGA headquarters.<sup>3</sup> IGA personnel forwarded the data booklets to MCSR for coding in several batches. The last booklets were sent to MCSR in early May.

Coding/editing of surveys, data entry, and data file cleaning were completed in early June by MCSR personnel. In June and July 2001 Elaine Jacobson, the Food Industry Center Research Associate who manages the Supermarket Panel database, prepared the data for analysis and generated a confidential benchmark report for each store in the Panel. All the benchmark reports were mailed on or before July 25, 2001.

To ensure confidentiality, Elaine Jacobson was the only person outside of MCSR who had access to the full data set while the benchmark reports were being prepared.<sup>4</sup> All store names, addresses, and zip codes were then removed from the data set used by Food Industry Center researchers for preparation of this report and for any future studies based on the Panel data.

During the preparation of this report, U.S. Census data based on zip code were acquired for all stores in the sample, including the IGA stores. These data were merged with the original data set by Robert King and Elaine Jacobson, who subsequently removed all store identifiers from the data files used by other researchers.

---

<sup>3</sup> IGA stores were informed that their Panel data would be available to IGA as well as to Food Industry Center researchers. IGA was not given access to data from the non-IGA stores that participated in the 2001 Panel.

<sup>4</sup> Access to store names and addresses was extended to Robert King in August 2001 when Elaine Jacobson relocated to another state. Jacobson continues to be employed by the Food Industry Center, and she and King remain the only Center affiliates with access to store identities.

## Response Rates and the Construction of Weights for Statistical Analysis

Preliminary analysis of the data for the 2001 Panel indicated that, as expected, response rates differed by ownership group size, with single store independents and stores in smaller groups having a higher response rate. There were also regional differences in response rates. Stores in the Midwest were more likely to respond than stores in other regions. Finally, IGA stores were over-represented in the data set, since the entire population of IGA stores had been given an opportunity to participate in the Panel. The population, original sample, and respondents were grouped into strata and frequency weights were constructed to correct for these imbalances.

The first step in the stratification process was to sort the 31,356 supermarkets in the population by establishment name. In cases where several store names were known to be under common corporate ownership, the stores with these names were combined into a single group. Similarly, when stores with the same name were known to be independently owned and operated, those stores with those names were classified as belonging to single store groups. Each store in the entire population was then placed in one of three ownership groups: (1) single store independents and stores in ownership groups with from two to ten stores, (2) stores in ownership groups with more than ten stores, and (3) stores in the IGA network. Within each ownership group, stores were assigned to one of four regional strata: (1) Midwest, (2) Northeast, (3) South, and (4) West.<sup>5</sup> Overall, then, the population was divided into twelve strata.

Strata definitions, strata sizes, and sample sizes for each strata are reported in Table A.1. The overall sample size was 3,599 stores.

Response rates are presented by stratum in Table A.2. In addition, twenty-five non-randomly selected stores that participated in 1999 pilot test returned completed data booklets. These stores are not included in the data set used in the analysis for this report.

---

<sup>5</sup> States in the Midwest region are: IA, IL, IN, KS, KY, MI, MN, MO, ND, NE, OH, SD, WI, and WV. States in the Northeast region are: CT, DC, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VA, and VT. States in the South region are: AL, AR, FL, GA, LA, MS, NC, OK, SC, TN, and TX. States in the West region are: AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, and WY

Table A.1 Population and Sample Size by Ownership Stratum and Region

|            | Midwest |       | Northeast |     | South |       | West  |     | Total  |       |
|------------|---------|-------|-----------|-----|-------|-------|-------|-----|--------|-------|
|            | Pop     | Sam   | Pop       | Sam | Pop   | Sam   | Pop   | Sam | Pop    | Sam   |
| 1 to 10    | 3,094   | 240   | 2,692     | 168 | 2,387 | 160   | 2,088 | 127 | 10,261 | 695   |
| 11 or more | 4,250   | 274   | 3,999     | 241 | 6,992 | 444   | 4,180 | 273 | 19,421 | 1,232 |
| IGA        | 822     | 822   | 220       | 220 | 471   | 471   | 161   | 161 | 1,674  | 1,674 |
| Total      | 8,166   | 1,336 | 6,911     | 629 | 9,850 | 1,075 | 6,429 | 561 | 31,356 | 3,601 |

Table A.2 Response Rates by Ownership Stratum and Region

|            | Midwest |       | Northeast |       | South |       | West |       | Total |       |
|------------|---------|-------|-----------|-------|-------|-------|------|-------|-------|-------|
|            | N       | Rate  | N         | Rate  | N     | Rate  | N    | Rate  | N     | Rate  |
| 1 to 10    | 69      | 28.8% | 28        | 16.7% | 34    | 21.3% | 25   | 19.7% | 156   | 22.4% |
| 11 or more | 56      | 20.4% | 28        | 11.6% | 73    | 16.4% | 50   | 18.3% | 207   | 16.8% |
| IGA        | 124     | 15.1% | 21        | 9.5%  | 28    | 5.9%  | 27   | 16.8% | 200   | 11.9% |
| Total      | 249     | 18.6% | 77        | 12.2% | 135   | 12.6% | 102  | 18.2% | 563   | 15.6% |

Weights were constructed to correct for over-representation of IGA stores in the original sample and differences in response rates by ownership group size and region. The weight for each of the twelve strata was calculated by dividing the total population by the number of respondents. In effect, then, the weights indicate the number of stores in the population represented by each store in the sample.<sup>6</sup> Weights are reported by stratum in Table A.3.

Table A.3 Statistical Analysis Weights by Ownership Stratum and Region

|            | Midwest | Northeast | South | West |
|------------|---------|-----------|-------|------|
| 1 to 10    | 45      | 96        | 70    | 84   |
| 11 or more | 76      | 143       | 96    | 84   |
| IGA        | 7       | 10        | 17    | 6    |

<sup>6</sup> Weights were rounded to the nearest integer, because integer weights are required for some of the statistical procedures used in the analysis for this report.

## Appendix B

### Performance Driver Regression Analysis Results

Multiple linear regression models for the analysis of drivers for key performance variables were estimated using *Stata*, Release 6.0.<sup>1</sup> For simplicity and ease of interpretation, the specification was limited to a simple linear model with no interactions among explanatory variables. Qualitative findings were similar for a preliminary analysis using natural logs of the dependent variables and the continuous explanatory variable.

Two regression models were estimated for each performance measure. For the first, the sample was restricted to those stores with valid data for all five performance measures and all twenty explanatory variables. A total of 231 stores met this restriction. For the second model, the sample included all stores with valid data for the performance measure under consideration and for all twenty explanatory variables. With such a large number of explanatory variables, this is still quite restrictive, but sample sizes did increase by more than seventy observations for some performance measures. For example, the unrestricted sample for Weekly Sales per Square Foot was 314.

Results from the two sets of regressions were quite similar qualitatively, and parameter estimates differed little in size, sign, and statistical significance. Therefore, for the sake of simplicity and consistency, only results for the more restrictive model are presented here.<sup>2</sup>

Finally, a word on interpretation of the estimated coefficients may be helpful. In general each coefficient indicates the change in the performance measure associated with a one unit increase in the associated explanatory variable, holding all other explanatory variables constant. For example, looking at the restricted sample results for Weekly Sales per Square Foot in Table B.1, the coefficient for **SellSize** (store selling area) is **-0.000190**. This implies a very small reduction in Weekly Sales per Square Foot with a one square foot increase in selling area, or a \$0.19 reduction with a 1,000 square foot increase in selling area. The coefficient for **US** (binary variable for superstore/upscale format) is **6.22**. This implies that, relative to a conventional format store with all other characteristics and practices identical, an upscale store is expected to have Weekly Sales per Square Foot that is \$6.22 higher.

---

<sup>1</sup> StataCorp. *Stata Statistical Software: Release 6.0*. College Station, TX: Stata Corporation, 1999.

<sup>2</sup> Results for the unrestricted model are available on request from Robert King.

