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Changes in the Market Structure of the Grocery Retailing Industry of Four Selected Utah Retail Selling Areas, 1960-1969

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CHANGES IN THE MARKET STRUCTURE OF THE GROCERY RETAILING INDUSTRY OF FOUR SELECTED UTAH RETAIL SELLING AREAS, 1960-1969

by

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Retailing Industry of Four Selected Utah

Retail Selling Areas, 1960-1969

by

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An analysis of four Utah retail selling areas was made to determine the changes in the market structure of the retail grocery industry of these markets. The study markets were Logan, Ogden, Salt Lake, and Provo-Orem. This study was an extension of the National Commission Food Marketing study of the retail food marketing industry.

The major changes observed in the study markets were increasing population, dollar food sales, supermarket saturation levels and concentration ratios. The number of retail food outlets was decreasing. The barriers to entry in the study markets increased during the study period.

There was substantial economic activity in the study markets during the study period. Several major chain food retailers entered and left the markets during the study period. Firm expansion in the retail grocery industry was accomplished by both external means and internal means.

(56 pages)

INTRODUCTION

Food marketing is the largest industry in the United States (U.S.) economy. In 1968, national food sales were estimated to be $7.77 billion from 227,000 retail outlets (6, p. 58). The current trend in store numbers is decreasing while the trend in sales per store is increasing. In 1958, 260,000 retail food stores had average sales of $202,000 per store, while in 1968, 227,000 retail outlets had average annual sales of $342,000 (6, p. 61). This example of dynamic adjustment in the retail food industry is just one area in which this industry has been constantly adjusting. New market conditions have dictated that the retail food marketing firm either adjust to new conditions or face substantial financial loss.

The introduction of the supermarket as a new concept in food retailing substantially changed the industry's structure. In 1963, supermarkets accounted for 12 percent of total grocery stores, contributing 69 percent to total sales (6, p. 61). In 1968, 16 percent of all grocery stores were supermarkets with sales accounting for 74 percent of total food sales (6, p. 61).

These changes and their ensuing results have caused increasing public concern over the "health" of the total food marketing industry. One of the tangible results of this concern was the establishment of Public Law 88-354. This law, approved by President Lyndon B. Johnson in 1964, provided for the establishment of the National Commission on Food Marketing (NCFM) (6, p. 1). The law, in effect, required the

Commission to study and appraise the changes taking place in the food marketing industry. The purpose of this appraisal was to "identify significant developments in the industry, determine their future course, and appraise the consequences." (8, p. 2).

The Commission studied every aspect of the food marketing industry and examined each sector involved in the marketing channel of the food marketing industry. It also analyzed the various sub-industries, such as the fruit and vegetable industry, the milling and baking industry and the dairy industry, plus several other related industries.

The retail grocery industry was also examined in depth by the NCFM. The Commission analyzed the industry on a national and regional basis with very few measures pertaining to the local market. Regional and national markets were, as a result, the major emphasis of the Commission's final conclusions.

The purpose of this study was to extend similar measures used by the NCFM into local Utah markets by utilizing the Commission's procedures. It is felt that this analysis supplements the Food Commission's study by extending it to the local market.

The local Utah markets examined in this study were Logan, Ogden, Salt Lake City and Provo-Orem.

OBJECTIVES

The objectives of this study were:

1. To ascertain the changes in numbers of retail food stores in four Utah markets and relate them to population changes in these markets to determine the extent of supermarket saturation.

2. To determine the impact that horizontal integration had upon the local markets.

3. To ascertain changes in some aspects of market structure in each local market by deriving concentration ratios for local markets, analyzing changes in conditions of entry and relating these changes to each local market.

REVIEW OF LITERATURE

Economic theory has, for the most part, traditionally bypassed the field of industrial organization. A reason for this probably lies in the fact that most industries have, within their performance, many variables which are not explained by the perfect competition model or the monopoly model. This deficit is partially in the field which could be labeled market organization. Market organization is an area which is not generally associated with economic theory. There seems to be a reluctance on the part of economists to enter into a field which traditionally has been the domain of the business people. Perhaps the first economist to formulate industrial theory was Edward Chamberlin (2). Since Chamberlin (2), J. S. Bain (1), Clodius (3), Mueller (3), Garoian (7), and others have taken an active role in developing market organization theory. J. S. Bain first presented the notion of market organization analysis in terms of structure, conduct and performance (1).

