

February 1992

A.E. Res. 92-04

Cornell
Food
Industry
Management
Program

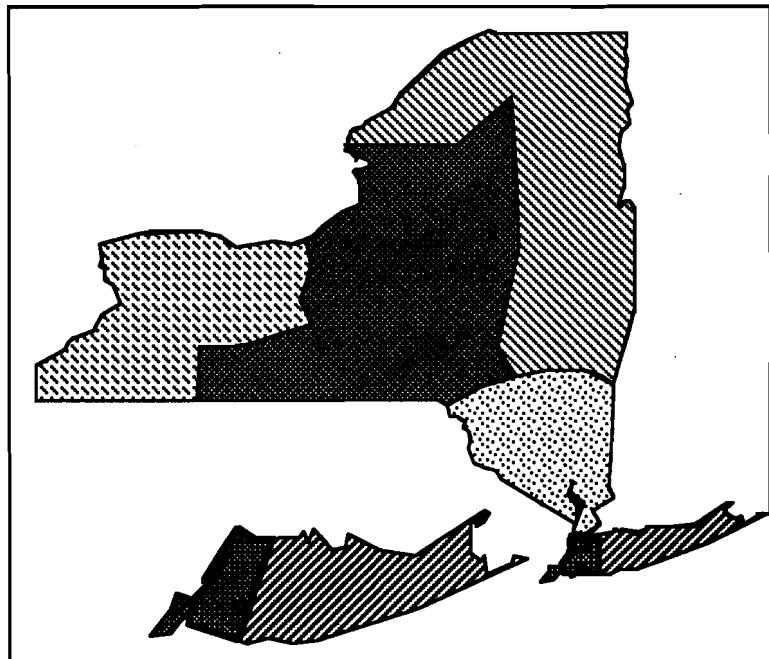
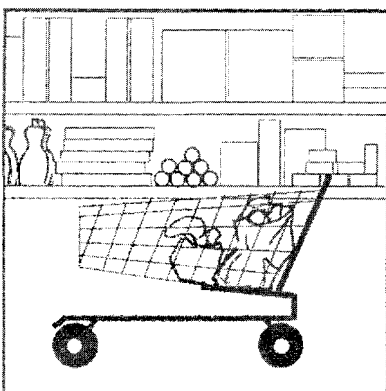
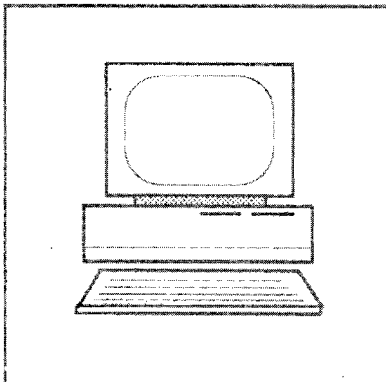
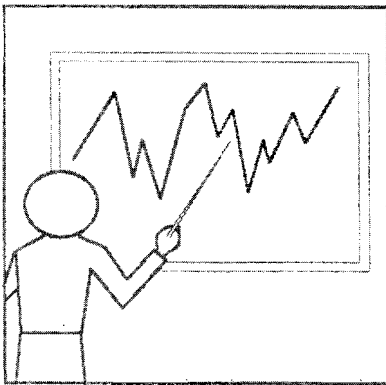
STATE OF THE NEW YORK FOOD INDUSTRY

Edward McLaughlin

Gerard Hawkes

Debra Perosio

David Russo



Department of Agricultural Economics
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York 14853

It is the policy of Cornell University actively to support equality of educational and employment opportunity. No person shall be denied admission to any educational program or activity or be denied employment on the basis of any legally prohibited discrimination involving, but not limited to, such factors as race, color, creed, religion, national or ethnic origin, sex, age or handicap. The University is committed to the maintenance of affirmative action programs which will assure the continuation of such equality of opportunity.

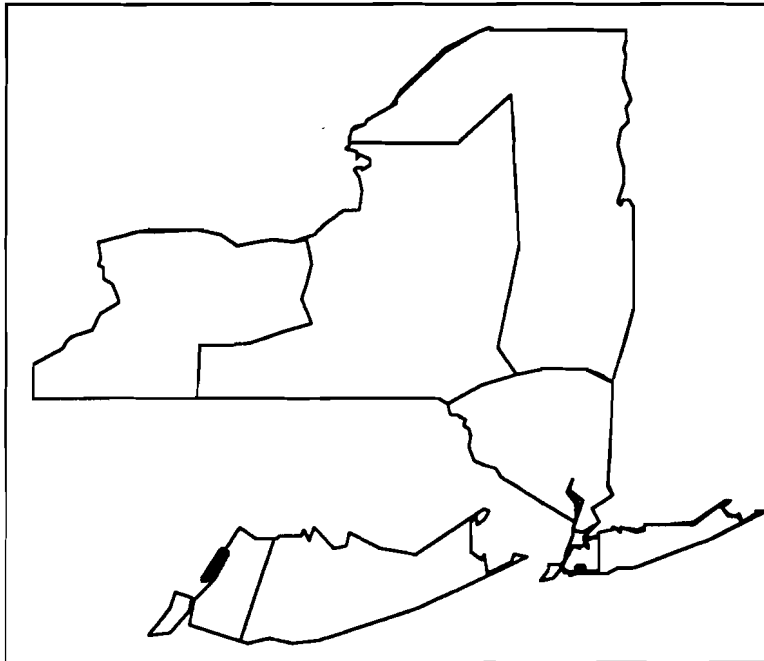
STATE OF THE NEW YORK FOOD INDUSTRY

Edward McLaughlin

Gerard Hawkes

Debra Perosio

David Russo



Department of Agricultural Economics
New York State College of Agriculture and Life Sciences
A Statutory College of the State University
Cornell University, Ithaca, New York 14853

ABSTRACT

The New York State food industry is one of the most diverse and dynamic state-wide industries in the country. Increasing manufacturer consolidation along with intensifying competition has created a dramatic need for more and better information regarding both current operations and anticipated trends in the food industry. This report is the first in a series of annual studies which examines the nature of the food industry in New York State, with a particular focus at the retail level.

The research approach for this study consisted of gathering information and operating data from a variety of government and industry sources and included an in-depth questionnaire sent to every wholesale and retail company operating in New York State. Until now, such comprehensive and interrelated information has never been assembled in one place.

The picture that emerges from this study is that of an industry which is vibrant and dynamic. New York State supermarkets lead the nation in a number of key productivity measures, while at the same time lagging behind in a number of indicators relating to technology adoption and innovation. Reflecting New York's great ethnic and cultural diversity, the report points sharply to the significant degrees to which the State's retail food companies have responded to this unique challenge. New York State supermarkets, for example, carry nearly 50 percent more products than their counterparts in the rest of the United States in similar size stores.

While the report quantifies many aspects of the New York State food system, it also raises a number of questions and challenges. Our objective in future studies is to further examine the benchmarks established here, explore new food industry issues, and continue to provide food industry professionals with timely information on the changing conditions of this dynamic industry.

ACKNOWLEDGEMENTS

The success of this inaugural study of the New York State food industry reflects the hard work, support and contributions of a broad coalition of individuals, organizations and agencies. Although our Cornell University Food Industry Management Program research staff is responsible for the contents of this report, we relied heavily on the cooperation of public and private sector sources for information, ideas and feedback.

Foremost, Kraft General Foods' sponsorship of the study is just one indication of their commitment to understanding the needs of the customers they serve in New York State. The New York State Food Merchants Association and especially James Rogers, President, provided leadership and direction for the study from inception to completion.