**Table B.1 Weekly Sales per Square Foot\***

| Source          | SS         | df        | MS         | Number of obs        | 231                  |            |
|-----------------|------------|-----------|------------|----------------------|----------------------|------------|
|                 |            |           |            | <b>F( 20, 210)</b>   | 8.86                 |            |
| <b>Model</b>    | 3664.3683  | 20        | 183.218415 | <b>Prob &gt; F</b>   | 0.0000               |            |
| <b>Residual</b> | 4344.93074 | 210       | 20.6901464 | <b>R-squared</b>     | 0.4575               |            |
|                 |            |           |            | <b>Adj R-squared</b> | 0.4058               |            |
| <b>Total</b>    | 8009.29904 | 230       | 34.8230393 | <b>Root MSE</b>      | 4.5486               |            |
|                 | Coef.      | Std. Err. | t          | P> t                 | [95% Conf. Interval] |            |
| <b>PopDen</b>   | 0.0011877  | 0.0002079 | 5.713      | 0.000                | 0.0007779            | 0.0015975  |
| <b>HHInc00</b>  | 4.45E-06   | 0.0000245 | 0.182      | 0.856                | -0.0000438           | 0.0000527  |
| <b>SMSA</b>     | -0.7085538 | 0.8750605 | -0.810     | 0.419                | -2.4335820           | 1.0164750  |
| <b>SellSize</b> | -0.0001898 | 0.0000268 | -7.080     | 0.000                | -0.0002426           | -0.0001369 |
| <b>US</b>       | 6.2242320  | 1.3318550 | 4.673      | 0.000                | 3.5987140            | 8.8497500  |
| <b>FD</b>       | 4.8285210  | 0.9671017 | 4.993      | 0.000                | 2.9220490            | 6.7349920  |
| <b>WH</b>       | 6.4457880  | 1.7152620 | 3.758      | 0.000                | 3.0644500            | 9.8271250  |
| <b>GSize</b>    | -0.0011834 | 0.0004363 | -2.712     | 0.007                | -0.0020435           | -0.0003232 |
| <b>SelfDist</b> | 1.3448740  | 0.9204893 | 1.461      | 0.145                | -0.4697093           | 3.1594570  |
| <b>Union</b>    | 3.0081790  | 0.8497686 | 3.540      | 0.000                | 1.3330090            | 4.6833490  |
| <b>Pleader</b>  | 1.5139500  | 0.7309471 | 2.071      | 0.040                | 0.0730161            | 2.9548840  |
| <b>Qleader</b>  | 1.1726370  | 0.8163258 | 1.436      | 0.152                | -0.4366067           | 2.7818800  |
| <b>Sleader</b>  | -0.3856330 | 0.7929860 | -0.486     | 0.627                | -1.9488660           | 1.1776000  |
| <b>Vleader</b>  | 0.0265845  | 0.7100926 | 0.037      | 0.970                | -1.3732390           | 1.4264070  |
| <b>SCScr</b>    | 0.0132144  | 0.0215490 | 0.613      | 0.540                | -0.0292656           | 0.0556945  |
| <b>HRSr</b>     | 0.0168537  | 0.0257744 | 0.654      | 0.514                | -0.0339561           | 0.0676635  |
| <b>FHSr</b>     | -0.0192760 | 0.0294655 | -0.654     | 0.514                | -0.0773620           | 0.0388101  |
| <b>EPScr</b>    | 0.0226089  | 0.0153944 | 1.469      | 0.143                | -0.0077384           | 0.0529562  |
| <b>QASr</b>     | 0.0047082  | 0.0222218 | 0.212      | 0.832                | -0.0390983           | 0.0485146  |
| <b>SOSr</b>     | 0.0393308  | 0.0291067 | 1.351      | 0.178                | -0.0180479           | 0.0967095  |
| <b>constant</b> | 6.4447460  | 2.4929560 | 2.585      | 0.010                | 1.5303190            | 11.3591700 |

\*See Table 9.1 on page 56 for a key to abbreviations for explanatory variable names.

Table B.2 Sales per Labor Hour\*

| Source   | SS         | df         | MS         | Number of obs |                      | 231        |
|----------|------------|------------|------------|---------------|----------------------|------------|
|          |            |            |            | F( 20, 210)   | 10.99                |            |
| Model    | 103992.222 | 20         | 5199.61112 | Prob > F      | 0.0000               |            |
| Residual | 99320.7258 | 210        | 472.955837 | R-squared     | 0.5115               |            |
|          |            |            |            | Adj R-squared | 0.4650               |            |
| Total    | 203312.948 | 230        | 883.96934  | Root MSE      | 21.748               |            |
|          |            |            |            |               |                      |            |
|          | Coef.      | Std. Err.  | t          | P> t          | [95% Conf. Interval] |            |
| PopDen   | 0.0014664  | 0.0009939  | 1.475      | 0.142         | -0.0004929           | 0.0034258  |
| HHInc00  | 0.0003504  | 0.0001171  | 2.992      | 0.003         | 0.0001195            | 0.0005812  |
| SMSA     | -5.4672940 | 4.1837580  | -1.307     | 0.193         | -13.7148400          | 2.7802520  |
| SellSize | 0.0001607  | 0.0001281  | 1.254      | 0.211         | -0.0000919           | 0.0004133  |
| US       | -5.3623070 | 6.3677400  | -0.842     | 0.401         | -17.9151900          | 7.1905770  |
| FD       | 1.1279300  | 4.6238170  | 0.244      | 0.808         | -7.9871150           | 10.2429800 |
| WH       | 27.7720200 | 8.2008500  | 3.386      | 0.001         | 11.6054800           | 43.9385600 |
| GSize    | -0.0044841 | 0.0020861  | -2.150     | 0.033         | -0.0085964           | -0.0003717 |
| SelfDist | 19.5794900 | 4.4009580  | 4.449      | 0.000         | 10.9037700           | 28.2552100 |
| Union    | 14.3596600 | 4.0628350  | 3.534      | 0.001         | 6.3504970            | 22.3688300 |
| Pleader  | 4.2359690  | 3.4947370  | 1.212      | 0.227         | -2.6532920           | 11.1252300 |
| Qleader  | 1.6935270  | 3.9029410  | 0.434      | 0.665         | -6.0004380           | 9.3874920  |
| Sleader  | 2.9083090  | 3.7913510  | 0.767      | 0.444         | -4.5656750           | 10.3822900 |
| Vleader  | -1.9364830 | 3.3950290  | -0.570     | 0.569         | -8.6291880           | 4.7562210  |
| SCScr    | 0.2258471  | 0.1030280  | 2.192      | 0.029         | 0.0227454            | 0.4289488  |
| HRSr     | 0.2454490  | 0.1232303  | 1.992      | 0.048         | 0.0025221            | 0.4883759  |
| FHSr     | -0.0736251 | 0.1408777  | -0.523     | 0.602         | -0.3513408           | 0.2040906  |
| EPSr     | 0.0185796  | 0.0736021  | 0.252      | 0.801         | -0.1265142           | 0.1636733  |
| QASr     | -0.0687241 | 0.1062450  | -0.647     | 0.518         | -0.2781675           | 0.1407192  |
| SOSr     | -0.0248878 | 0.1391622  | -0.179     | 0.858         | -0.2992217           | 0.2494460  |
| constant | 60.1849900 | 11.9190900 | 5.049      | 0.000         | 36.6885800           | 83.6813900 |

\*See Table 9.1 on page 56 for a key to abbreviations for explanatory variable names.

