



The Food Industry Center
UNIVERSITY OF MINNESOTA

The Food Industry Center's 2001 Supermarket Annual Report

The 2001 Supermarket Panel Annual Report

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

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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 2000.¹ 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.

¹ 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 2001.²

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.³

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.⁴ 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 *68th 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 *68th 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.

² 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.

³ See Appendix C for a sample benchmark report.

⁴ 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> ¹	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

¹ Source: 68th 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 Store	2 -10 Stores	11 - 30 Stores	31 - 60 Stores	> 60 Stores
NUMBER OF STORES REPRESENTED	5,989 (185)	5,802 (145)	3,204 (61)	2,170 (24)	14,292 (148)
STORE AND MARKET CHARACTERISTICS					
• 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
MEDIAN PERFORMANCE MEASURES					
• 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
NUMBER OF STORES BY FORMAT					
• 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)
NUMBER OF STORES BY REGION					
• 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
NUMBER OF STORES REPRESENTED	19,392 (420)	2,814 (33)	7,375 (84)	1,876 (26)
STORE AND MARKET CHARACTERISTICS				
• 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
MEDIAN PERFORMANCE MEASURES				
• 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
NUMBER OF STORES BY STORE GROUP SIZE				
• 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)
NUMBER OF STORES BY REGION				
• 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
NUMBER OF STORES REPRESENTED	11,463 (155)	19,994 (408)
STORE AND MARKET CHARACTERISTICS		
• 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
MEDIAN PERFORMANCE MEASURES		
• 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
NUMBER OF STORES BY STORE GROUP SIZE		
• 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)
NUMBER OF STORES BY REGION		
• 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 Store	2 -10 Stores	11 - 30 Stores	31 - 60 Stores	> 60 Stores
NUMBER OF STORES REPRESENTED (SC Score)	5,989 (185)	5,641 (142)	3,204 (61)	2,170 (24)	14,196 (147)
MEDIAN SUPPLY CHAIN SCORE	30	45	67	70	80
• Technology Component	40	40	60	60	60
• Decision Sharing Component	20	55	70	80	100
USE OF TECHNOLOGY (Percentages)					
• 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

	<u>Single Store</u>	<u>2 -10 Stores</u>	<u>11 - 30 Stores</u>	<u>31 - 60 Stores</u>	<u>> 60 Stores</u>
DECISION SHARING WITH PARTIES OUTSIDE THE STORE (Percentages)					
<u>APPLES</u>					
• 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
<u>DRY CEREAL</u>					
• 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
<u>DSD SNACKS</u>					
• 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
<u>FLUID MILK</u>					
• 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 COMBO	WH
NUMBER OF STORES REPRESENTED (SC Score)	19,231 (417)	2,814 (33)	7,279 (83)	1,876 (26)
MEDIAN SUPPLY CHAIN SCORE	55	80	80	70
• Technology Component	50	70	70	60
• Decision Sharing Component	60	95	100	75
USE OF TECHNOLOGY (Percentages)				
• 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 COMBO	WH
DECISION SHARING WITH PARTIES OUTSIDE THE STORE (Percentages)				
<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

CON = Conventional
US = Upscale

FD COMBO = Food/Drug Combination
WH = Warehouse

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

	<u>Lowest Quartile</u>	<u>Second Quartile</u>	<u>Third Quartile</u>	<u>Highest Quartile</u>
MEDIAN SUPPLY CHAIN SCORE	30	60	75	87
• Technology Component	30	50	60	80
• Decision Sharing Component	15	65	100	100
MARKET CHARACTERISTICS				
• 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
STORE CHARACTERISTICS (Median)				
• 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
STORE CHARACTERISTICS (Percentage)				
• Wholesaler Supplied	90	70	22	7
• Union Workforce	10	20	35	52
PERFORMANCE MEASURES (Median)				
• 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.

- 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.

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 2001.¹ 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

¹ Data were not weighted for this analysis.