The authors also offer their gratitude to the members of the Special Advisory Committee established by the New York State Food Merchants Association to guide the focus and direction of the study. This broad based industry group included the following people and companies:

Jim Robinson, Olean Wholesale Grocery Cooperative
 Bob Clement, S.M. Flickinger
 Tom Cullen, King Kullen
 Nick D'Agostino, D'Agostino Supermarkets
 Mike Donoghue, Tops Friendly Markets
 Bruce Kloc, Tops Friendly Markets
 Bob Mueller, Tops Friendly Markets

Ron Hodge, Hannaford Bros.
 Jim O'Neill, Wegmans Food Markets
 Bill Vitulli, The Great A&P Tea Company
 Jim Keller, Kraft General Foods
 Steve Kline, Kraft General Foods
 Roy Mathis, Kraft General Foods
 Jerry Page, Kraft General Foods

A key cooperator in the data collection phase of the study was the New York State Department of Agriculture and Markets, especially, Maurice Guerrette, Director of the Division of Food Inspection Services.

We also express our appreciation to the wholesale and retail executives who contributed their valuable time and invaluable information and expertise in completing the survey and to Professors Richard Aplin and Andrew Novakovic for their helpful suggestions.

TABLE OF CONTENTS

INTRODUCTION.....	1
METHODOLOGY.....	2
STRUCTURE AND ORGANIZATION OF NEW YORK	
STATE FOOD RETAILING	3
Total Food Stores.....	3
Supermarkets.....	4
Food Store Types.....	5
New York City Stores vs. Rest of the State.....	6
Specialty Stores	7
Per Capita Food Expenditures.....	9
Population, Employees and Stores	9
Employment.....	10
Store Size	11
Supermarket Size	12
Supermarket Size and Product Mix.....	13
Supermarket Scanning	14
Supermarket Productivity.....	15
PRODUCTIVITY AND PERFORMANCE.....	16
Future Sales Distribution.....	17
Operating Performance.....	19
TECHNOLOGY AND THE FUTURE.....	20
Technological Constraints	21
Operations Technology.....	22
SUMMARY	23
REFERENCES	25

LIST OF TABLES AND FIGURES

Table 1	Specialty Stores in New York State, 1987
Table 2	Per Capita Spending in Speciality Stores, U.S. vs New York, 1987
Table 3	Population, Employees and Stores, 1990
Table 4	Supermarket Square Feet, SKU's, Checkouts: U.S. vs New York
Table 5	Supermarket Productivity, U.S. vs New York
Table 6	New York Supermarket Merchandise Productivity
Table 7	New York Supermarket Coupon Utilization
Table 8	United States Supermarket Sales Distribution
Table 9	Packaged Categories: U.S. vs New York
Table 10	Fresh Categories: U.S. vs New York
Table 11	Supermarket Operating Performance, U.S. vs New York
Table 12	Customer Service Technology, U.S. vs New York
Table 13	Constraints to Customer Service Technology Use
Table 14	Operations Technology: New York
Table 15	Constraints To Operations Technology Use
Figure 1	Number of Food Stores in New York State, By Region, 1991
Figure 2	Study Regions of New York State
Figure 3	Number of New York State Food Stores and Supermarkets, By Region, 1991
Figure 4	Food Store Types, U.S. vs. New York, 1987
Figure 5	New York Food Store Types, Upstate vs. Downstate, 1991
Figure 6	New York Food Store Employment, 1991
Figure 7	New York Food Store Size, 1991
Figure 8	New York Supermarket Size, 1991
Figure 9	Supermarkets Scanning in New York State, 1991

INTRODUCTION

The New York State retail food industry is one of the most diverse and dynamic state-wide industries in the country. Increasing manufacturer consolidation coupled with ever intensifying competition between New York supermarket companies, has created a dramatic need for more and better information regarding both current operations and forecasted changes in the food industry environment. Despite this conventional wisdom, the structure and performance of the state's retail food sector has rarely been studied in its entirety. Therefore, under the sponsorship of Kraft General Foods for the New York State Food Merchants Association (NYSFMA), the Cornell University Food Industry Management Program has undertaken an annual study investigating the New York State retail food industry.

There are several components to the study. The principal basis of the multi-year project is the establishment of a food industry database for New York State. The purpose of the database is to record and subsequently document trends and changes occurring throughout the New York State food industry, particularly at the retail level. The data are sufficiently broad to capture industry opinion and strategic shifts as well as conventional statistical profiles on operational and financial performance. The industry data base is supplemented by information gathered in personal interviews as well as frequent interaction through seminars and workshops with New York State food companies. Finally, this annual study will also investigate a different set of timely issues each year that present special, critical challenges to suppliers, wholesalers, and retailers. This year "Technology and the Future" was the focus of the issue section of the study.

METHODOLOGY

The research approach for this study consisted of four distinct but interrelated phases:

- 1) A review of existing research, trade literature, consulting and newsletter publications.
- 2) A compilation of industry statistics from various federal and state agencies and publications.
- 3) An industry-wide mail survey (see Appendix). A survey questionnaire was mailed to every retailer and wholesaler serving independent supermarkets in the state. The purpose of the questionnaire was to provide in-depth and comprehensive coverage of supermarket operations and performance. The development of the survey instrument was guided by an Advisory Committee composed of the following individuals and their affiliated companies:

Jim Robinson, Olean Wholesale Grocery Cooperative
 Bob Clement, S.M. Flickinger
 Tom Cullen, King Kullen
 Nick D'Agostino, D'Agostino Supermarkets
 Mike Donoghue, Tops Friendly Markets
 Bruce Kloc, Tops Friendly Markets
 Bob Mueller, Tops Friendly Markets

Ron Hodge, Hannaford Bros.
 Jim O'Neill, Wegmans
 Bill Vitulli, The Great A&P Tea Company
 Jim Keller, Kraft General Foods
 Steve Kline, Kraft General Foods
 Roy Mathis, Kraft General Foods
 Jerry Page, Kraft General Foods

In each of the respondent companies, one individual was designated to oversee the completion of the questionnaire by directing its various parts to the department most able to supply the required information. The response from the survey comprises a representative sample of supermarket companies in New York State. Firms come from the chain and independent sectors of the industry in about equal proportions, and the companies represented are from both the metropolitan New York area and all of the various upstate regions of New York.

- 4) Personal interviews with New York State food companies, trade associations and government officials were undertaken to provide balance to the written survey and trade information. This interaction served to reinforce and validate the trends, challenges and suggestions for change that emerged from the other components of the study.

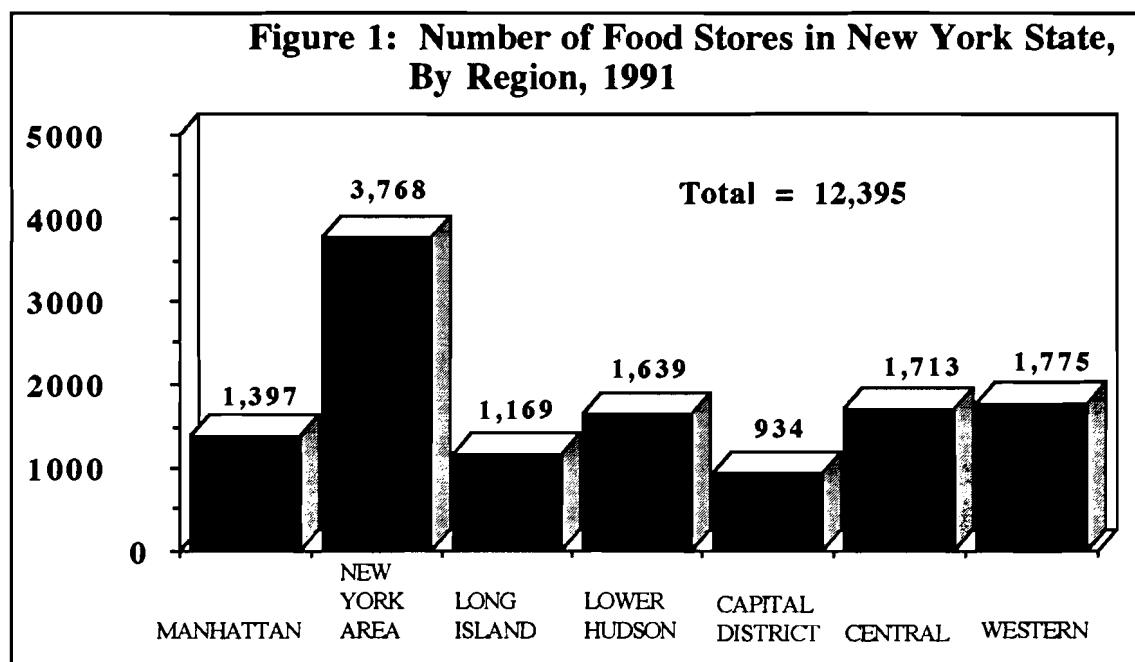
The remainder of this report is divided into three principal sections:

- Structure and organization of the New York State food industry
- Productivity and Performance
- Technology and the Future

STRUCTURE AND ORGANIZATION OF NEW YORK STATE FOOD RETAILING

Total Food Stores

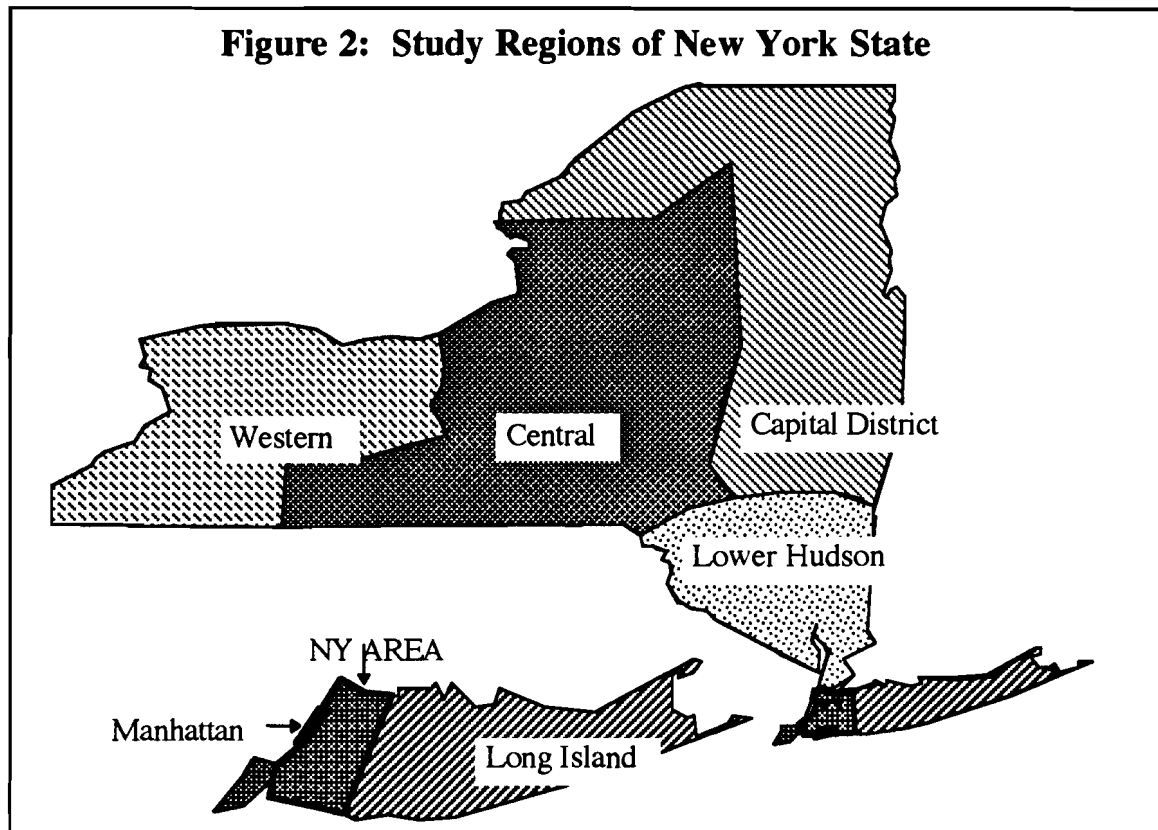
In 1991, a total of 12,395 food stores operated in New York State. This represented approximately 9 percent of all food stores in the U.S. More than half of these 12,395 were located in the five boroughs of New York City (Figure 1).



Source: New York State Department of Agriculture and Markets

Included in this designation of total "food stores" are all types of retail food outlets: supermarkets, grocery stores, and specialty food stores. Note that the seven regions of New York State referred to frequently throughout this report are defined as shown in Figure 2. For the purposes of this study, the region designated "Manhattan" refers only to that borough of New York City, while the region "NY Area" refers to the combined total of

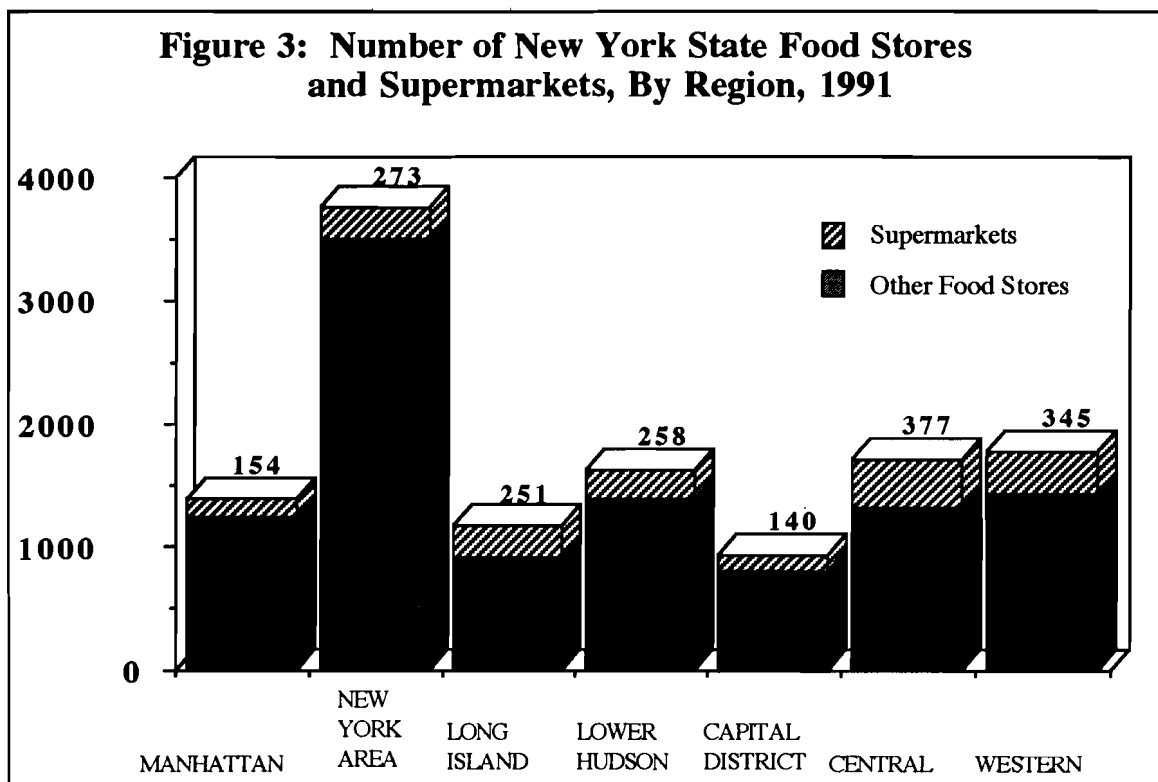
the other four boroughs (Queens, Bronx, Staten Island, and Brooklyn). Long Island (Nassau and Suffolk counties) constitutes a separate region.