Clodius and Mueller discuss Bain's presentation of the market organization model in a logical fashion by first discussing aspects of structure, aspects of conduct, and finally performance criteria (3). Clodius and Mueller assume that a causal relationship exists and that this relationship runs from structure through conduct to performance, resulting in a model in which structure determines conduct and conduct determines performance.

In order to fully understand the nature of the causation assumption as presented by Clodius and Mueller, an understanding of the variables of structure, conduct and performance is prerequisite.

Market structure is defined as "those characteristics of the organization of a market which seem to influence strategically the nature of competition and pricing within the market." (3, p. 516) Market structure does not refer to anything external to the market such as level of personal income, national income or personal factors that affect individuals. There are four major characteristics which are emphasized as strategic aspects of market structure. These are:

> 1. The degree of seller concentration, described by the number and size distribution of sellers in the market.
> 2. The degree of buyer concentration, defined in parallel fashion.
> 3. The degree of product differentiation, as among the outputs (though similar) are viewed as nonidentical by buyers.
> 4. The condition of entry to the market, referring to the relative ease or difficulty with which new sellers may enter the market, as determined generally by the advantages which established sellers have over potential entrants. (3, p. 516)

Many aspects of market structure are related to market conduct. Market conduct refers to ". . . patterns of behavior which enterprises follow in adapting or adjusting to the markets in which they sell (or buy)." (3, p. 517). Important dimensions of conduct include

> (1) methods employed by the firm or group of firms in determining price and output; (2) product policy; (3) sales promotion policy; (4) means of coordination and cross-adaptation of price, product and sales-promotion policies among competing firms; and (5) presence or absence of, and extent of, predatory or exclusionary tactics directed against either established rivals or potential entrants. (3, p. 517)

Market performance is defined as the "economic results that flow from the industry as an aggregate of firms." The concern of society is "how an industry performs in terms of its efficiency, its progressiveness, its stability and the like." (3, p. 517)

The following are principal dimensions of market performance:

> 1. The height of price relative to the average cost of production.
> 2. The relative efficiency of production so far as this is influenced by the scale or size of plants and firms (relative to the most efficient), by the extent, if any, of excess capacity.
> 3. The size of sales-promotion costs relative to the costs of production.
> 4. The character of the product, including choice of design, level of quality, and variety of products within any market.
> 5. The rate of progressiveness of the firm and industry in developing both products and techniques of production, relative to evidently attainable rates and relative to the costs of progress. (3, p. 517)

Returning to the discussion concerning the assumption of causation, it can be logically concluded that many aspects of market structure can be and probably are closely related to aspects of market conduct. Mueller and Clodius (3, p. 513) provide an example, ". . . an important barrier to entry may be a product differentiation advantage; or, product differentiation may become a form of conduct in the market of few sellers." Thus Clodius and Mueller tend to discredit their own assumption relative to causation. It would seem more logical to conclude that structure and conduct have interrelationships in the characteristics of each, and these inter-relationships determine the market performance for the industry. Also, aspects of market performance can influence structure and conduct adjustments by the individual firms within the industry.

The final report of the National Commission on Food Marketing presents in detail the major conclusions. Included within the report is an evaluation of performance in the food retailing industry. The major conclusions of the Commission in the area of food retailing point out the high levels of market concentration in many markets, the increasing use of mergers and acquisitions as a means of firm growth and the increasing barriers to entry (8).

A study very similar to this study was completed and published in September 1969. The study, titled Changes in Philadelphia's Grocery Retailing Market Structure 1948-1968, reviewed the history of the grocery retailing market in Philadelphia (13). The author, James S. Toothman, mainly used secondary data obtained from the National Commission on Food Marketing technical studies. The Food Commission had compiled data on individual Standard Metropolitan Statistical Areas, which covered the Business Census from 1948 to the present. Toothman segregated data relevant to the Philadelphia market and presented a concise picture of the changes which occurred in that market.