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

Supply Chain Technology	Percentage Adoption Rate	
	2000	2001
EDI and Internet-Based Data Sharing Technologies		
• 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
Technologies that Facilitate Decision Sharing		
• Scan-Based Trading	29.9	28.5
• Scanning Data Used for Automatic Inventory Refill	9.3	9.9
Technologies that Support Product Assortment, Pricing, and Merchandising Decisions		
• 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

	<u>Single</u>	<u>2-10</u>	<u>11 - 30</u>	<u>31 - 60</u>	<u>> 60</u>
NUMBER OF STORES REPRESENTED (HR Score)	5,625 (167)	5,567 (136)	2,877 (56)	2,018 (22)	13,776 (142)
MEDIAN HUMAN RESOURCE PRACTICES SCORE	33	38	41	35	45
• 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
NEW EMPLOYEE TRAINING COMPONENT: MEDIANS					
• Cashier Training (1 st 26 weeks)	25	24	20	24	20
• Other Training (1 st 26 weeks)	20	24	16	12	20
KEY EMPLOYEE TRAINING COMPONENT: MEDIANS					
• Store Manager Training	0	8	10	5	27
• Grocery Manager Training	0	0	4	2	12
• Scanning Coordinator Training	0	3	0	1	8
COMPENSATION COMPONENT: MEDIANS					
• 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

	<u>CON</u>	<u>US</u>	<u>FD COMBO</u>	<u>WH</u>
NUMBER OF STORES REPRESENTED (HR Score)	18,544 (391)	2,654 (31)	6,949 (77)	1,716 (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 st 26 weeks)	20	23	24	30
• Other Training (1 st 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

	<u>Lowest Quartile</u>	<u>Second Quartile</u>	<u>Third Quartile</u>	<u>Highest Quartile</u>
MEDIAN HUMAN RESOURCE PRACTICES SCORE	26	37	46	60
• 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
MARKET CHARACTERISTICS				
• 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
STORE CHARACTERISTICS (Median)				
• 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
STORE CHARACTERISTICS (Percentage)				
• Wholesaler Supplied	68	50	51	23
• Union Workforce	19	33	39	22
PERFORMANCE MEASURES (Median)				
• 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 2001.¹ 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

<u>Human Resource Practice Component</u>	<u>Median Component Score</u>	
	<u>2000</u>	<u>2001</u>
New Employee Training	47.3	40.0
Key Employee Training	NA	19.0
Proportion of Full-Time Employees	35.4	34.5
<u>Compensation</u>	<u>38.9</u>	<u>47.0*</u>
• 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.

¹ 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, differences 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.¹ 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.