Supermarkets

Supermarkets account for 1,798, or 14.5%, of the 12,395 food stores in New York State. For the purpose of this study, supermarkets are defined as grocery stores with more than 5,000 square feet of area. The standard definition of a supermarket adopted by most food industry analysts and data trackers - - a grocery store with sales of at least \$2 million per year - - is very close to and consistent with our measure of 5,000 square feet for New York State.

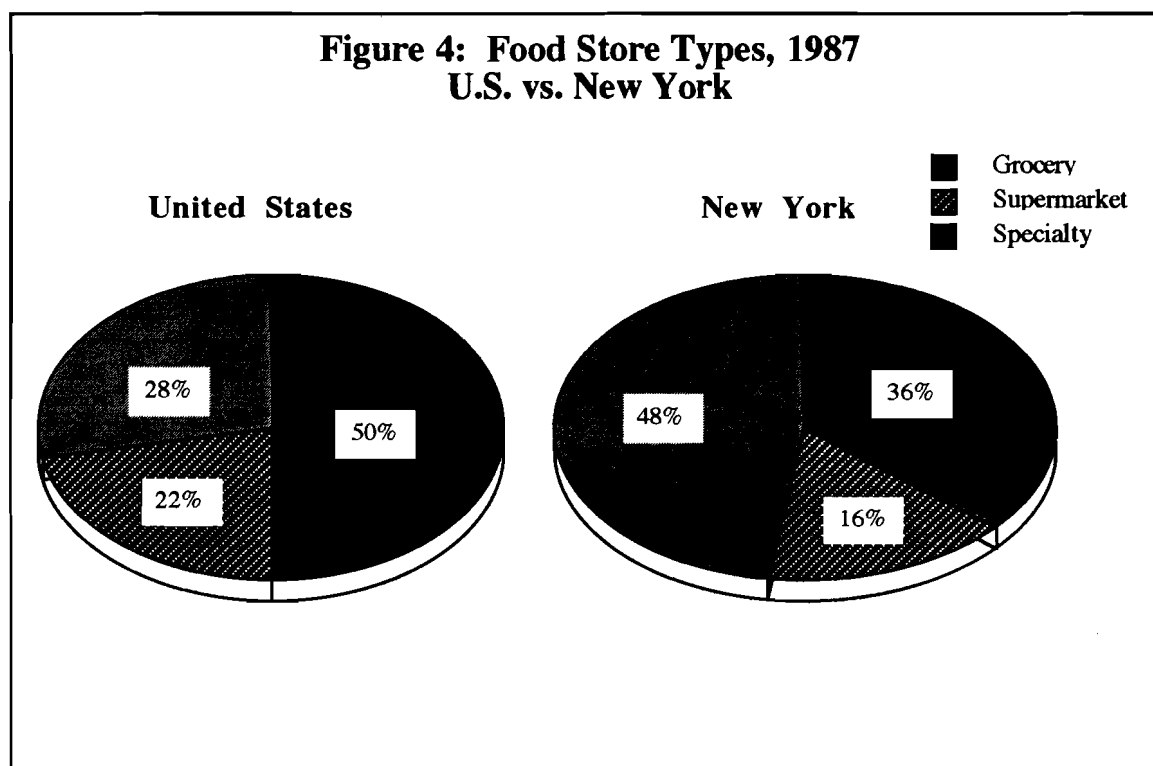
The proportion that supermarkets in New York State represent of total food stores ranges from 7 percent in the New York Area (excluding Manhattan) to 22 percent of food stores in the Central region of the state (Figure 3).



Source: New York State Department of Agriculture and Markets

Food Store Types

The composition of food stores in New York State is drastically different than that of the United States as a whole. Whereas grocery stores (stores that carry a full line of grocery items) and supermarkets (grocery stores larger than 5,000 square feet) are less common in New York, specialty stores, including meat, fish and seafood stores, bakeries, and produce stores account for almost half of New York food stores (Figure 4). These specialty store types only comprise slightly over one quarter of all food stores in the rest of the country. The significantly higher ratio of specialty food stores in New York State might be explained by the greater ethnic diversity that exists in the state relative to the average in the rest of the U.S.



Source: New York State Department of Agriculture and Markets, The Food Institute

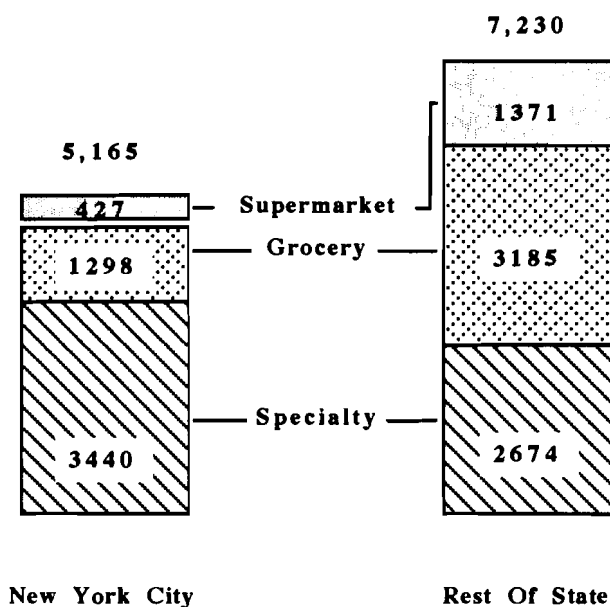
New York City Stores vs. Rest of the State

A closer look at the composition of New York State's food stores reveals dramatic differences in the makeup of the food retailing landscape when New York City (by our definition, Manhattan and NY Area) stores are segregated from the rest of the State (Figure 5). Over two thirds of New York City food stores are specialty stores, while specialty stores comprise just 37 percent of food stores in the rest of the state. In fact, New York City alone contains 56 percent of all specialty stores in the State.

While there is such a wide difference between New York City and the rest of the State, it is worth noting that the rest of New York State also has a significantly higher percentage of specialty stores than the U.S. average (37 percent vs. 28 percent).

Supermarkets represent just 8 percent of New York City food stores but about 19 percent of stores outside the 5 boroughs. New York City contains only about 24 percent of the State's supermarkets, while accounting for over half of all retail food outlets.

**Figure 5: New York Food Store Types, 1991
- Upstate vs. Downstate -**



Source: New York State Department of Agriculture and Markets and The Food Institute

Specialty Stores

According to the most recent Census of Retail Trade by the U.S. Department of Commerce, there are over 6,100 specialty food stores in New York State (Table 1). Over one third (2,203) of these specialty stores are retail bakeries. Another 29 percent fall into the category of meat, fish, and seafood stores (1,772 stores). The miscellaneous category includes all other types of single product food stores such as those selling spices, coffees, eggs, poultry, health foods, vitamins, etc.

The proportion of each type of specialty store located in New York City varies from a high of 69 percent of produce stores in the State to just 37 percent of the State's dairy stores. Partially explaining the high percentage of produce stores located in the New York City is the fact that direct marketing outlets for farm produce such as u-pick operations, farmer's markets, and roadside farm stands are not included in the retail census figures.