**Table B.3 Payroll as a Percent of Sales\***

| Source          | SS         | df        | MS         | Number of obs        | 231                  |            |
|-----------------|------------|-----------|------------|----------------------|----------------------|------------|
|                 |            |           |            | <b>F( 20, 210)</b>   | 2.98                 |            |
| <b>Model</b>    | 187.006505 | 20        | 9.35032527 | <b>Prob &gt; F</b>   | 0.0000               |            |
| <b>Residual</b> | 659.628131 | 210       | 3.14108634 | <b>R-squared</b>     | 0.2209               |            |
|                 |            |           |            | <b>Adj R-squared</b> | 0.1467               |            |
| <b>Total</b>    | 846.634637 | 230       | 3.68102016 | <b>Root MSE</b>      | 1.7723               |            |
|                 | Coef.      | Std. Err. | t          | P> t                 | [95% Conf. Interval] |            |
| <b>PopDen</b>   | -0.0000642 | 0.0000810 | -0.792     | 0.429                | -0.0002238           | 0.0000955  |
| <b>HHInc00</b>  | -1.51E-06  | 9.54E-06  | -0.158     | 0.874                | -0.0000203           | 0.0000173  |
| <b>SMSA</b>     | 0.2500452  | 0.3409543 | 0.733      | 0.464                | -0.4220865           | 0.9221769  |
| <b>SellSize</b> | 1.99E-06   | 0.0000104 | 0.191      | 0.849                | -0.0000186           | 0.0000226  |
| <b>US</b>       | 1.5112540  | 0.5189374 | 2.912      | 0.004                | 0.4882594            | 2.5342480  |
| <b>FD</b>       | 0.2176327  | 0.3768168 | 0.578      | 0.564                | -0.5251956           | 0.9604611  |
| <b>WH</b>       | -1.8767330 | 0.6683262 | -2.808     | 0.005                | -3.1942210           | -0.5592447 |
| <b>GSize</b>    | 0.0000491  | 0.0001700 | 0.289      | 0.773                | -0.0002860           | 0.0003842  |
| <b>SelfDist</b> | -0.1243024 | 0.3586550 | -0.347     | 0.729                | -0.8313279           | 0.5827231  |
| <b>Union</b>    | 0.0211190  | 0.3310997 | 0.064      | 0.949                | -0.6315861           | 0.6738241  |
| <b>Pleader</b>  | -0.9787384 | 0.2848027 | -3.437     | 0.001                | -1.5401770           | -0.4172997 |
| <b>Qleader</b>  | -0.3518419 | 0.3180692 | -1.106     | 0.270                | -0.9788596           | 0.2751759  |
| <b>Sleader</b>  | 0.0616266  | 0.3089752 | 0.199      | 0.842                | -0.5474639           | 0.6707171  |
| <b>Vleader</b>  | -0.0494650 | 0.2766770 | -0.179     | 0.858                | -0.5948853           | 0.4959553  |
| <b>SCScr</b>    | -0.0220145 | 0.0083962 | -2.622     | 0.009                | -0.0385662           | -0.0054628 |
| <b>HRScr</b>    | -0.0129127 | 0.0100426 | -1.286     | 0.200                | -0.0327099           | 0.0068846  |
| <b>FHScr</b>    | 0.0003990  | 0.0114808 | 0.035      | 0.972                | -0.0222334           | 0.0230313  |
| <b>EPScr</b>    | 0.0144501  | 0.0059982 | 2.409      | 0.017                | 0.0026257            | 0.0262745  |
| <b>QAScr</b>    | 0.0027180  | 0.0086584 | 0.314      | 0.754                | -0.0143505           | 0.0197865  |
| <b>SOScr</b>    | -0.0152623 | 0.0113410 | -1.346     | 0.180                | -0.0376191           | 0.0070945  |
| <b>constant</b> | 11.6907900 | 0.9713435 | 12.036     | 0.000                | 9.7759520            | 13.6056200 |

\*See Table 9.1 on page 56 for a key to abbreviations for explanatory variable names.

**Table B.4 Gross Profit as a Percent of Sales\***

| Source          | SS         | df        | MS         | Number of obs        |                      |            |
|-----------------|------------|-----------|------------|----------------------|----------------------|------------|
|                 |            |           |            | <b>F( 20, 210)</b>   | 231                  |            |
| <b>Model</b>    | 2087.3737  | 20        | 104.368685 | <b>Prob &gt; F</b>   | 1.94                 |            |
| <b>Residual</b> | 11295.1919 | 210       | 53.7866279 | <b>R-squared</b>     | 0.0114               |            |
|                 |            |           |            | <b>Adj R-squared</b> | 0.0756               |            |
| <b>Total</b>    | 13382.5655 | 230       | 58.1850676 | <b>Root MSE</b>      | 7.3339               |            |
|                 | Coef.      | Std. Err. | t          | P> t                 | [95% Conf. Interval] |            |
| <b>PopDen</b>   | 0.0005241  | 0.0003352 | 1.564      | 0.119                | -0.0001366           | 0.0011849  |
| <b>HHInc00</b>  | 0.0000490  | 0.0000395 | 1.241      | 0.216                | -0.0000289           | 0.0001268  |
| <b>SMSA</b>     | -0.6175275 | 1.4108910 | -0.438     | 0.662                | -3.3988520           | 2.1637970  |
| <b>SellSize</b> | -0.0000652 | 0.0000432 | -1.509     | 0.133                | -0.0001504           | 0.0000200  |
| <b>US</b>       | 0.6396356  | 2.1473960 | 0.298      | 0.766                | -3.5935800           | 4.8728510  |
| <b>FD</b>       | -1.6565290 | 1.5592920 | -1.062     | 0.289                | -4.7304000           | 1.4173430  |
| <b>WH</b>       | -5.3466770 | 2.7655770 | -1.933     | 0.055                | -10.7985300          | 0.1051730  |
| <b>GSize</b>    | 0.0003470  | 0.0007035 | 0.493      | 0.622                | -0.0010397           | 0.0017338  |
| <b>SelfDist</b> | 2.3315680  | 1.4841370 | 1.571      | 0.118                | -0.5941491           | 5.2572850  |
| <b>Union</b>    | 1.0294890  | 1.3701120 | 0.751      | 0.453                | -1.6714460           | 3.7304250  |
| <b>Pleader</b>  | -2.3618830 | 1.1785320 | -2.004     | 0.046                | -4.6851520           | -0.0386137 |
| <b>Qleader</b>  | -1.2807960 | 1.3161910 | -0.973     | 0.332                | -3.8754360           | 1.3138440  |
| <b>Sleader</b>  | 1.0914080  | 1.2785590 | 0.854      | 0.394                | -1.4290480           | 3.6118640  |
| <b>Vleader</b>  | 1.6844610  | 1.1449070 | 1.471      | 0.143                | -0.5725232           | 3.9414450  |
| <b>SCScr</b>    | -0.0282962 | 0.0347442 | -0.814     | 0.416                | -0.0967883           | 0.0401959  |
| <b>HRSr</b>     | -0.0315883 | 0.0415570 | -0.760     | 0.448                | -0.1135107           | 0.0503340  |
| <b>FHSr</b>     | 0.0025954  | 0.0475083 | 0.055      | 0.956                | -0.0910589           | 0.0962496  |
| <b>EPSr</b>     | -0.0020172 | 0.0248209 | -0.081     | 0.935                | -0.0509473           | 0.0469128  |
| <b>QASr</b>     | 0.0169555  | 0.0358291 | 0.473      | 0.637                | -0.0536752           | 0.0875862  |
| <b>SOSr</b>     | 0.0111580  | 0.0469297 | 0.238      | 0.812                | -0.0813558           | 0.1036717  |
| <b>constant</b> | 22.6385900 | 4.0194820 | 5.632      | 0.000                | 14.7148900           | 30.5622900 |

\*See Table 9.1 on page 56 for a key to abbreviations for explanatory variable names.

**Table B.5 Annual Percentage Sales Growth\***

| Source   | SS          | df        | MS         | Number of obs |                      | 231        |
|----------|-------------|-----------|------------|---------------|----------------------|------------|
|          |             |           |            | F( 20, 210)   |                      | 2.85       |
| Model    | 6693.01434  | 20        | 334.650717 | Prob > F      |                      | 0.0001     |
| Residual | 24686.7874  | 210       | 117.55613  | R-squared     |                      | 0.2133     |
|          |             |           |            | Adj R-squared |                      | 0.1384     |
| Total    | 31379.8017  | 230       | 136.433921 | Root MSE      |                      | 10.842     |
|          |             |           |            |               |                      |            |
|          | Coef.       | Std. Err. | t          | P> t          | [95% Conf. Interval] |            |
| PopDen   | 0.0007737   | 0.0004955 | 1.561      | 0.120         | -0.0002031           | 0.0017506  |
| HHInc00  | 0.0001637   | 0.0000584 | 2.804      | 0.006         | 0.0000486            | 0.0002788  |
| SMSA     | 3.0371690   | 2.0858300 | 1.456      | 0.147         | -1.0746800           | 7.1490170  |
| SellSize | -0.0000628  | 0.0000639 | -0.983     | 0.327         | -0.0001888           | 0.0000631  |
| US       | -3.2005530  | 3.1746630 | -1.008     | 0.315         | -9.4588460           | 3.0577390  |
| FD       | 2.0593710   | 2.3052230 | 0.893      | 0.373         | -2.4849730           | 6.6037140  |
| WH       | 4.7087070   | 4.0885680 | 1.152      | 0.251         | -3.3511870           | 12.7686000 |
| GSize    | -0.0005470  | 0.0010400 | -0.526     | 0.599         | -0.0025972           | 0.0015032  |
| SelfDist | 0.2068652   | 2.1941160 | 0.094      | 0.925         | -4.1184500           | 4.5321800  |
| Union    | -4.4731660  | 2.0255430 | -2.208     | 0.028         | -8.4661700           | -0.4801624 |
| Pleader  | 4.5894890   | 1.7423160 | 2.634      | 0.009         | 1.1548190            | 8.0241580  |
| Qleader  | -4.2162380  | 1.9458280 | -2.167     | 0.031         | -8.0520960           | -0.3803793 |
| Sleader  | 2.8018300   | 1.8901940 | 1.482      | 0.140         | -0.9243563           | 6.5280160  |
| Vleader  | 1.8715560   | 1.6926060 | 1.106      | 0.270         | -1.4651200           | 5.2082310  |
| SCScr    | -0.0190918  | 0.0513651 | -0.372     | 0.710         | -0.1203490           | 0.0821654  |
| HRScr    | 0.1829070   | 0.0614370 | 2.977      | 0.003         | 0.0617947            | 0.3040192  |
| FHScr    | 0.2423768   | 0.0702352 | 3.451      | 0.001         | 0.1039204            | 0.3808331  |
| EPScr    | 0.0030091   | 0.0366947 | 0.082      | 0.935         | -0.0693280           | 0.0753461  |
| QAScr    | -0.1913362  | 0.0529689 | -3.612     | 0.000         | -0.2957550           | -0.0869173 |
| SOScr    | 0.0008746   | 0.0693799 | 0.013      | 0.990         | -0.1358957           | 0.1376449  |
| constant | -17.3169400 | 5.9423130 | -2.914     | 0.004         | -29.0311700          | -5.6027070 |

\*See Table 9.1 on page 56 for a key to abbreviations for explanatory variable names.