¹ 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 Store	2-10 Stores	11 - 30 Stores	31 - 60 Stores	> 60 Stores
NUMBER OF STORES REPRESENTED (FH Score)	3,711 (126)	4,086 (102)	2,498 (46)	1,188 (14)	11,170 (116)
MEDIAN FOOD HANDLING PRACTICES SCORE	79	86	87	92	92
• 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
TARGET TEMPERATURE COMPONENT: MEDIANS					
• Self Service Meat	34	35	34	32	35
• Dairy	38	36	36	34	38
• Self Service Deli	36	36	38	34	38
TEMPERATURE CHECKING COMPONENT: MODES					
• 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
STORE AUDITS COMPONENT: MODES					
• Self Audit	4	4	4	4	4
• 3 rd Party Commercial Audit	0	0	0	0	0
DATING INFORMATION COMPONENT: MODES					
• 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
INVENTORY PRACTICES COMPONENT: MODES					
• 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
TRAINING COMPONENT: PERCENTAGES					
• 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 COMBO	WH
NUMBER OF STORES REPRESENTED (FH Score)	13,869 (300)	2,091 (25)	5,346 (60)	1,347 (19)
MEDIAN FOOD HANDLING PRACTICES SCORE	87	91	92	84
• 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
TARGET TEMPERATURE COMPONENT: MEDIANS				
• Self Service Meat	34	34	36	35
• Dairy	36	38	37	38
• Self Service Deli	36	36	38	38
TEMPERATURE CHECKING COMPONENT: MODES				
• Self Service Meat	3	3	3	3
• Dairy	3	3	3	3
• Self Service Deli	3	3	3	3
• Frozen	3	3	3	3
STORE AUDITS COMPONENT: MODES				
• Self Audit	4	4	4	4
• 3 rd Party Commercial Audit	0	2	0	0
DATING INFORMATION COMPONENT: MODES				
• Poultry	2	2	2	2
• Red Meat	2	2	2	2
• Seafood	2	2	2	2
• Deli	2	2	2	2
INVENTORY PRACTICES COMPONENT: MODES				
• Self Service Meat	2	2	2	2
• Dairy	2	2	2	2
• Self Service Deli	2	2	2	2
• Frozen	2	2	2	2
TRAINING COMPONENT: PERCENTAGES				
• 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 Quartile	Second Quartile	Third Quartile	Highest Quartile
MEDIAN FOOD HANDLING PRACTICES SCORE	74	86	92	96
• 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
MARKET CHARACTERISTICS				
• 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
STORE CHARACTERISTICS (Median)				
• 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
STORE CHARACTERISTICS (Percentage)				
• Wholesaler Supplied	67	52	40	24
• Union Workforce	26	25	31	39
PERFORMANCE MEASURES (Median)				
• 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 2001¹. 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

Food Handling Practice Component	Median Component Score	
	2000	2001
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.

¹Data 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.¹

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.

¹ 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 Store	2 -10 Stores	11 - 30 Stores	31 - 60 Stores	> 60 Stores
NUMBER OF STORES REPRESENTED (EP Score)	5,989 (185)	5,641 (142)	3,204 (61)	2,170 (24)	14,292 (148)
MEDIAN ENVIRONMENTAL PRACTICES SCORE	50	66	66	66	83
• Consumer Component	33	33	66	66	100
• Operations Component	66	66	66	66	100
CONSUMER ORIENTED PRACTICES: PERCENTAGE					
• Environmentally Friendly Products	67	70	78	75	88
• Organic Produce	44	44	60	62	88
• Recycling (cans, glass, plastic)	20	36	27	46	65
OPERATIONS ORIENTED PRACTICES: PERCENTAGE					
• 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 COMBO	WH
NUMBER OF STORES REPRESENTED (EP Score)	19,231 (417)	2,814 (33)	7,375 (84)	1,876 (26)
MEDIAN ENVIRONMENTAL PRACTICE SCORES	66	100	83	83
• Consumer Component	66	100	100	100
• Operations Component	66	100	100	100
CONSUMER ORIENTED PRACTICES: PERCENTAGE				
• Environmentally Friendly Products	74	90	90	76
• Organic Produce	54	90	90	81
• Recycling (cans, glass, plastic)	38	69	54	54
OPERATIONS ORIENTED PRACTICES: PERCENTAGE				
• Energy Efficient Lighting	71	90	92	83
• Refrigeration Management Program	59	75	76	75
• Store Waste Recycling	69	96	84	92

CON = Conventional
US = Upscale

FD COMBO = Food/Drug Combination
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 2001.² Adoption rates increased slightly for all practices except for consumer oriented recycling and store waste

² Data were not weighted for this analysis.

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

	Lowest Quartile	Second Quartile	Third Quartile	Highest Quartile
MEDIAN ENVIRONMENTAL PRACTICES SCORE	33	50	83	100
• Consumer Component	33	33	66	100
• Operations Component	33	66	100	100
MARKET CHARACTERISTICS				
• 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
STORE CHARACTERISTICS (Median)				
• 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
STORE CHARACTERISTICS (Percentage)				
• Wholesaler Supplied	80	73	46	18
• Union Workforce	13	22	32	37
PERFORMANCE MEASURES: MEDIANS				
• 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
Consumer Oriented Practices		
• Environmentally Friendly Products	72.2	74.2
• Organic Produce	52.3	58.8*
• Recycling (cans, glass, plastic)	42.1	39.5
Operations Oriented Practices		
• 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.¹

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.