TABLE 1: Specialty Stores in New York State, 1987

	<u>NY City</u>	<u>Rest of State</u>	<u>NY State</u>
Meat, Fish, Seafood	1,127	645	1,772
Bakery	1,193	1,010	2,203
Produce	367	169	536
Candy, Nut, Confection	257	323	580
Dairy	135	233	368
Miscellaneous	<u>361</u>	<u>294</u>	<u>655</u>
	3,440	2,674	6,114

Source: The Food Institute

New York State has a disproportionately high share of the nation's specialty stores, particularly produce stores and meat, fish and seafood stores (Table 2). New York's population is just over 7 percent of the U.S. total (Table 3) yet over 16 percent of the produce shops and over 15 percent of the meat, fish and seafood shops operate in the state (Table 2). Likewise, New York's share of total U.S. specialty stores in categories like dairy stores (11.1%), retail bakeries (10.1%), candy, nut, and confection shops (9.5%) and miscellaneous specialty food stores (9.0%) indicates the greater prominence of specialty retailers in New York State compared with the rest of the U.S.

Another critical food retailing difference between New York and the nation as a whole is the amount of consumer spending in specialty food stores. Overall, New Yorkers spend almost twice as much, per capita, as the national average in specialty food stores (Table 2). Overall per capita spending in New York State specialty food stores averaged \$126 while United States per capita specialty food store spending was \$67 in 1987. For specialty store categories like meat, fish and seafood, produce, and dairy, New York's per capita spending is more than twice the national average. When considering the weight of New York State on the national average, the difference would be even greater if New York's per capita spending were compared with that of the other 49 states without New York.

TABLE 2: Per Capita Spending in Specialty Stores, U.S. vs NY, 1987

	<u>Per Capita Spending</u>			<u>Number of Stores</u>		
	<u>US</u>	<u>NY</u>	<u>NY % of US</u>	<u>US</u>	<u>NY</u>	<u>NY % of US</u>
Meat, Fish, Seafood	\$23	\$52	230%	11,364	1,722	15.6%
Bakery	20	32	160	21,790	2,203	10.1
Produce	7	15	210	3,271	536	16.4
Candy, Nut, Confection	5	6	120	6,124	580	9.5
Dairy	4	9	230	3,302	368	11.1
Miscellaneous	8	12	150	7,271	655	9.0
	\$67	\$126	190%	53122	6064	11.4%

Source: The Food Institute

Population, Employees and Stores

Although about 7 percent of American consumers live in New York State the state employs less than 6 percent of the nation's food store employees. This is despite the fact that 9 percent of the nation's food stores are located in New York (Table 3). Those figures speak a great deal about the nature of food retailing in New York compared with the rest of the U.S.: specifically, New York State has relatively more stores per shopper but enjoys a shopping environment with fewer employees per customer. On the other hand, the proportion of New York supermarkets that are operated as chains (59%) and independents (41%) is about the same as the U.S. supermarket averages, 57% and 43% respectively.

TABLE 3: Population, Employees and Stores, 1990

	<u>U.S.</u>	<u>N.Y.</u>	<u>NY%</u> <u>Of U.S.</u>
Population	251,400,000	18,023,000	7.2 %
Food Store Employees	2,900,000	166,755	5.8
Food Stores	137,000	12,395	9.0
Supermarkets	30,750	1,798	5.9
Chain	17,450	1,060	6.1
Independent	13,290	738	5.6

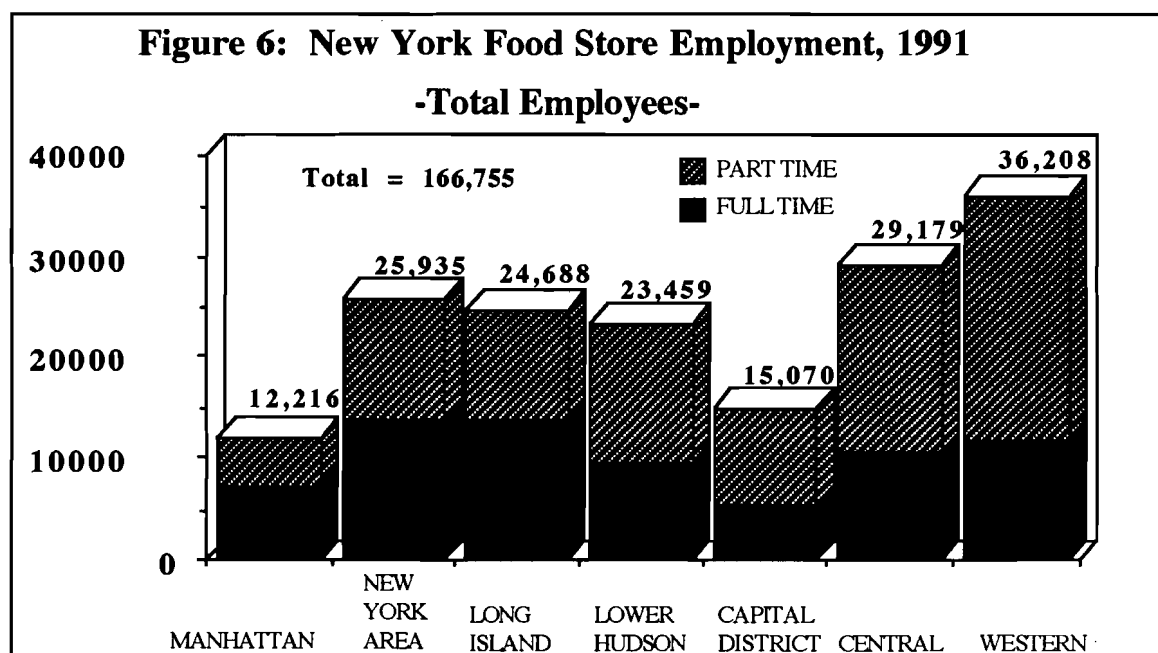
Source: Census of Retail Trade, U.S. Statistical Abstract, Progressive Grocer, New York State Department of Agriculture and Markets.

Employment

New York State food stores employ a total of 166,755 people, full-time and part-time combined (Figure 6). The percentage of full-time employees varies considerably across the State. The down -state area, including New York City and Long Island, uses more than 50 percent full-time employees (56%). The rest of the state uses less than 50 percent full-time employees (36%).

There is a wide range in the average number of employees per store from a low of 7 in the four non-Manhattan boroughs of the city to a high of 21 employees per store in Long Island.

The Central and Western regions of New York State employ greater numbers of overall food store employees due at least in part to the larger store sizes characteristic of those areas (Figure 7).