## **Appendix C**

### **Sample Benchmark Report**

In July 2001 each store in the Panel received a confidential benchmark report comparing it to peer stores similar in marketing format and size. This was the primary reward for participation.

A sample benchmark report is reproduced on the pages that follow. This report was prepared for a store that was classified as Upscale. As explained in the cover letter, the peer group for this store was stores ranging in size from 12,000 to 45,000 square feet.

The first section of the report compares the store's scores for six management area indices to the median scores for the peer group. The six management area indices summarize supply chain practices, human resource practices, food handling, environmental practices, quality assurance, and service offerings of the store.

The remainder of the report presents question-by-question comparisons of the store's responses to those of its peers. The store's responses are noted by bold face type. Questions for which the store's responses are "unusual" relative to those of its peers are marked with a box. For example, in question 1, the sample store is one of only 10% of peer stores that has no plans to use customer satisfaction surveys. This distinguishes it from other stores in its peer group. Similarly, in question 7, the fact that this store has no exclusive parking spaces distinguishes it from its peer stores, which have a median of 200 exclusive parking spaces.

The benchmark report provides detailed, highly personalized feedback to stores in the Panel.

# University of Minnesota

---

## *Twin Cities Campus*

## *The Food Industry Center*

*Department of Applied Economics  
College of Agricultural, Food,  
and Environmental Sciences*

*317 Classroom Office Building  
1994 Buford Avenue  
St. Paul, MN 55108-6040  
612-625-7019  
FAX: 612-625-2729  
<http://trfic.umn.edu>*

## **TFIC BOARD OF ADVISORS:**

*John Block, President  
Food Distributors International*

*Gary Costley  
Chairman/CEO/President  
International Multifoods*

*Ray A. Goldberg, Professor  
Harvard Business School*

*John Gray, President  
International Foodservice  
Distributors, Assn.*

*Ellen Haas, Adjunct Fellow  
Center for Food and Nutrition Policy*

*Thomas Haggai, Chairman/CEO  
IGA Incorporated*

*Tim Hammonds, President/CEO  
Food Marketing Institute*

*Don Hays, CEO  
Parasole Restaurant Holdings, Inc.*

*George Hoffman, President & CEO  
Restaurant Services, Inc.*

*David Hughes, Professor  
Wye College, University of London*

*Joel W. Johnson  
Chairman, President/CEO  
Hormel Foods Corporation*

*Ron Marshall, President/CEO  
Nash Finch Company*

*Gary Michael, Chairman/CEO  
Albertson's, Inc.*

*C. Manly Molpus, President/CEO  
Grocery Manufacturers of America*

*Jeff Noddle, President/COO  
SUPERVALU, Inc.*

*Ron Pedersen, Chairman/CEO  
Marketing Specialists Sales Co.*

*Bruce Rohde, Chairman/CEO  
ConAgra, Inc.*

*Stephen W. Sanger  
Chairman & CEO  
General Mills, Inc.*

*Lloyd M. Sigel, President  
Lloyd's Food Products Holding Co.*

*Warren Staley, Chairman/CEO  
Cargill, Inc.*

*Roger Stangeland, Chairman  
The Grand Union Company*

*John Woodhouse, Senior Chairman  
Sysco Corporation*

*Tom Zaucha, President  
National Grocers Association*

## **2001 Supermarket Panel Benchmark Report**

July 25, 2001

Prepared for: Jon Seltzer  
1994 Buford Ave  
St. Paul, MN 55108

Dear Jon:

Thank you for participating in the Supermarket Panel. Your support makes possible this unique, in-depth view of the supermarket industry at the store level. We are pleased to provide your benchmark report that compares your store with all others in your peer group.

Peer groups are stores of similar size and marketing formats (Conventional, Upscale, Food/Drug Combination, or Warehouse store/Super warehouse). The peer group used in this report consists of stores whose format is "Upscale (Byerly's)" ranging in size from 12,000 to 45,000 square feet. If this peer group is not appropriate for your store or you would like to see another comparison, please let us know immediately. If possible, we will prepare a follow-up benchmark report with a revised peer group.

Your report begins with summary information for six areas of management interest:

- Supply Chain
- Human Resources
- Food Handling
- Environmental Practices
- Quality Assurance
- Service Offerings

In the first section of the report, responses in each management area are combined into scores that can range from 0 to 100%. The higher your score, the more of the "characteristics" you have adopted. A high score may not be the ideal target for your store. The score shown under "Peer Group Score" is the median value (half the responses larger, half smaller) for stores in your peer group. This may be your most meaningful basis for comparison.

Your practices in half of the areas of management interest are similar to those of stores in your peer group. You may want to take this opportunity to examine your policies with regards to Human Resources.

The remainder of your benchmark report presents question-by-question comparisons between your responses and those of stores in your peer group.

Considering the entire questionnaire, your responses differ most from those of stores in your peer group in Store Operations.

For more information on interpreting this portion of your report, see the one-page guide titled "How to Read the Benchmark Report" at the beginning of the second section.

In the fall we will have a full analysis of the results of this year's Panel. The initial results indicate that we have good representation of large and small stores, chain and independents, and stores from all parts of the country, fully reflecting the breadth of the retail food industry.

Your participation in the Panel is important and we want it to be a valuable resource for you. Please contact Jon Seltzer if you have any questions about this report or if there are changes in the areas of interest and benchmark comparisons that would make it more useful for you.

Jon Seltzer  
Supermarket Panel Project Manager

Telephone: 952-926-4602  
FAX: 952-926-3933  
Email: seltz004@tc.umn.edu

Once again, thank you for your participation.

## Summary Information for Key Management Areas

| Area                   |   | Peer<br>Group<br>Score<br>2001 | Your<br>Score<br>2001 | Your<br>Score<br>2000* |
|------------------------|---|--------------------------------|-----------------------|------------------------|
| <b>Supply Chain</b>    | <p>This index measures progress in implementing Supply Chain initiatives. It has two distinct dimensions which are combined to give a single score:</p> <ul style="list-style-type: none"> <li>• Use of technology (questions 1d, 1e, 1g, 1l, 1n, 1o, 1p, and 6h).</li> <li>• The role of various supply chain members in making marketing decisions--it assesses the degree to which pricing, advertising, promotions, merchandise display, and space allocation in produce, dry cereal, DSD snacks, and dairy are the responsibility of different parties in the supply chain (question 17).</li> </ul> <p>A higher value indicates that your store is further along in implementing Supply Chain initiatives.</p> <p>Your score is typical of stores in your peer group.</p> | 76%                            | 73%                   |                        |
| <b>Human Resources</b> | <p>This index measures your adoption of more progressive human resource practices. It has four components which are combined into a single score:</p> <ul style="list-style-type: none"> <li>• New hire training (questions 18 and 19).</li> <li>• Key employee training (question 20).</li> <li>• Proportion of full time to total employees (question 22).</li> <li>• Use of incentive-based and non-cash compensation (questions 26 and 27).</li> </ul> <p>A higher value indicates greater adoption of progressive human resource policies.</p> <p><b>This may be an area of opportunity for improving your practices.</b></p>  | 44%                            | 28%                   |                        |

\* Index scores for 2000 cannot be calculated for stores in their first year of Panel membership.