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

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

¹ 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.

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 Store	2 - 10 Stores	11 - 30 Stores	31 - 60 Stores	> 60 Stores
NUMBER OF STORES REPRESENTED (QA Score)	3,788 (128)	4,105 (103)	2,498 (46)	1,188 (14)	11,673 (121)
MEDIAN QUALITY ASSURANCE PRACTICES SCORE	45	52	73	74	81
• Customer Satisfaction Component	0	33	66	33	66
• Food Handling Component	77	84	86	91	91
USE OF INSTRUMENTS TO ASSESS CUSTOMER SATISFACTION: PERCENTAGES					
• Customer Focus Groups	20	24	50	30	56
• Customer Satisfaction Surveys	29	40	58	60	82
• Mystery Shopper Programs	25	24	59	58	85
FOOD HANDLING PRACTICES: MEDIANS					
• 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 COMBO	WH
NUMBER OF STORES REPRESENTED (QA Score)	14,061 (304)	2,175 (26)	5,669 (63)	1,347 (19)
MEDIAN QUALITY ASSURANCE PRACTICES SCORE	63	77	81	81
• Customer Satisfaction Component	33	66	66	66
• Food Handling Component	86	88	91	83
USE OF INSTRUMENTS TO ASSESS CUSTOMER SATISFACTION: PERCENTAGES				
• Customer Focus Groups	35	40	55	45
• Customer Satisfaction Surveys	51	75	76	74
• Mystery Shopper Programs	45	66	86	66
FOOD HANDLING PRACTICES: MEDIANS				
• 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 2001.² 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.

² Data were not weighted for this analysis.

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

	<u>Lowest Quartile</u>	<u>Second Quartile</u>	<u>Third Quartile</u>	<u>Highest Quartile</u>
MEDIAN QUALITY ASSURANCE PRACTICES SCORE	41	63	79	96
• Customer Satisfaction Component	0	33	66	100
• Food Handling Component	77	83	88	92
MARKET CHARACTERISTICS				
• 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
STORE CHARACTERISTICS (Median)				
• 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
STORE CHARACTERISTICS (Percentage)				
• Wholesaler Supplied	93	44	30	20
• Union Workforce	13	36	33	37
PERFORMANCE MEASURES: MEDIANS				
• 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

Quality Assurance Practice Component	Median Component Score	
	2000	2001
Customer Satisfaction	33.3	33.3
• 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*
Food Handling Practices	78.4	81.3*
• 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 Store	2 -10 Stores	11 - 30 Stores	31 - 60 Stores	> 60 Stores
NUMBER OF STORES REPRESENTED (SO Score)	5,989 (185)	5,648 (143)	3,204 (61)	2,170 (24)	14,292 (148)
MEDIAN SERVICE OFFERINGS SCORE	30	38	46	38	38
PERCENTAGE THAT OFFER EACH SERVICE					
• 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 COMBO	WH
NUMBER OF STORES REPRESENTED (SO Score)	19238 (418)	2814 (33)	7375 (84)	1876 (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

	Lowest Quartile	Second Quartile	Third Quartile	Highest Quartile
MEDIAN SERVICE OFFERINGS SCORE	23	38	46	69
MARKET CHARACTERISTICS				
• 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
STORE CHARACTERISTICS (Median)				
• 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
STORE CHARACTERISTICS (Percentage)				
• Wholesaler Supplied	61	45	44	31
• Union Workforce	23	33	29	32
PERFORMANCE MEASURES: MEDIANS				
• 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 2001.¹ 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.