SOURCES OF DATA AND PROCEDURES

Major Sources of Data

Data for this study were obtained from several sources. Technical Study No. 7 of the National Commission on Food Marketing (NCFM) was used to obtain comparison figures for measures of concentration at the local market level, number of grocery stores and similar parameters (9). A majority of the information used by the NCFM was obtained from Business Census publications. The Business Census is compiled every four or five years. The most recent complete Business Census was in 1963.

While the Business Census releases official figures and estimates as to volume of sales and level of business activity in the census years, several independent firms make yearly estimates as to business parameters based on official Business Census figures. The newspaper industry has several firms which specialize in furnishing market information for newspaper advertisers. The most noted of these publications is the Annual Editor and Publisher Market Guide (4, 5). This guide has utilized the Standard Metropolitan Statistical Areas which the Business Census uses to define market areas. This guide furnishes estimates on retail sales, population, personal income for the Standard Metropolitan Statistical Areas (SMSA) markets, the county markets and the major city markets for each state. The guide also lists the major retailers located within each major city. The weakness of this source is that it is often outdated in referring to number of retail outlets and listing the major retailers within each major city market. This source uses official Census estimating procedures in estimating annual sales and similar parameters.

Progressive Grocer, an industry magazine, publishes an annual report of the grocery industry. This annual report summarizes each year's activity in grocery retailing. It compares chain activity to independent activity and reports on the success of new retailing practices and techniques. It estimates the total food sales, total number of retail food outlets, trends in sales, sales per store, and number of food stores. This source obtains data from surveys that it conducts yearly. The 36th Annual Report of the Grocery Industry was used in this study (6).

The Newspaper Agency Corporation, an agent for the Salt Lake Tribune and The Deseret News, compiles a Grocery and Drug Directory each year (10, 11, 12). This directory lists all retailers in the grocery business throughout the Salt Lake Intermountain Market, as well as listing all retail drug stores. This directory was used to ascertain the retailers within the study markets for the selected years.

The Utah State Tax Commission was contracted to furnish sales volume figures for selected grocery retailers in the four Utah markets. The Tax Commission supplied this information in coded form to avoid identifying the sales volume of individual firms. These data covered the three time periods of 1963, 1965 and 1968.

Method of Procedure

Objective one was accomplished by using The Salt Lake Intermountain Market Grocery and Drug Directory for 1960 (10), 1965 (11), and 1968 (12). The number of grocery retailers in the individual markets were obtained from this source. Population estimates were obtained from the Editor and Publisher Market Guide for 1963 (5), 1965 (11) and 1968 (12). From population and store number information population per store ratios were derived. The amount of supermarket saturation was ascertained by determining the percent of total food sales done by supermarkets for each study market. Total food sales information was obtained from the Editor and Publisher Market Guide for each study market. Total amount of sales by supermarkets for each market was obtained from individual firm sales figures supplied by the State Tax Commission. The resulting saturation levels were then compared to saturation criteria presented by the NCFM.

The procedure in accomplishing objective two was to select the large chain store grocery firms which were presently, or had at some time during the decade of the sixties, operated in any of the market areas. Expansion activities of these large chains, in their respective markets, were studied and analyzed to ascertain the methods used by these firms to expand horizontally in the market.

Objective three was accomplished by using the data on individual firm sales of grocery goods, supplied by the State Tax Commission. Total market grocery sales were obtained from information in the Editor and Publisher Market Guide for the years 1963, 1965 and 1968. Concentration ratios were then derived for the individual markets for three time periods. These ratios were then compared to NCFM criteria on desirable levels of concentration. Changes in the level of concentration ratios within the same market were also discussed, as well as the differences in level of concentration ratios between markets. The NCFM developed its concentration ratios for the top four, top eight and top twenty firms in the market. This study, because of the limited size of the study markets, developed concentration ratios for the largest three, largest four and largest five firms in each market.

Barriers to entry were also discussed and related to changes in other aspects of market structure.

PRESENTATION AND ANALYSIS OF DATA

Comparison of Economic Geography

The term market is defined in many ways. It may refer to an area delineated by political boundaries; it may refer to an area where supply and demand forces effectively operate; or it may refer to an area where population is centered. This study defined a market with the same definition as the Business Census uses. The Census defines a market as the area where supply and demand forces effectively operate as a cohesive economic unit, and uses political boundaries to clearly delineate market areas (9, p. 43). These markets are termed Standard Metropolitan Statistical Areas (SMSA).