## Summary Information for Key Management Areas

| Area                           |   | Peer<br>Group<br>Score<br>2001 | Your<br>Score<br>2001 | Your<br>Score<br>2000* |
|--------------------------------|---|--------------------------------|-----------------------|------------------------|
| <b>Food Handling</b>           | <p>This index is based on your responses to the questions in the Food Handling Section of the survey.</p> <ul style="list-style-type: none"> <li>For all departments other than Frozen Foods, is the target temperature low enough (question 38)?</li> <li>Do you check the temperature in each department often enough (question 38)?</li> <li>Do you conduct store sanitation and 3<sup>rd</sup> party commercial audits often enough (question 39)?</li> <li>What dating information do you include (question 40)?</li> <li>Are your inventory rotation policies appropriate (question 41)?</li> <li>Do you require employees to be trained in proper handling techniques (question 42)?</li> </ul> <p>A higher value indicates better food quality/handling practices.</p> <p><b>This may be an area of opportunity for improving your practices.</b></p> | 89%                            | 82%                   |                        |
| <b>Environmental Practices</b> | <p>This index reflects your adoption of “environmentally friendly” practices. It has two aspects:</p> <ul style="list-style-type: none"> <li>Consumer oriented environmental policies (questions 6e, 6q, and 6v).</li> <li>Operations oriented environmental policies (questions 1h, 1m, and 1q).</li> </ul> <p>A higher value indicates greater adoption of environmentally friendly practices.</p> <p>Your score is typical of stores in your peer group.</p>   | 100%                           | 100%                  |                        |

\* Index scores for 2000 cannot be calculated for stores in their first year of Panel membership.

## Summary Information for Key Management Areas

| Area                     |   | Peer<br>Group<br>Score<br>2001 | Your<br>Score<br>2001 | Your<br>Score<br>2000* |
|--------------------------|---|--------------------------------|-----------------------|------------------------|
| <b>Quality Assurance</b> | <p>This index measures your adoption of quality assurance practices in two areas:</p> <ul style="list-style-type: none"> <li>• Use of instruments that assess customer satisfaction (questions 1a, 1b, and 1k).</li> <li>• Food handling practices regarding temperature checks, sanitation audits, inventory rotation, and food safety training.</li> </ul> <p>A higher value indicates greater attention to quality assurance.</p> <p><b>This may be an area of opportunity for improving your practices.</b></p> | 70%                            | 40%                   |                        |
| <b>Service Offerings</b> | <p>This index measures the breadth of customer service your store provides. It is based on your responses to questions 6b-d, 6f, 6i-l, 6n, 6r, 6s, 6x, and 6y.</p> <p>A higher value indicates that your store offers a wider range of services.</p> <p>Your score is typical of stores in your peer group.</p>   | 42%                            | 38%                   |                        |

\* Index scores for 2000 cannot be calculated for stores in their first year of Panel membership.

## How to Read the Benchmark Report

1. There are 2 types of answers.
  - a. Percentages: these numbers indicate the percentage of peer group stores that selected a specific response. The percentage is based on all peer group stores that answered this question.
  - b. Averages: these are numbers without "%" signs and are based only on the peer group stores that answered the question. These numbers are not means but medians, so half of the peer group stores that answered this question gave answers that are larger and half gave answers that are smaller.
2. Numbers in bold face indicate answers for your store.
3. Boxed answers indicate an unusual answer. For a percentage, if your answer is different from the answer or answers on which your peer stores are concentrated, then your answer is unusual. For a numerical answer, "unusual" means that it is far from the peer group average.
4. EXAMPLE 1: Consider the following sample response to Q1 on Page 1 by a hypothetical store.

Q1. To what extent are the following practices actively used in your store?  
*(Respondents circled ONE answer for each item)*

|    |  | Used for<br>More<br>Than 2<br>Years | Used for<br>1-2 Years | Started in<br>Past Year | Plant to<br>Start Next<br>Year | No Plans<br>to Use | Don't<br>Know |
|----|--|-------------------------------------|-----------------------|-------------------------|--------------------------------|--------------------|---------------|
| a. | Customer focus groups                                    |                                     | 12%                   |                         | 12%                            | 45%                | 31%           |
| b. | Customer satisfaction surveys                            | 42%                                 | 25%                   | 7%                      | 7%                             | 5%                 | 14%           |
| c. | Customer self-scanning                                   | 11%                                 | 7%                    | 7%                      | 7%                             | 11%                | 57%           |
| d. | Electronic receipt of invoices<br>from vendors/suppliers | 16%                                 | <b>7%</b>             |                         | 17%                            | 10%                | 49%           |

Twelve percent of stores in the peer group have used focus groups for between one and two years, 12% plan to start using them next year, and 31% of store managers in this peer group do not know what company plans are for using focus groups. The bold face indicates that this store is among the 45% of stores in the peer group that have no plans to use customer focus groups. In the last row, we see that this store is among the 7% of stores in the peer group that have used electronic receipt of invoices from vendors/suppliers for between one and two years. In this regard, it belongs to an unusually small group of stores. This is indicated by the box around the number.

5. EXAMPLE 2: Consider the following response to Q2 on Page 1 by a hypothetical store.

Q2. How many EXPRESS check-stands are there? **1 : 2** EXPRESS check-stands

Stores in this store's peer group have an average of 1 express check-stand. The 2 in bold face indicates that this store has 2 express check-stands. The box indicates that this is an unusually high number of express check-stands for this peer group.

Q1. To what extent are the following practices actively used in your store?  
(Respondents circled ONE answer for each item)

|    |   | Used for<br>More<br>Than 2<br>Years | Used for<br>1-2<br>Years | Started<br>in Past<br>Year | Plan to<br>Start<br>Next<br>Year | No Plans<br>to Use | Don't<br>Know |
|----|---|-------------------------------------|--------------------------|----------------------------|----------------------------------|--------------------|---------------|
| a. | Customer focus groups   | 30%                                 | 5%                       |                            | 10%                              | 40%                | 15%           |
| b. | Customer satisfaction surveys   | 60%                                 | 5%                       |                            | 10%                              | 10%                | 15%           |
| c. | Customer self-scanning  |                                     |                          | 5%                         | 10%                              | 67%                | 19%           |
| d. | Electronic receipt of invoices from vendors/suppliers                     | 48%                                 | 19%                      | 5%                         | 5%                               | 19%                | 5%            |
| e. | Electronic transmission of movement data to headquarters or key suppliers | 62%                                 | 24%                      | 5%                         |                                  | 10%                |               |
| f. | Electronic transmission of orders to vendors/suppliers                    | 82%                                 | 9%                       |                            |                                  | 5%                 | 5%            |
| g. | Electronic shelf tags   | 14%                                 |                          | 5%                         | 5%                               | 50%                | 27%           |
| h. | Energy efficient lighting   | 77%                                 | 5%                       | 9%                         | 5%                               | 5%                 |               |
| i. | In-store electronic coupons   | 33%                                 | 10%                      | 10%                        | 5%                               | 38%                | 5%            |
| j. | Internet/Intranet link to corporate headquarters and/or key suppliers     | 45%                                 | 14%                      | 9%                         | 18%                              | 9%                 | 5%            |
| k. | Mystery shopper program   | 41%                                 | 5%                       | 5%                         | 5%                               | 27%                | 18%           |
| l. | Product movement analysis/Category management                             | 86%                                 | 9%                       | 5%                         |                                  |                    |               |
| m. | Refrigeration management program  | 73%                                 | 5%                       |                            |                                  | 9%                 | 14%           |
| n. | Scan-based trading (payment to vendor triggered by sale to consumer)      | 18%                                 | 5%                       | 9%                         | 5%                               | 45%                | 18%           |
| o. | Scanning data used for automatic inventory refill                         | 23%                                 |                          |                            | 5%                               | 50%                | 23%           |
| p. | Shelf-space allocation plan-o-grams                                       | 68%                                 |                          | 18%                        |                                  | 14%                |               |
| q. | Store waste recycling   | 95%                                 |                          |                            |                                  | 5%                 |               |
| r. | Web site for customers  | 45%                                 | 9%                       | 9%                         | 18%                              | 9%                 | 9%            |

Q2. How many EXPRESS check-stands are there? 2 : 1 EXPRESS check-stands

Q3. How many TOTAL check-stands are there (including express)? 9 : 9 check-stands TOTAL

Q4. How many hours per week are all check-stands in use? 25 : 20 hours per week

Q5. How many hours per week is the store open? (168 maximum) 119 : 120 hours per week