¹ 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.¹

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

¹ 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>
<u>MARKET CHARACTERISTICS</u>		
• 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
<u>STORE CHARACTERISTICS</u>		
• 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
<u>COMPETITIVE STRATEGY</u>		
• Price Leader	PLLeader	1 if PLLeader, 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
<u>MANAGEMENT PRACTICES</u>		
• 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 Regressions¹

Explanatory Variable ²	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
MARKET CHARACTERISTICS					
• PopDen	++	+		+	+
• HHInc		++			++
• SMSA					+
STORE CHARACTERISTICS					
• SellSize	--			-	
• US	++		++		
• FD	++				
• WH	++	++	--	-	
• GSize	--	--			
• SelfDist	+	++		+	
• Union	++	++			--
COMPETITIVE STRATEGY					
• PLeader	++		--	--	++
• QLeader					--
• SLeader					+
• VLeader				+	
MANAGEMENT PRACTICES					
• SCScr		++	--		
• HRScr		++			++
• FHScr					++
• EPScr	+		++		
• QAScr					--
• SOScr					

¹The 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 at the 85% confidence level.

²See 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.

- 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.

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 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.

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.

- 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.

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

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

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>> 60 Stores</u>
NUMBER OF STORES REPRESENTED	5,989 (185)	5,802 (145)	3,204 (61)	2,170 (24)	14,292 (148)
Internet/Intranet Link to Corporate Headquarters and/or Key Suppliers					
• 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
Scan-Based Trading					
• 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
Scanning Data Used for Automatic Inventory Refill					
• 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
Energy Efficient Lighting					
• 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
Refrigeration Management Program					
• 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
NUMBER OF STORES REPRESENTED	5,989 (185)	5,802 (145)	3,204 (61)	2,170 (24)	14,292 (148)
Customer Self-Scanning					
• 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
Internet Ordering by Customer					
• 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
Gasoline					
• 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

	<u>Wholesaler Supplied</u>	<u>Member of a Self Distributing Chain</u>
NUMBER OF STORES REPRESENTED	15,707 (394)	15,578 (167)
MARKET CHARACTERISTICS		
• Median Population Density (per sq. mi)	195	833*
• Median Household Income (\$/year)	\$37,889	\$42,594*
• Percent Located in an SMSA	55	77*
STORE CHARACTERISTICS		
• 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*
MANAGEMENT SCORES (Median)		
• Supply Chain	45	80*
• Human Resources	37	45*
• Food Handling	85	92*
• Environmental Practices	50	83*
• Quality Assurance	55	81*
• Service Offerings	38	46*
PERFORMANCE MEASURES (Median)		
• 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

	<u>No Supercenter Competition</u>	<u>Supercenter Competition</u>
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.¹ 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

¹ 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 Supercenter Competition	Supercenter Competition in 1999 but not in 2000	Supercenter Competition in 1999 and 2000	Supercenter Competition in 2000
NUMBER OF STORES	83	7	24	25
MEDIAN CHANGE IN PERFORMANCE FROM 1999 TO 2000				
• 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%
PERCENT OF STORES WITH A MAJOR REMODELING				
• 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

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.

- 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 Store Characteristics and Performance for Stores Grouped by Major Remodeling Activity

	No Major Remodeling in 1999 or 2000	Major Remodeling in 1999	Major Remodeling in 2000
NUMBER OF STORES REPRESENTED	25,848 (461)	2,961 (54)	2,648 (48)
STORE CHARACTERISTICS			
• 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
STORE PERFORMANCE LEVELS (Median)			
• 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 10.7.² 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.