There are 218 SMSA markets in the United States. Utah has three SMSA markets--Ogden, Salt Lake City and Provo. The Logan market is not a Census SMSA market area, but was delineated similarly by including all Cache County as the market. An SMSA uses county lines as its boundaries; a single SMSA may be just one county or may be several counties, depending upon the size of the particular market. For example, the Ogden and Provo-Orem SMSA markets are single county units, but the Salt Lake SMSA encompasses Salt Lake County and Davis County. The Logan market has been defined as Cache County.

The Logan market is unique in that geographic boundaries exclude overlap of market areas. The mountains separate Cache Valley from the cities to the south and west, thereby making the Logan market an excellent study market since the market is isolated and relatively easy to observe without any outside influence.

The Ogden SMSA is defined as Weber County and is located to the south of Cache County. The Ogden market is not as clearly defined as is the Logan market. To the north of Weber County lie several small villages which account for some shopping in Ogden, but this crossing over county lines amounted to a very small percentage of the total Ogden sales volume. On the east and west, Weber has well-defined geographic boundaries; to the south the county line draws an arbitrary line through several villages, Layton being the largest of these which shop in Ogden. The effect of this overlap upon the total sales of the Ogden SMSA was probably quite small since the amount of sales would come from a relatively small population. The major reason for including Davis County in the Salt Lake SMSA is that many of the residents of Davis County live in Bountiful, the population center of Davis County, and work in Salt Lake City. Residents of Davis County shop quite extensively in Salt Lake City stores. Salt Lake City is generally the economic center of Davis County as well as Salt Lake County. The Salt Lake SMSA is limited on the east and west with geographic boundaries. On the south, the Point of the Mountain area clearly separates the Provo-Orem SMSA from the Salt Lake SMSA.

The Provo-Orem SMSA is delineated by the boundaries of Utah County. This market is well defined by the lack of large population centers located in adjoining counties, excluding Salt Lake City.

All these markets have universities located within their boundaries. The universities located in Logan and Provo have a relatively greater impact upon the economy of the markets since these cities have smaller populations and hence a greater proportion of residents are employed by and attending the university. Ogden and Salt Lake have substantial industry which employs much of the available labor force in these cities. The Logan and Provo markets have substantial agricultural activity within the market boundaries.

Comparison in Population and Population Growth Trends

The four selected markets comprised a majority of Utah's population and economic activity. The growth in population of these markets largely determined the relative growth of the markets over time.

The Logan market, the smallest in terms of population, had an average rate of population growth during the past decade of 2.25 percent per year (Table 1). This growth had occurred mostly within Logan City limits. There were several suburbs which accounted for a large amount of the non-Logan City growth. The implications of this type of growth for market structure change are substantial in that locations of major retailers would tend to move with the population. This situation had occurred in the Logan market. The major grocery stores moved to a more central and convenient area on the northern end of the downtown area.

The Provo-Orem SMSA had a population growth rate of 2.13 percent per year for the ten-year study period (Table 1). This rate was somewhat less than the Logan growth rate. The Provo-Orem market has the largest land area of the four selected study markets. The Provo market is agriculturally oriented with some industry and a

Table 1. Estimated population of selected Utah markets, 1960-1969

Year	Logan	Ogden	Salt Lake	Provo-Orem
		Market		
		Population		
1960	35,788	110,774	447,795	106,991
1965	37,506	122,483	510,773	127,854
1969	44,162	130,678	583,854	130,101
		Percent		
Average annual change	2.25	1.68	2.84	2.13

large university. This market was similar to the Logan market in its stage of development and structure in the grocery retailing industry. The main difference between the structures of the two markets was due to the remoteness of the Logan market. Logan had traditionally been the central shopping area of the entire valley, and because of this characteristic, it was natural for Logan to absorb the grocery retailing function for the entire valley as transportation improved for consumers and as refrigeration became accessible to the valley residents. Provo did not have the advantage of being a central market for durable goods earlier in the century; therefore, as consumer transportation improved, Provo did not develop into the central market for the county; each small village maintained its role as an independent market place.