Q6. How would you rate the use of the following service offerings in your store?  
(Respondents circled ONE answer for each item)

|    |   | Key<br>Competitive<br>Advantage | Standard<br>Offering | Plan to<br>Discontinue | Considering<br>Introduction | Not Used,<br>No Plan to<br>Offer |
|----|---|---------------------------------|----------------------|------------------------|-----------------------------|----------------------------------|
| a. | Advertise Every Day Low Prices (EDLP)                                       | 27%                             | 45%                  |                        | 5%                          | 23%                              |
| b. | Bagging service   | 45%                             | 55%                  |                        |                             |                                  |
| c. | Carryout service  | 55%                             | 32%                  |                        |                             | 14%                              |
| d. | Custom meat cutting/service meats   | 77%                             | 18%                  |                        |                             | 5%                               |
| e. | Environmentally-friendly products   | 32%                             | 55%                  |                        |                             | 14%                              |
| f. | Fax ordering by customer  | 14%                             | 18%                  |                        | 14%                         | 55%                              |
| g. | Franchise/license depts. (Starbucks, Subway)                                |                                 | 10%                  |                        | 14%                         | 76%                              |
| h. | Frequent shopper/Loyalty card program                                       | 45%                             |                      |                        | 5%                          | 50%                              |
| i. | Gasoline  |                                 |                      |                        | 9%                          | 91%                              |
| j. | Home delivery   | 14%                             |                      |                        | 27%                         | 59%                              |
| k. | Home meal replacement (HMR)/fresh prepared foods                            | 50%                             | 27%                  |                        | 5%                          | 18%                              |
| l. | HMR meals—special checkout lane   | 18%                             | 9%                   |                        | 9%                          | 64%                              |
| m. | In-store bakery   | 55%                             | 36%                  |                        | 5%                          | 5%                               |
| n. | Internet ordering by customer   | 9%                              | 9%                   |                        | 36%                         | 45%                              |
| o. | Labels pertaining to genetically modified foods (GMO-Free or Contains GMOs) | 14%                             | 10%                  |                        | 10%                         | 67%                              |
| p. | Newspaper ads with coupons  | 32%                             | 32%                  |                        |                             | 36%                              |
| q. | Organic produce   | 36%                             | 45%                  |                        | 5%                          | 14%                              |
| r. | Pharmacy, prescriptions   | 10%                             | 5%                   |                        | 5%                          | 81%                              |
| s. | Post office, mailing services   | 9%                              | 23%                  |                        | 9%                          | 59%                              |
| t. | Private label program-own brand   | 45%                             | 45%                  |                        |                             | 9%                               |
| u. | Purchase triggered electronic coupons                                       | 33%                             | 24%                  |                        | 10%                         | 33%                              |
| v. | Recycling (cans, glass, plastic)  | 23%                             | 50%                  |                        | 5%                          | 23%                              |
| w. | Seating for eating/customer rest areas                                      | 27%                             | 32%                  |                        | 5%                          | 36%                              |
| x. | Teller banking/in-store banking   | 23%                             | 9%                   |                        | 5%                          | 64%                              |
| y. | Video department  |                                 | 18%                  |                        | 9%                          | 73%                              |

Q7. What is the approximate number of parking spaces?

a. Number of parking spaces EXCLUSIVE to your store:

200 : 0

b. TOTAL parking spaces, exclusive and shared, available to your store:

275 : 150

- Q8. What is the approximate size of the SELLING AREA in your store? 30,000 : 28,500 sq. ft.
- Q9. Approximately, what is the TOTAL size of your store (selling area and backroom)? 41,500 : 31,000 sq. ft.
- Q10. In what year was the store originally constructed? (Approx) 1987 : 1985
- Q11. In what year was the store 1<sup>st</sup> operated under its current name? (Approx) 1986 : 1985
- Q12. Has your store ever had a major remodeling (significant new equipment or new departments, or store dimensions changed)?
1. Yes 68% → If Yes: What was the year of the most recent MAJOR remodeling? 1998
  2. No 32%
  3. Not sure or don't know
- Q13. Has your store ever had a minor remodeling (some equipment change or replacement but no new departments or change in store dimensions)?
1. Yes 60% → If Yes: What was the year of the most recent MINOR remodeling? 1999 : 1997
  2. No 40%
  3. Not sure or don't know
- Q14. Approximately how many stores are owned by the same company that owns your store?
- 30 : 1 stores
- If 10 stores or less → Is the manager's equity ownership in THIS STORE at least 20%?
1. Yes
  2. No 83%
  3. Not sure or don't know 17%
- Q15. What is the relationship between this store and its primary warehouse or major supplier?
1. The warehouse is a wholesaler or cooperative 50%
  2. The store and the warehouse are part of the same company (including wholesaler owned store) 50%
  3. Not sure or don't know
- Q16. Does your store participate in a cooperative or wholesaler-sponsored ad group or franchise program?
1. Yes 45%
  2. No 41%
  3. Not sure or don't know 14%

Q17. For each of the products listed below, please indicate who has MAJOR responsibility for each of the functions listed. (Respondents circled ALL that applied; row totals may exceed 100%)

|                         | Store<br>Manager | Dept.<br>Head | Other<br>Store<br>Personnel | Wholesaler | Chain HQ<br>or Region | Indept Ad<br>Group | Category<br>Manager | Vendor<br>or<br>Broker | Other<br>Out-of-<br>Store<br>Personnel |
|-------------------------|------------------|---------------|-----------------------------|------------|-----------------------|--------------------|---------------------|------------------------|--|
| <b>Fresh Apples</b>     |                  |               |                             |            |                       |                    |                     |                        |  |
| Pricing                 | 9%               | 36%           |                             | 14%        | 45%                   |                    | 32%                 |                        | 9%                                     |
| Advertising             | 23%              | 14%           |                             | 5%         | 68%                   | 5%                 | 9%                  |                        | 5%                                     |
| Space Allocation        | 27%              | 50%           | 5%                          |            | 41%                   |                    | 18%                 |                        | 9%                                     |
| Display Merchandising   | 50%              | 59%           | 5%                          |            | 36%                   |                    | 14%                 |                        |  |
| Promotions              | 50%              | 41%           | 5%                          | 9%         | 55%                   |                    | 14%                 |                        |  |
| <b>Dry Cereal</b>       |                  |               |                             |            |                       |                    |                     |                        |  |
| Pricing                 | 27%              | 18%           |                             | 9%         | 50%                   |                    | 32%                 |                        | 9%                                     |
| Advertising             | 27%              | 9%            |                             |            | 59%                   | 9%                 | 14%                 |                        |  |
| Space Allocation        | 36%              | 36%           | 5%                          |            | 41%                   |                    | 32%                 |                        | 5%                                     |
| Display Merchandising   | 45%              | 50%           | 9%                          |            | 32%                   |                    | 18%                 |                        | 5%                                     |
| Promotions              | 45%              | 32%           | 5%                          | 9%         | 45%                   | 5%                 | 23%                 | 9%                     |  |
| <b>DSD Snacks</b>       |                  |               |                             |            |                       |                    |                     |                        |  |
| Pricing                 | 27%              | 18%           |                             | 5%         | 50%                   |                    | 27%                 | 9%                     | 9%                                     |
| Advertising             | 32%              | 9%            |                             |            | 59%                   | 9%                 | 14%                 | 5%                     | 5%                                     |
| Space Allocation        | 50%              | 36%           |                             |            | 32%                   |                    | 36%                 | 9%                     | 5%                                     |
| Display Merchandising   | 59%              | 50%           |                             | 5%         | 36%                   |                    | 18%                 | 5%                     | 9%                                     |
| Promotions              | 50%              | 27%           |                             | 5%         | 45%                   | 5%                 | 23%                 | 9%                     | 5%                                     |
| <b>Fresh Fluid Milk</b> |                  |               |                             |            |                       |                    |                     |                        |  |
| Pricing                 | 27%              | 14%           |                             | 5%         | 45%                   |                    | 27%                 | 5%                     | 14%                                    |
| Advertising             | 27%              | 9%            |                             |            | 59%                   | 9%                 | 14%                 | 5%                     |  |
| Space Allocation        | 41%              | 32%           |                             |            | 36%                   |                    | 27%                 | 5%                     | 5%                                     |
| Display Merchandising   | 45%              | 55%           |                             |            | 36%                   |                    | 18%                 | 5%                     | 5%                                     |
| Promotions              | 41%              | 27%           |                             |            | 45%                   | 5%                 | 23%                 | 5%                     | 5%                                     |

For a typical new-hire in each of the following positions, how many hours of training (classroom or one-on-one supervision) are given for the following? Answers should be cumulative; i.e., include "Training hours during week 1 of employment" in the total for "Training hours during weeks 1-26 of employment". (A zero indicates no classroom or one-on-one, supervised training)

|      | Number of Hours of Training for a New Hire (classroom or one-on-one supervision) | During Week 1 of Employment | During Weeks 1-26 of Employment |
|------|--|-----------------------------|---------------------------------|
| Q18. | Cashier  | 17 : 18                     | 20 : 18                         |
| Q19. | Elsewhere in the Store   | 16 : 8                      | 24 : 8                          |

Q20. How many hours in the past 12 months have the following individuals spent in classroom training or one-on-one instruction? (Training would include outside programs like Dale Carnegie, college courses or internal training. Time spent in operational meetings, such as staff meetings, should not be included.)

|                                 | Number of Hours |
|---------------------------------|-----------------|
| Store Manager                   | 12 : 0          |
| Grocery Department Manager      | 10 : 8          |
| Pricing or Scanning Coordinator | 10 : 8          |

|      |  | Full Time   | Part Time   |
|------|--|-------------|-------------|
| Q21. | In an average week, how many employee hours do you schedule Full Time and Part Time?           | 1,200 : 480 | 1,642 : 960 |
| Q22. | CURRENTLY, how many employees are working in the store, Full Time and Part Time?               | 33 : 8      | 73 : 25     |
| Q23. | 12 MONTHS AGO, what was the number of employees working in the store, Full Time and Part Time? | 36 : 8      | 73 : 25     |

Q24. Approximately how many Full Time and Part Time employees started working at this location in the last 12 months (whether or not they are still with your store or company)?