² 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 Remodeling in 1999 or 2000	Major Remodeling in 1999	Major Remodeling in 2000
NUMBER OF STORES	127	15	13
STORE CHARACTERISTICS			
• 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
MEDIAN CHANGE IN PERFORMANCE FROM 1999 TO 2000			
• 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 (10 or fewer stores)		Chain Stores (more than 10 stores)	
	Regular Stores	Top Stores	Regular Stores	Top Stores
NUMBER OF STORES REPRESENTED	10,955 (313)	836 (17)	17,356 (210)	2,310 (23)
MARKET CHARACTERISTICS				
• 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
STORE CHARACTERISTICS (Median)				
• 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
STORE CHARACTERISTICS (Percentage)				
• Wholesaler Supplied	98	100	23	3
• Union Workforce	15	8	35	53
MANAGEMENT SCORES (Median)				
• 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
PERFORMANCE MEASURES (Median)				
• 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.³ 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.

³ 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 (10 or fewer stores)		Chain Stores (more than 10 stores)	
	Regular Stores	Top Stores	Regular Stores	Top Stores
MEDIAN SCORES FOR SUPPLY CHAIN COMPONENTS				
• Technology Component	40	40	60	60
• Decision Sharing Component	35	45	95	100
MEDIAN SCORES FOR HUMAN RESOURCE COMPONENTS				
• 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
MEDIAN SCORES FOR ENVIRONMENTAL PRACTICE COMPONENTS				
• 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.¹ 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.² 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

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

² 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.³ 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.⁴ 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.

³ 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.

⁴ 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.⁵ 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.

⁵ 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.⁶ 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

⁶ 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 6.0.¹ 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.²

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.

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

² 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		
				F(20, 210)	231	
Model	3664.3683	20	183.218415	Prob > F	8.86	
Residual	4344.93074	210	20.6901464	R-squared	0.0000	
				Adj R-squared	0.4575	
Total	8009.29904	230	34.8230393	Root MSE	0.4058	
					4.5486	
	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
PopDen	0.0011877	0.0002079	5.713	0.000	0.0007779	0.0015975
HHInc00	4.45E-06	0.0000245	0.182	0.856	-0.0000438	0.0000527
SMSA	-0.7085538	0.8750605	-0.810	0.419	-2.4335820	1.0164750
SellSize	-0.0001898	0.0000268	-7.080	0.000	-0.0002426	-0.0001369
US	6.2242320	1.3318550	4.673	0.000	3.5987140	8.8497500
FD	4.8285210	0.9671017	4.993	0.000	2.9220490	6.7349920
WH	6.4457880	1.7152620	3.758	0.000	3.0644500	9.8271250
GSize	-0.0011834	0.0004363	-2.712	0.007	-0.0020435	-0.0003232
SelfDist	1.3448740	0.9204893	1.461	0.145	-0.4697093	3.1594570
Union	3.0081790	0.8497686	3.540	0.000	1.3330090	4.6833490
Pleader	1.5139500	0.7309471	2.071	0.040	0.0730161	2.9548840
Qleader	1.1726370	0.8163258	1.436	0.152	-0.4366067	2.7818800
Sleader	-0.3856330	0.7929860	-0.486	0.627	-1.9488660	1.1776000
Vleader	0.0265845	0.7100926	0.037	0.970	-1.3732390	1.4264070
SCScr	0.0132144	0.0215490	0.613	0.540	-0.0292656	0.0556945
HRSr	0.0168537	0.0257744	0.654	0.514	-0.0339561	0.0676635
FHSr	-0.0192760	0.0294655	-0.654	0.514	-0.0773620	0.0388101
EPScr	0.0226089	0.0153944	1.469	0.143	-0.0077384	0.0529562
QASr	0.0047082	0.0222218	0.212	0.832	-0.0390983	0.0485146
SOSr	0.0393308	0.0291067	1.351	0.178	-0.0180479	0.0967095
constant	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		
				F(20, 210)	231	
Model	103992.222	20	5199.61112	Prob > F	10.99	
Residual	99320.7258	210	472.955837	R-squared	0.0000	
				Adj R-squared	0.5115	
Total	203312.948	230	883.96934	Root MSE	0.4650	
					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
EPScr	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
				F(20, 210)		2.98
Model	187.006505	20	9.35032527	Prob > F		0.0000
Residual	659.628131	210	3.14108634	R-squared		0.2209
				Adj R-squared		0.1467
Total	846.634637	230	3.68102016	Root MSE		1.7723