Source: New York State Department of Agriculture and Markets, Cornell University

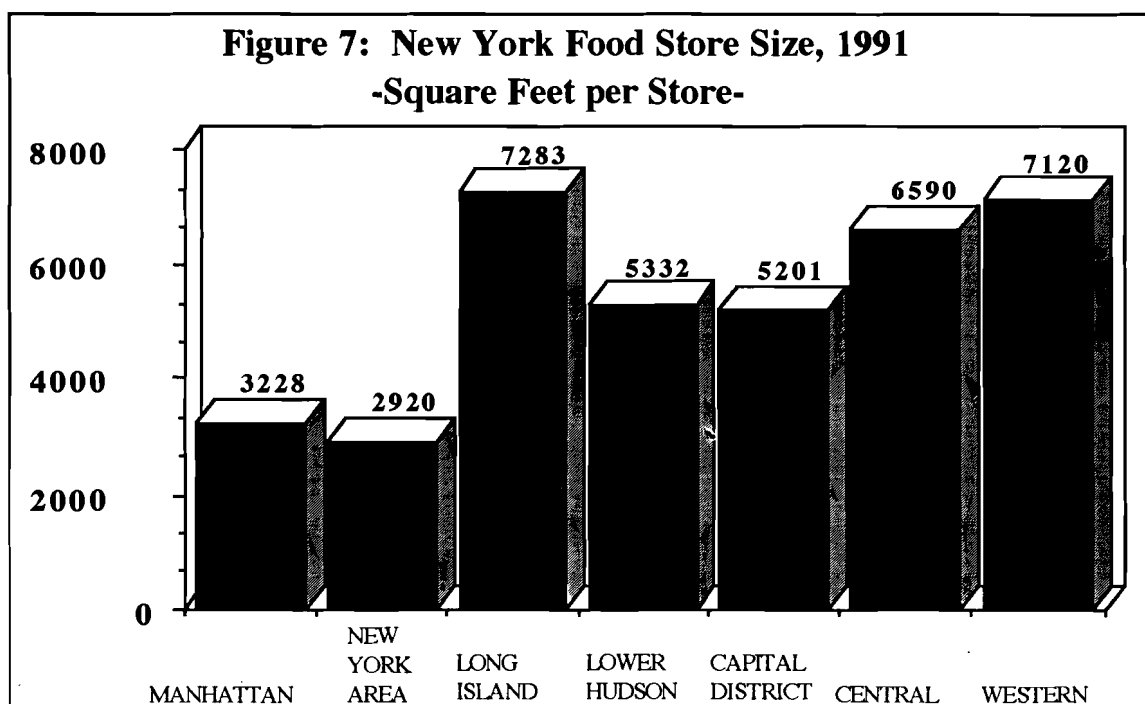
Store Size

Average food store size in New York State ranges from a low of 2,920 square feet in the non-Manhattan boroughs of New York City to a high of 7,283 square feet in Long Island (Figure 7). These figures are consistent with those presented above since the non-Manhattan boroughs of New York City had the fewest employees per store while Long Island, with the largest average store size, was thus able to accommodate the greatest number of employees per store.

Supermarket Size

When focussing just on New York's 1,798 supermarkets, it can be noted that most regions of the state contain larger supermarkets than the U.S. average of just under 21,000 square feet (Figure 8). The exceptions are the two regions which comprise New York City where the average supermarket size is significantly below the national average. Considering high real estate costs, rents and population densities in New York city, these differences are as expected.

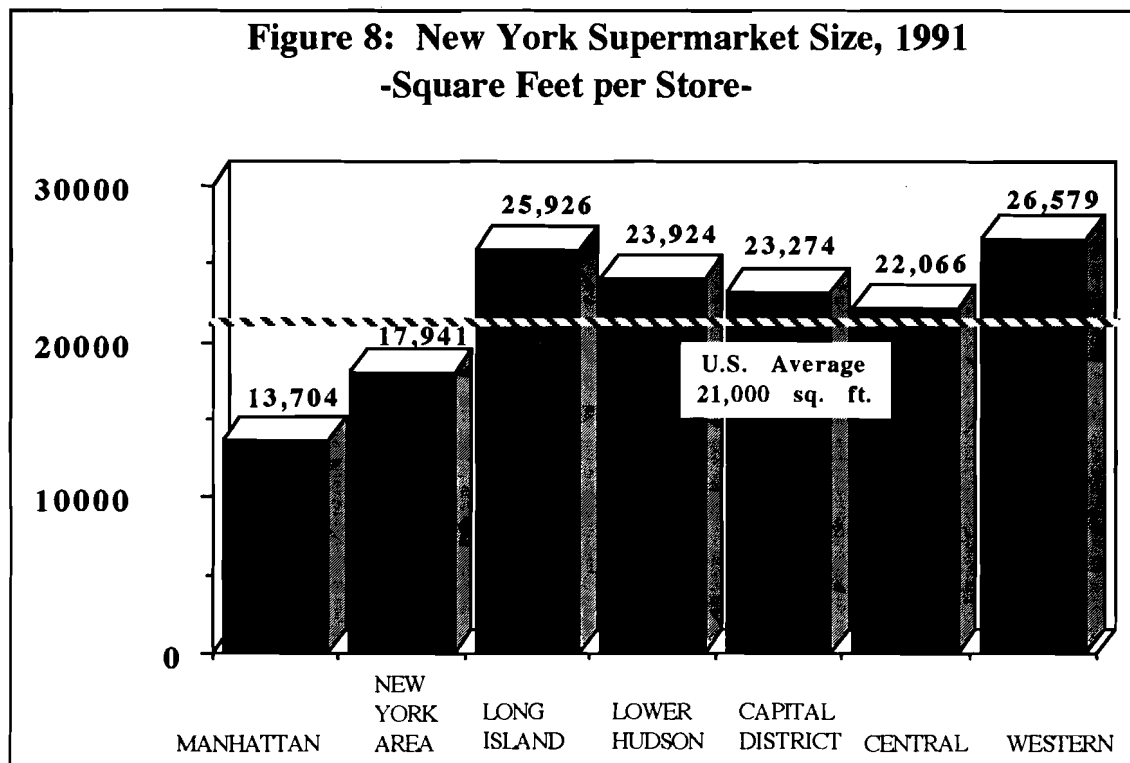
The largest supermarkets in the state, averaging 26,579 square feet, are found in the Western region which includes Buffalo and Rochester. Long Island is a close second in average supermarket size, at 25,926 square feet.



Source: New York State Department of Agriculture and Markets

Supermarket Size and Product Mix

The average size of all New York supermarkets is 21,415 square feet . This places New York State supermarkets only 3 percent larger than the national average of 20,786 square feet . However, one of the distinguishing characteristics of food retailing in New York State is the number of items or stock keeping units (SKU's) that New York supermarkets typically carry: 23,915 SKU's, which is 45 percent higher than the national average of 16,486 (Table 4).



Source: New York State Department of Agriculture and Markets

**TABLE 4: Supermarket Square Feet, SKU's, Checkouts:
New York vs U.S.**

	<u>U.S.</u>	<u>N.Y.</u>	<u>% Diff.</u>
Square Feet	20,786	21,415	+3
SKU's	16,486	23,915	+45
Checkouts	7.3	6.7	-8

Source: Cornell University, Progressive Grocer

The implications of this much larger number of products handled by New York supermarket operators are manifold. Certainly, buying, merchandising, inventory management, and space allocation must be enormously more challenging when dealing with 45 percent more items in virtually the same size stores as their counterparts in the rest of the U.S. The implications for store employee training are also considerable.

TABLE 5: Supermarket Productivity, New York vs U.S.

	<u>CHAIN</u>			<u>INDEPENDENT</u>		
	U.S.	N.Y.	% DIFF	U.S.	N.Y.	% DIFF
Weekly Sales/ft.	\$8.31	\$13.01	+56.6%	\$7.89	\$8.87	+12.4%
Sales/Trans.	\$17.27	\$18.49	+7.1%	\$14.35	\$12.64	-11.9%
Trans./wk.	12197	16171	+32.6%	8147	10588	+30.0%
Weekly Sales/Store	\$210,625	\$323,310	+53.5%	\$116,890	\$133,795	+14.5%

Source: Cornell University, Progressive Grocer

Supermarket Productivity

As discussed earlier, New York supermarkets are just slightly larger than U.S. stores on average. However, New York supermarkets have a higher weekly sales per square foot per week than their U.S. counterparts (Table 5). Within New York State, chains are more productive in weekly sales per square foot than independents. Both chains and independents in New York are above the US average for customer transactions per week, while only chains are higher for sales per customer transaction. Looking at New York as a whole, we can conclude that consumers in New York shop more frequently, but ring up a smaller transaction size than all U.S. shoppers on average.

Overall, New York shoppers spend 18 percent more per capita in food stores than US shoppers (Census of Retail Trade, 1987). A number of factors may be cited to explain this finding: it could be that New York supermarkets carry a much wider variety of items, thus providing greater opportunities to spend, or that New York retailers do a better job of merchandising and, as a result, customers purchase more or higher priced items. Finally, and perhaps most important, it is not coincidental that while New York consumers spend approximately 18 percent more per capita in food stores than the average U.S. shopper, New York's per capita income is higher than the rest of the U.S. by almost exactly 18 percent.