35 : 30

Number of new hires in the last 12 months

5 : 0

Number of transfers from other locations in your company in the last 12 months.

Q25. Are 25% or more of your employees covered by a collective bargaining agreement?

1. Yes 29%

2. No 71%

The next questions asked how different types of employees are compensated. *Respondents circled Yes, No, or DK (Don't Know) for each question below.*

Q26. Please indicate which of the items below is typically a part of the compensation of

|    |  | <u>Store Managers</u> |     |    | <u>Department Heads</u> |     |    |
|----|--|-----------------------|-----|----|-------------------------|-----|----|
|    |  | Yes                   | No  | DK | Yes                     | No  | DK |
| a. | Salary   | 100%                  |     |    | 37%                     | 63% |    |
| b. | Annual Bonus   | 86%                   | 14% |    | 71%                     | 29% |    |
| c. | Hourly Wage  | 5%                    | 95% |    | 71%                     | 29% |    |
| d. | Individual Performance Incentive Pay                   | 41%                   | 55% | 5% | 43%                     | 57% |    |
| e. | Incentive Pay Based on Product or Category Performance | 36%                   | 59% | 5% | 38%                     | 62% |    |
| f. | Employee Stock Ownership Plan                          | 45%                   | 50% | 5% | 43%                     | 57% |    |
| g. | Individual Health Insurance                            | 95%                   | 5%  |    | 90%                     | 10% |    |
| h. | Family Health Insurance                                | 91%                   | 9%  |    | 86%                     | 14% |    |
| i. | Disability Insurance                                   | 68%                   | 32% |    | 71%                     | 29% |    |
| j. | Pension  | 59%                   | 36% | 5% | 57%                     | 43% |    |
| k. | 401(k) Plan  | 77%                   | 18% | 5% | 76%                     | 24% |    |

Q27. Please indicate which of the items below is typically a part of the compensation of

|    |  | <u>Other Full Time Personnel</u> |     |    | <u>Part Time Personnel</u> |     |    |
|----|--|----------------------------------|-----|----|----------------------------|-----|----|
|    |  | Yes                              | No  | DK | Yes                        | No  | DK |
| a. | Salary   | 10%                              | 90% |    | 5%                         | 95% |    |
| b. | Annual Bonus   | 36%                              | 64% |    | 23%                        | 77% |    |
| c. | Hourly Wage  | 100%                             |     |    | 100%                       |     |    |
| d. | Individual Performance Incentive Pay                   | 14%                              | 86% |    | 14%                        | 86% |    |
| e. | Incentive Pay Based on Product or Category Performance | 9%                               | 91% |    | 5%                         | 95% |    |
| f. | Employee Stock Ownership Plan                          | 50%                              | 50% |    | 41%                        | 59% |    |
| g. | Individual Health Insurance                            | 95%                              | 5%  |    | 68%                        | 32% |    |
| h. | Family Health Insurance                                | 91%                              | 9%  |    | 45%                        | 55% |    |
| i. | Disability Insurance                                   | 64%                              | 36% |    | 41%                        | 59% |    |
| j. | Pension  | 64%                              | 36% |    | 55%                        | 45% |    |
| k. | 401(k) Plan  | 82%                              | 18% |    | 64%                        | 36% |    |

The next set of questions concerns the three stores that compete most strongly with your store for customers, whether or not they belong to your company or ad group.

|      |  | Your Store | Competitor 1 | Competitor 2 | Competitor 3 |
|------|--|------------|--------------|--------------|--------------|
| Q28. | Name (not included to maintain confidentiality)  | XXXX       | XXXX         | XXXX         | XXXX         |
| Q29. | Distance from your store in miles  | XXXX       | 2 : 1        | <u>2 : 1</u> | 4 : 2        |
| Q30. | Please indicate each store's MARKETING FORMAT.<br>(Respondents selected one per store) |            |              |              |              |
| a.   | Conventional   |            | 59%          | 38%          | 31%          |
| b.   | Upscale (Byerly's)   | 100%       | 6%           | 6%           | 13%          |
| c.   | Food/Drug combination (Albertsons, Smitty's)   |            | 12%          | 19%          | 25%          |
| d.   | Warehouse store/Super warehouse (Cub, Xtra)  |            | 6%           | 19%          | 13%          |
| e.   | Supercenter/Hypermarket (Kmart, Wal*Mart, Fred Meyer, Meijer)                          |            | 18%          | 19%          | 13%          |
| f.   | Category specialist (PET Food Warehouse, Office Max)                                   |            |              |              |              |
| g.   | Wholesale club (Costco, Sam's Club, BJ's)  |            |              |              | 6%           |
| h.   | Convenience store (with or without gasoline)   |            |              |              |              |
| i.   | Internet (Peapod, NetGrocer, Webvan)   |            |              |              |              |
| j.   | Natural foods (Whole Foods)  |            |              |              |              |
| k.   | Mass merchant/Discount (Traditional Kmart, Wal*Mart, Target)                           |            |              |              |              |
| l.   | Other  |            |              |              |              |

|      |  | Your Store | Competitor 1 | Competitor 2 | Competitor 3 |
|------|--|------------|--------------|--------------|--------------|
| Q31. | What is the competitive sales rank of each of these stores CURRENTLY? (1 - 4: Leader = 1)  | 2 : 2      | 2 : 3        | 3 : 4        | 3 : 1        |
| Q32. | What was the competitive sales rank of each of these stores LAST YEAR? (1 - 4: Leader = 1) | 2 : 2      | <u>2 : 3</u> | <u>3 : 4</u> | <u>4 : 1</u> |
| Q33. | Which ONE of these 4 stores is the PRICE LEADER?   | 26%        | 16%          | 26%          | 32%          |
| Q34. | Which ONE of these 4 stores is the SERVICE LEADER?   | 86%        | 14%          |              |              |
| Q35. | Which ONE of these 4 stores is the QUALITY LEADER?   | 90%        | 5%           | 5%           |              |
| Q36. | Which ONE of these 4 stores is the VARIETY LEADER?   | 67%        | 19%          | 5%           | 10%          |

Q37. Please indicate each store's MARKETING PROGRAMS below.

|    |                             | <u>Your Store</u> |     | <u>Competitor 1</u> |     | <u>Competitor 2</u> |     | <u>Competitor 3</u> |     |
|----|-----------------------------|-------------------|-----|---------------------|-----|---------------------|-----|---------------------|-----|
|    |                             | Yes               | No  | Yes                 | No  | Yes                 | No  | Yes                 | No  |
| a. | Strong Service              | 100%              |     | 41%                 | 50% | 26%                 | 63% | 30%                 | 60% |
| b. | Perishable Excellence       | 100%              |     | 52%                 | 48% | 42%                 | 58% | 47%                 | 47% |
| c. | Bagging                     | 100%              |     | 64%                 | 36% | 65%                 | 35% | 47%                 | 42% |
| d. | Parcel Pickup               | 23%               | 73% | 14%                 | 73% | 5%                  | 80% | 5%                  | 75% |
| e. | Frequent Shopper Program    | 45%               | 55% | 64%                 | 27% | 58%                 | 37% | 37%                 | 47% |
| f. | Heavy Private Label Program | 55%               | 45% | 77%                 | 23% | 75%                 | 25% | 70%                 | 20% |
| g. | Open 24 Hours               | 27%               | 73% | 55%                 | 45% | 40%                 | 50% | 20%                 | 70% |
| h. | Store Coupons               | 64%               | 36% | 76%                 | 19% | 84%                 | 11% | 70%                 | 25% |
| i. | Low Prices                  | 64%               | 36% | 55%                 | 41% | 75%                 | 20% | 70%                 | 25% |
| j. | Every Day Low Prices (EDLP) | 68%               | 32% | 45%                 | 50% | 60%                 | 35% | 55%                 | 35% |
| k. | High/Low Advertising        | 68%               | 23% | 64%                 | 23% | 60%                 | 25% | 55%                 | 30% |
| l. | Advertising Driven          | 57%               | 38% | 82%                 | 14% | 74%                 | 21% | 53%                 | 37% |
| m. | Home Shopping               | 9%                | 91% | 9%                  | 86% |                     | 95% | 10%                 | 75% |
| n. | Other                       |                   | 5%  |                     |     |                     |     |                     |     |