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
PopDen	-0.0000642	0.0000810	-0.792	0.429	-0.0002238	0.0000955
HHiInc00	-1.51E-06	9.54E-06	-0.158	0.874	-0.0000203	0.0000173
SMSA	0.2500452	0.3409543	0.733	0.464	-0.4220865	0.9221769
SellSize	1.99E-06	0.0000104	0.191	0.849	-0.0000186	0.0000226
US	1.5112540	0.5189374	2.912	0.004	0.4882594	2.5342480
FD	0.2176327	0.3768168	0.578	0.564	-0.5251956	0.9604611
WH	-1.8767330	0.6683262	-2.808	0.005	-3.1942210	-0.5592447
GSize	0.0000491	0.0001700	0.289	0.773	-0.0002860	0.0003842
SelfDist	-0.1243024	0.3586550	-0.347	0.729	-0.8313279	0.5827231
Union	0.0211190	0.3310997	0.064	0.949	-0.6315861	0.6738241
Pleader	-0.9787384	0.2848027	-3.437	0.001	-1.5401770	-0.4172997
Qleader	-0.3518419	0.3180692	-1.106	0.270	-0.9788596	0.2751759
Sleader	0.0616266	0.3089752	0.199	0.842	-0.5474639	0.6707171
Vleader	-0.0494650	0.2766770	-0.179	0.858	-0.5948853	0.4959553
SCScr	-0.0220145	0.0083962	-2.622	0.009	-0.0385662	-0.0054628
HRScr	-0.0129127	0.0100426	-1.286	0.200	-0.0327099	0.0068846
FHScr	0.0003990	0.0114808	0.035	0.972	-0.0222334	0.0230313
EPScr	0.0144501	0.0059982	2.409	0.017	0.0026257	0.0262745
QAScr	0.0027180	0.0086584	0.314	0.754	-0.0143505	0.0197865
SOScr	-0.0152623	0.0113410	-1.346	0.180	-0.0376191	0.0070945
constant	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		
				231		
Model	2087.3737	20	104.368685	F(20, 210)	1.94	
Residual	11295.1919	210	53.7866279	Prob > F	0.0114	
				R-squared	0.1560	
				Adj R-squared	0.0756	
Total	13382.5655	230	58.1850676	Root MSE	7.3339	

	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
PopDen	0.0005241	0.0003352	1.564	0.119	-0.0001366	0.0011849
HHInc00	0.0000490	0.0000395	1.241	0.216	-0.0000289	0.0001268
SMSA	-0.6175275	1.4108910	-0.438	0.662	-3.3988520	2.1637970
SellSize	-0.0000652	0.0000432	-1.509	0.133	-0.0001504	0.0000200
US	0.6396356	2.1473960	0.298	0.766	-3.5935800	4.8728510
FD	-1.6565290	1.5592920	-1.062	0.289	-4.7304000	1.4173430
WH	-5.3466770	2.7655770	-1.933	0.055	-10.7985300	0.1051730
GSize	0.0003470	0.0007035	0.493	0.622	-0.0010397	0.0017338
SelfDist	2.3315680	1.4841370	1.571	0.118	-0.5941491	5.2572850
Union	1.0294890	1.3701120	0.751	0.453	-1.6714460	3.7304250
Pleader	-2.3618830	1.1785320	-2.004	0.046	-4.6851520	-0.0386137
Qleader	-1.2807960	1.3161910	-0.973	0.332	-3.8754360	1.3138440
Sleader	1.0914080	1.2785590	0.854	0.394	-1.4290480	3.6118640
Vleader	1.6844610	1.1449070	1.471	0.143	-0.5725232	3.9414450
SCScr	-0.0282962	0.0347442	-0.814	0.416	-0.0967883	0.0401959
HRSr	-0.0315883	0.0415570	-0.760	0.448	-0.1135107	0.0503340
FHSr	0.0025954	0.0475083	0.055	0.956	-0.0910589	0.0962496
EPScr	-0.0020172	0.0248209	-0.081	0.935	-0.0509473	0.0469128
QASr	0.0169555	0.0358291	0.473	0.637	-0.0536752	0.0875862
SOSr	0.0111580	0.0469297	0.238	0.812	-0.0813558	0.1036717
constant	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
Model	6693.01434	20	334.650717	F(20, 210)		2.85
Residual	24686.7874	210	117.55613	Prob > F		0.0001
				R-squared		0.2133
Total	31379.8017	230	136.433921	Adj R-squared		0.1384
				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.