Merchandise Productivity

New York retailers reported significant variability in what often is referred to as "unexplained shrink", that is, lost sales that cannot be attributed to predictable product deterioration but come from other types of theft and loss (Table 6).

TABLE 6: New York Supermarket Merchandise Productivity

	<u>Chain</u>	<u>Independent</u>
Annual Stock Turns	20.3	19.1
Unexplained Shrink (%/Sales)	0.72 %	0.59 %

Source: Cornell University

This variability can be attributed to the different market areas in the state (e.g. theft in New York City is thought to be considerably higher than upstate), different accounting methods for wholesaling and retailing and differing reporting criteria. However, chains in the state, on average, report a 0.72 percent rate for unexplained shrink and independents report 0.59 percent of sales. At first glance these figures may seem low, but, considering this represents unexplained shrink only and retail food industry net profit margins (after tax) are near 1 percent (FMI 1988-1989), this is a significant number.

PRODUCTIVITY AND PERFORMANCE

Coupon scanning is a relatively new technology that is slowly finding acceptance by retailers. In New York State, 29 percent of chains and 7 percent of independents currently have coupon scanning in place (Table 7).

TABLE 7: New York Supermarket Coupon Utilization

	<u>Chain</u>	<u>Independent</u>
% Scanning Coupons	29%	7%
Double Coupons Offered	50%	88%
Cost of Double Coupons	1.41%	0.78%

Source: Cornell University

Doubling of the face value of manufacturer coupons is practiced widely in New York State. Whereas, in the U.S. as a whole only about 40 percent of stores are doubling the face value of coupons, 50 percent of chains and 88 percent of independents are "doubling" in New York. As Table 7 shows, the cost of doubling coupons averages as high as 1.4 percent of sales in chains and 0.78 percent of sales for independents. Again, when net profits of these companies average only around one percent of sales, such cost levels are clearly significant.

Future Sales Distribution

For the past several years, an annual forecast has been developed for the food industry by Cornell's Food Executive Program. A large and representative group of middle and senior level food industry managers was questioned regarding its most likely projections for a considerable range of food industry developments. One of the most striking results in this executive survey for 1991 is contained in Table 8. In the survey, the executives were given actual data on sales distribution in major supermarket departments for 1967 and 1989 and then asked to forecast the most likely distribution in the year 2000.

These executives projected a steep increase in importance of fresh foods -- deli, bakery, produce and seafood -- in the supermarket sales mix. The trends and forecasts for fresh and packaged food sales on a national level serve as important contrasts to the current situation in New York State. Other studies conducted by Cornell have also shown that retailers project an increasing importance of fresh foods in the supermarket. The increases in these departments come at the expense of products in the packaged goods categories, historically the mainstay of supermarket sales.

TABLE 8: United States Supermarket Sales Distribution

	-Percent of Total Sales-		
	<u>1967</u> (1)	<u>1989</u> (2)	<u>2000</u> (3)
Grocery	48.0	44.3	39.6
Dairy	11.1	8.2	7.5
Frozen	4.3	6.2	7.3
GM/HBC/OTC	5.4	8.4	9.8
Meat	24.1	16.9	13.2
Produce	7.6	9.2	11.9
Deli	—	3.8	5.6
Bakery	—	2.0	2.7
Seafood	—	1.0	2.4
Total	100.0	100.0	100.0

Source: (1)Chain Store Age, (2)Progressive Grocer, (3)Executive Projection

Looking more closely at the sales mix in New York State supermarkets, we see that packaged products account for a higher portion of the sales mix than in the rest of the country (Table 9). However, the gross margin on sales of these products is not consistently higher or lower than the U.S. average. The sales mix and gross margin of fresh products indicate that New York is different the rest of the U.S. in some categories (Table 10). The gross margin is higher in New York for some fresh products because this state's consumers have a strong demand for these products, but as a result of strong competition from specialty stores, the supermarket sales mix is lower.

It is probable that New York shoppers demand quality fresh products at a rate at least as high as the rest of the country, but with the number of specialty stores available to New York shoppers, it should perhaps be no surprise that New York supermarkets realize a smaller sales share than in the rest of the country. Moreover, it should be noted that New York State supermarkets have more competition in the form of direct farmer marketing outlets - selling a wide variety of fresh fruits, vegetables and other fresh foods - than any other state in the country. It is important to note, however, the supermarkets in New York enjoy a much higher margin on baked goods-probably as a result of a higher number of in-store scratch bakeries in New York state.

TABLE 9: Packaged Categories, U.S. vs New York

	Sales Mix -% of Total Sales -			Gross Margin		
	<u>U.S.</u>	<u>New York</u>		<u>U.S.</u>	<u>New York</u>	
		<u>Chain</u>	<u>Independent</u>		<u>Chain</u>	<u>Independent</u>
Grocery	42.4	44.9	57.9	20.0	20.8	19.9
Dairy	7.0	10.1	9.3	21.7	24.2	22.8
Frozen	4.9	6.6	5.7	24.4	27.6	26.7
GM/HBC/OTC	<u>8.8</u>	<u>9.1</u>	<u>4.7</u>	35.0	27.4	23.3
Total Packaged	63.1	70.7	77.6			

Source: Cornell University Study, Supermarket Business

TABLE 10: Selected Fresh Categories, U.S. vs New York

	Sales Mix -% of Total Sales -			Gross Margin		
	<u>U.S.</u>	<u>New York</u>		<u>U.S.</u>	<u>New York</u>	
		<u>Chain</u>	<u>Independent</u>		<u>Chain</u>	<u>Independent</u>
Meat	16.1	14.0	15.4	22.9	22.9	21.0
Produce	9.6	7.9	7.0	36.1	32.6	29.9
Deli	3.6	4.3	3.6	43.1	44.6	39.3
Bakery	5.9	4.1	2.8	34.7	43.7	48.2
Seafood	<u>1.1</u>	<u>1.1</u>	<u>0.6</u>	31.4	25.9	26.8
Total Fresh	36.3	31.4	29.4			

Source: Cornell University, Supermarket Business

Operating Performance

Financial statistics show that New York supermarkets are very close to the national averages with the exception of the category "Net Profits after Taxes" (Table 11). The lower net profit figure for New York State is likely explained by two factors. First, the data for the U.S. are not as recent as the data for New York State and the economic conditions in these two time periods were very different. Specifically, the more recent fiscal year reflects a much poorer economic and business climate than the earlier period. Second, since net profits are net of interest expense and many New York chains, as a result of the takeovers of the late eighties, are highly leveraged and their interest payments are high.

TABLE 11: Supermarket Operating Performance, U.S. vs New York

	<u>U.S.</u>	<u>New York</u>	
	1988	1990	
		<u>Chain</u>	<u>Independent</u>
Sales	100.00 %	100.00 %	100.00 %
Cost of Goods Sold	76.08	75.46	78.21
Gross Margin	23.92	24.53	21.75
Total Expenses	22.23	22.53	20.64
Net Operating Profit	1.69	2.00	1.11
Net Earnings After Taxes	1.10	0.19	0.43

Source: FMI Supermarket Financial Performance Study 1988-89, Cornell University

TECHNOLOGY AND THE FUTURE

New York chain supermarkets are adopting most customer service technologies at a higher rate than the national average (Table 12). New York independent supermarkets, however, are somewhat less likely to have scanning checkouts or coupon scanning capability than are independent supermarkets throughout the country. For fax ordering, credit/debit cards and automatic teller machines, New York independent supermarkets are much more likely to be using these technologies than the average independent supermarket across the U.S.