Q38. How frequently are display case temperatures checked for the following departments? *(For each department, respondents filled in the target temperature and chose ONE answer to indicate frequency)*

|    |                     | Display case target temperature | Does not apply | Less than once per week | At least once per week, less than once per day | At least once per day | Checked whenever automatic alarm goes off |
|----|---------------------|---------------------------------|----------------|-------------------------|--|-----------------------|---|
| a. | Meat (self service) | 34 : 34                         |                | 10%                     |  | 67%                   | 24%                                       |
| b. | Dairy               | 37 : 36                         |                | 10%                     |  | 67%                   | 24%                                       |
| c. | Deli (self service) | 36 : 36                         |                | 10%                     |  | 67%                   | 24%                                       |
| d. | Frozen              | 0 : 0                           |                | 10%                     |  | 67%                   | 24%                                       |

Q39. How often is your store inspected for food sanitation by the following?  
*(Respondents chose ONE answer for each item)*

|    |                                  | Does not apply | Once per year | More than once per year, less than once per month | Once per month | More than once per month |
|----|----------------------------------|----------------|---------------|---|----------------|--------------------------|
| a. | Self Audit                       |                |               | 9%  | 36%            | 55%                      |
| b. | Local Authority                  |                | 23%           | 73%   | 5%             |                          |
| c. | 3 <sup>rd</sup> Party Commercial | 27%            | 9%            | 27%   | 32%            | 5%                       |

Q40. For each product listed below, please indicate what type of dating information is on the package and who determines the date (if any). *(Respondents chose ONE answer for dating information and ONE for who determines the dating information, if applicable)*

|    | Perishable Product       | Does not apply | None | Sell by date | Use by date | Other | Determined by manufacturer or processor | Determined at store level or company HQ |
|----|--------------------------|----------------|------|--------------|-------------|-------|---|---|
| a. | Poultry                  |                | 5%   | 76%          | 19%         |       | 71%                                     | 29%                                     |
| b. | Red Meat                 |                | 5%   | 82%          | 14%         |       | 25%                                     | 75%                                     |
| c. | Seafood                  | 5%             | 5%   | 77%          | 14%         |       | 27%                                     | 73%                                     |
| d. | Self Service Deli (Cold) | 9%             |      | 68%          | 23%         |       | 50%                                     | 50%                                     |

Q41. For each of the following areas, please circle all the inventory rotation or stocking policies that apply. *(Respondents circled all that applied; row totals may exceed 100%)*

|    | Department          | Does not apply | Replace when depleted | Restock as needed into the rear | Restock, no rotation | Other |
|----|---------------------|----------------|-----------------------|---------------------------------|----------------------|-------|
| a. | Meat (self service) | 5%             | 36%                   | 77%                             |                      |       |
| b. | Dairy               |                | 14%                   | 95%                             |                      |       |
| c. | Deli (self service) |                | 23%                   | 86%                             |                      |       |
| d. | Frozen              |                | 27%                   | 68%                             | 18%                  |       |

Q42. Is a food safety training course required, either by company policy or regulation, for:

|    |   | Does not apply | Yes | No  | Don't know |
|----|---|----------------|-----|-----|------------|
| a. | Deli Manager?                             |                | 82% | 18% |            |
| b. | Deli Employees?                           |                | 59% | 36% | 5%         |
| c. | Meat Department Employees?                |                | 68% | 32% |            |
| d. | Store Manager or Assistant Store Manager? |                | 82% | 18% |            |

The next set of questions asks for information about three individual departments and for the store as a whole.

|      |   | Produce   | Meat      | Grocery         | Total Store     |
|------|---|-----------|-----------|-----------------|-----------------|
| Q43. | Approximately, how much are PRIVATE LABEL SALES as a percentage of total sales in Grocery and Total Store? (Please include STORE BRAND BREAD in the TOTAL STORE but not in GROCERY) | XXXX      | XXXX      | 5 : 5           | 9 : 12          |
| Q44. | In each department, how much are average weekly sales as a percentage of total store sales?   | 12 : 10   | 14 : 8    | 51 : 50         | 100%            |
| Q45. | What is the AVERAGE NUMBER of DSD DELIVERIES per week in each department and for the TOTAL STORE?   | 6 : 0     | 6 : 0     | 50 : 4          | 98 : 10         |
| Q46. | What is the AVERAGE NUMBER of non-DSD DELIVERIES per week in each department and for the TOTAL STORE?   | 4 : 3     | 4 : 3     | 4 : 4           | 19 : 4          |
| Q47. | What is the number of ANNUAL INVENTORY TURNS for each department and for the TOTAL STORE?   | 48 : 50   | 41 : 50   | 17 : 15         | 20 : 18         |
| Q48. | What is the number of SKUs for each department and for the TOTAL STORE?   | 500 : 400 | 650 : 700 | 19,000 : 20,000 | 32,500 : 38,000 |

|      |  | Most Recent Complete Fiscal Year | Previous Fiscal Year |
|------|--|----------------------------------|----------------------|
| Q49. | Ending date of Fiscal Year                                     | 12/00 : 2/01                     | XXXX                 |
| Q50. | What were AVERAGE WEEKLY STORE SALES?                          | 325,000 : 240,000                | 325,000 : 237,000    |
| Q51. | What was the AVERAGE NUMBER OF CUSTOMER TRANSACTIONS PER WEEK? | 13,500 : 12,500                  | 13,125 : 12,500      |
| Q52. | What was the AVERAGE GROSS PROFIT as a PERCENTAGE of SALES?    | 28 : 25                          | 26 : 24              |
| Q53. | What was the AVERAGE PAYROLL as a PERCENTAGE of SALES?         | 11 : 11                          | 11 : 11              |

**The Mission of The Food Industry Center of the University of Minnesota** is to be the leading source of knowledge on how food reaches consumers effectively and efficiently. Through research and educational programs, it will help develop leaders for tomorrow's food industry.

**The Food Industry Center** is a community of scholars that develops and disseminates knowledge and analysis about how food reaches consumers. The Center focuses on how food retailers, manufacturers, and distributors serve consumers and how they interact with various suppliers and customers in the food distribution channel. The community of scholars includes faculty, students, and industry leaders from across the nation and around the world. The Center introduces creative thinking and visionary solutions to tomorrow's challenges that arise out of new science, lifestyles, management relationships, and technology.

**The Food Industry Center** is one of eighteen industry study centers located in major universities around the country and funded initially by the Alfred P. Sloan Foundation. Each center studies a different industry such as automobiles, steel, semiconductors, and airlines. A goal of the Sloan Foundation is to foster an understanding of the basic forces contributing to American economic progress in an increasingly competitive world. The primary objectives of the Sloan Foundation study centers are to enable academic scholars to learn, first-hand, about the operations of a particular industry, develop new knowledge, and create a forum where industry leaders can examine new information and discuss the implications for their industry.

**The University of Minnesota** is the largest land grant university in the country with more than 65,000 students, 5,700 faculty, four campuses, and a long history of excellence in research and education in the economics and sciences of agricultural, environmental, and food distribution issues. The Center is housed in the Applied Economics Department on the St. Paul Campus in the College of Agricultural, Food, and Environmental Sciences. Faculty from other departments are heavily involved in research projects with the Center. These departments include Food Science and Nutrition, Marketing and Logistics Management, Operations and Management Science, Industrial Relations Center, and Strategic Management Organization. The last four departments are in the Carlson School of Management.



The Food Industry Center  
Co-Directors: Jean Kinsey, Benjamin Senauer  
Department of Applied Economics  
University of Minnesota  
317 Classroom Office Building  
1994 Buford Avenue  
Saint Paul, MN 55108-6040

Worldwide Web: <http://trfic.umn.edu>

Phone 612-625-7019; Fax 612-625-2729