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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

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Once again, thank you for your participation.

Summary Information for Key Management Areas

Area		Peer Group Score 2001	Your Score 2001	Your Score 2000*
Supply Chain	<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"> • Use of technology (questions 1d, 1e, 1g, 1l, 1n, 1o, 1p, and 6h). • 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). <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%	
Human Resources	<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"> • New hire training (questions 18 and 19). • Key employee training (question 20). • Proportion of full time to total employees (question 22). • Use of incentive-based and non-cash compensation (questions 26 and 27). <p>A higher value indicates greater adoption of progressive human resource policies.</p> <p>This may be an area of opportunity for improving your practices.</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 Group Score 2001	Your Score 2001	Your Score 2000*
Food Handling	<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"> • For all departments other than Frozen Foods, is the target temperature low enough (question 38)? • Do you check the temperature in each department often enough (question 38)? • Do you conduct store sanitation and 3rd party commercial audits often enough (question 39)? • What dating information do you include (question 40)? • Are your inventory rotation policies appropriate (question 41)? • Do you require employees to be trained in proper handling techniques (question 42)? <p>A higher value indicates better food quality/handling practices.</p> <p>This may be an area of opportunity for improving your practices.</p>	89%	82%	
Environmental Practices	<p>This index reflects your adoption of “environmentally friendly” practices. It has two aspects:</p> <ul style="list-style-type: none"> • Consumer oriented environmental policies (questions 6e, 6q, and 6v). • Operations oriented environmental policies (questions 1h, 1m, and 1q). <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 Group Score 2001	Your Score 2001	Your Score 2000*
<p>Quality Assurance</p> <p>This index measures your adoption of quality assurance practices in two areas:</p> <ul style="list-style-type: none"> • Use of instruments that assess customer satisfaction (questions 1a, 1b, and 1k). • Food handling practices regarding temperature checks, sanitation audits, inventory rotation, and food safety training. <p>A higher value indicates greater attention to quality assurance.</p> <p>This may be an area of opportunity for improving your practices.</p>		70%	40%	
<p>Service Offerings</p> <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 More Than 2 Years	Used for 1-2 Years	Started in Past Year	Plant to Start Next Year	No Plans to Use	Don't 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 from vendors/suppliers	16%	7%		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 More Than 2 Years	Used for 1-2 Years	Started in Past Year	Plan to Start Next Year	No Plans to Use	Don't 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 Competitive Advantage	Standard Offering	Plan to Discontinue	Considering Introduction	Not Used, No Plan to 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 1st 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 Manager	Dept. Head	Other Store Personnel	Wholesaler	Chain HQ or Region	Indept Ad Group	Category Manager	Vendor or Broker	Other Out-of-Store Personnel
Fresh Apples									
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%		
Dry Cereal									
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%	
DSD Snacks									
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%
Fresh Fluid Milk									
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	2 : 1	4 : 2
Q30.	Please indicate each store's MARKETING FORMAT. (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	2 : 3	3 : 4	4 : 1
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.

		Your Store		Competitor 1		Competitor 2		Competitor 3	
		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)

Department	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 rd Party Commercial	27%	9%	27%	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.



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