TABLE 12: Customer Service Technology, U.S. vs New York

	Percent of Stores Using					
	<u>Chain</u>			<u>Independent</u>		
	<u>U.S.</u> <u>1991</u>	<u>New York</u> <u>1991</u>	<u>2000*</u>	<u>U.S.</u> <u>1991</u>	<u>New York</u> <u>1991</u>	<u>2000*</u>
Checkout Scanning	79	89	92	61	56	64
Coupon Scanning	14	29	30	10	7	13
Fax Ordering	12	57	79	13	29	56
Credit/Debit Cards	23	57	76	13	21	51
ATMs	28	87	98	10	43	80

*Projected

Source: Cornell University

Over the next decade, projections for the year 2000 made by the participants in the Cornell study show that New York chain supermarket operators expect the largest growth in customer service technologies to be in the area of fax ordering and credit/debit cards. Furthermore, chain supermarket operators expect minimal further expansion in checkout scanning, coupon scanning and automatic teller machines. This cautious expectation for coupon scanning is rather surprising since the scanning of coupons involves a technology with relatively low current adoption (29 percent) and potentially great cost saving advantages for both retailers and manufacturers.

New York independent supermarket operators expect tremendous growth in customer service technologies. By the year 2000, New York independent supermarket operators expect that the percent of supermarkets using four of the five customer service technologies to double or more. Checkout scanning is the only customer service technology in which independents do not expect to see tremendous growth.

Figure 9: Constraints To Customer Service Technology Use

	<u>Chain</u>	<u>Independent</u>
Checkout Scanning	⊗	\$
Coupon Scanning	\$	⊗
Fax Ordering	\$	⊗
Credit/Debit Cards	—	⊗
ATMs	⊗	⊗

\$ = Too Expensive ⊗ = Not Sufficient Benefit ⊗ = Lack Technical Staff

Technological Constraints

Chains and independents not currently using each of the customer service technologies, were asked to identify the barriers preventing adoption of these technologies. Constraints identified fell into three categories: cost, benefits, and expertise. Chain and independent supermarket operators offered different reasons for failure to implement these various technologies, reflecting the varying resources that each can access (Figure 9). For example, the constraint preventing chains from implementing checkout scanning was anticipated insufficient benefits to justify the investment while independents were constrained by the initial cost of the technology itself.

For three of the technologies, it is worth noting that independents feel they lack the technical staff and expertise to implement such systems. This identifies an obvious opportunity for both manufacturer and wholesaler support services.

TABLE 13: Operations Technology: New York

	- % of Stores Using -			
	<u>Chain</u>		<u>Independent</u>	
	<u>1991</u>	<u>2000*</u>	<u>1991</u>	<u>2000*</u>
Electronic Scaling	89	92	56	64
In-store Computer	88	93	60	68
Electronic Ordering	50	65	40	50
Electronic P-O-P	43	60	29	29
Category Management	38	85	29	39
DPP Analysis	13	63	7	24
DSD	63	74	21	61
Frequent Shopper	13	68	0	35

*Projected

Source: Cornell University

Operations Technology

New York chain supermarkets are presently more heavily involved in each of the operations technologies surveyed than New York independent supermarkets (Table 13). The greatest predicted growth for both chains and independents is in the areas of direct product profit (DPP) analysis and frequent shopper programs. Indeed, for this latter relatively recent promotional tool, frequent shopper programs, New York operators are projecting at least a quadrupling in adoption by the year 2000.

Technological Constraints

As we examine the constraints preventing supermarkets from adopting these operations technologies, note that independents are constrained most often by the cost of implementing the technology (Figure 10). Chain supermarkets in New York State apparently do not see sufficient benefits or think the initial cost of these systems is too high.

Figure 10: Constraints To Operations Technology Use

	<u>Chain</u>	<u>Independent</u>
Electronic Scaling	⊗	\$
In-Store Computer	—	\$
Electronic Ordering	⊗	\$
Electronic P-O-P	⊗	⊗
Category Management	\$	\$
DPP Analysis	\$	⊗
DSD	⊗	\$
Frequent Shopper	\$	\$

\$ = Too Expensive ⊗ = Not Sufficient Benefit ⊗ = Lack Technical Staff

Source: Cornell University

SUMMARY

This report is the first of a series of annual studies examining the nature of the retail food industry in New York State. This first study gathered together for this first time information and operating data from a variety of sources, never before assembled in one place. As such, the report provides a glimpse into the structure and performance of the New York State retail food industry that was previously unavailable. Moreover, the report draws comparisons between New York State operators and their counterparts in the rest of the country.

The picture that emerges from this study is of an industry that is dynamic and responsive. For example, New York State supermarkets lead the nation in a number of key productivity measures while, at the same time, lagging behind in a number of other equally critical indicators of technological adoption and innovation. One image of the New York State food system came into sharp focus in this study: the very diverse positioning and merchandising efforts of New York State stores to respond to the increasingly diverse ethnic and cultural characteristics of New York's consumers. In fact, 25.6 percent of the State population is non-white, as compared the the United States population which is 19.7 percent non-white (U.S. Bureau of the Census, 1990) The report pointed clearly to the greater degree to

which New York State supermarkets are called upon to respond and, indeed, are responding to, this significant marketplace challenge.

While the current report summarizes many aspects of the very diverse food system in New York State, it also realizes a number of issues that present particular challenges to New York State food retailers and, appropriately, poses a number of questions to resolve in the future. Our objective in subsequent studies of the New York State food industry is to pursue these questions and to continue to provide managers with timely information on the changing conditions in this dynamic industry.

REFERENCES

Chain Store Age , "1968 Supermarket Sales Manual" (Mid-July 1968)

The Food Institute, *Those Other Food Stores*, (May 1990)

Food Marketing Institute (FMI), "Supermarket Financial Performance Study", (1988-89)

New York State Department of Agriculture and Markets, Official Inspection Data, (1990)

Progressive Grocer, "Supermarket Sales Manual," (July 1990)

Supermarket Business, "Consumer Expenditures Study," (September 1990)

U.S. Bureau of the Census, *Statistical Abstract of the United States: 1990* (110th edition)
Washington, D.C., 1990.

U.S. Department of Commerce, *1987 Census of Retail Trade* Washington, D.C., 1987

OTHER AGRICULTURAL ECONOMICS RESEARCH PUBLICATIONS

No. 91-06	The Budgetary Implications of Reducing US Income Inequality Through Income Transfer Programs	Richard N. Boisvert Christine Ranney
No. 91-07	Annotated Bibliography of Generic Commodity Promotion Research (Revised)	Susan Hurst Olan Forker
No. 91-08	Geographic Price Relationships Under Federal Milk Marketing Orders	Andrew Novakovic James Pratt
No. 91-09	Dairypert: An Expert Systems Approach for Improving Dairy Farm Management Practices	Robert J. Kalter Andrew L. Skidmore
No. 91-10	Measuring Hicksian Welfare Changes from Marshallian Demand Functions	Jesus C. Dumagan Timothy D. Mount
No. 92-01	Comparison of the Economics of Cheddar Cheese Manufacture by Conventional and Milk Fractionation/Concentration Technologies	Richard D. Aplin David M. Barbano Susan J. Hurst
No. 92-02	Appendix Comparison of the Economics of Cheddar Cheese Manufacture by Conventional and Milk Fractionation/Concentration Technologies	Richard D. Aplin David M. Barbano Susan J. Hurst
No. 92-03	Credit Evaluation Procedures at Agricultural Banks in the Northeast and Eastern Cornbelt	Eddy L. LaDue Warren F. Lee Steven D. Hanson Gregory D. Hanson David M. Kohl