The Ogden and Salt Lake SMSA markets had experienced different problems in development of a retail grocery industry. The Ogden market had been centralized in the location of major retail grocery stores. Ogden developed early as the industrial center of the state since early in its history as a city. Population growth in the Ogden market averaged 1.68 percent per year during the ten-year study period (Table 1). The Ogden market had not developed any major retail grocery shopping centers within the city boundaries. The general development of the new grocery retail units had been to the southern areas of the city. There was a major shopping center in the southern end of the city, but there was only one large food supermarket in that complex. The southern movement of retail firms was characteristic of all types of retailers in Ogden. The center of population was also moving to the south.

The Salt Lake SMSA had an average yearly population increase of 2.8 percent per year for the ten-year period. This growth rate was the largest of the four study markets. Although the SMSA was growing in population at a faster rate than the city itself, Salt Lake City was the major shopping center for the total SMSA. This characteristic of population growth differed from that of the Ogden SMSA, which was only growing at a rate of 1.68 percent per year. The rest of Ogden SMSA was growing at a slightly faster rate than the City of Ogden, the city having 63.4 percent of the SMSA population in 1960 compared with 61.2 percent in 1969 (Table 2). The Salt Lake SMSA had another major difference from the Ogden SMSA. The Salt Lake SMSA had four major shopping centers. In Salt Lake City, there was the downtown shopping district composed mainly of older type retail grocery stores with very few modern supermarkets. The future of grocery retailing in the downtown district was bleak because of general central city deterioration and lack of adequate parking. The Sugar

Table 2. Percent of population located in major city of SMSA's of selected Utah markets, 1960-1969

Year	Market: Logan	Ogden	Salt Lake	Provo-Orem
			Percent	
1960	52.0	63.4	42.3	33.7
1965	53.5	61.4	37.7	31.3
1969	53.0	61.2	33.9	38.7

House shopping area was located in the southern section of Salt Lake City. This shopping center generally served the new subdivisions which had developed in that section of Salt Lake City. This area was composed mainly of large supermarkets and superette sized convenience stores. Most of these retail grocery stores were relatively new with a few older individual-proprietor outlets. A major shopping center had developed on the southeast side of Salt Lake City. This center, Cottonwood, had several of the larger retail grocery chains represented. New homes and new retail stores were prevalent in this area. Salt Lake City was expanding and growing in the southern section of the county. In the future, Salt Lake and Provo may be one continuous population and industrial center. Another shopping center was the Bountiful area. This area contained a large number of stores but had only one major food store. The major activity in grocery retailing in this shopping area was done by the superette sized convenience stores.

The Salt Lake SMSA population which was not within the corporate city limits of Salt Lake City was growing at a faster rate than the population within the city. Provo was the only major city which was experiencing a substantial increase in population in relation to the rest of the SMSA. The Ogden and Logan markets had no substantial change in the percent of population located in the major city of the market.

Number of Retail Grocery Stores

The number of retail grocery stores, as well as trends in number of retail grocery stores, was used in two ways in this analysis. This measure was used to derive sales per store and trends in sales per store. The measure was also used with sales per store data to derive supermarket saturation levels.

The number of retail grocery stores is decreasing. A study by Progressive Grocer in 1969 indicated that during the ten-year period from 1959 to 1968, the yearly rate of decrease in the number of grocery stores across the nation was 1.9 percent (6, p. 61). This same study revealed that the average yearly increase in total grocery store sales nationwide was 9 percent (6, p. 61).

The total number of grocery stores in the four markets decreased by 25 percent from 1960 to 1969 (Table 3). This was a 2.5 percent annual decrease in total number of grocery stores. The rate of decrease in number of retail grocery stores in the four study markets was higher than the national rate of 1.9 percent per year. The Provo-Orem SMSA had the greatest percentage decrease in total number of grocery stores of all four markets. The index of change (Table 3) indicates that Logan and Provo-Orem had the largest percent decrease

Table 3. Number of retail grocery stores in selected Utah markets, 1960-1969

Year	Logan	Ogden	Salt Lake	Provo-Orem	Total
			Number		
1960	56	87	366	126	635
1965	46	84	335	111	576
1969	34	75	300	55	474
			Index (1960=100)		
1960	100	100	100	100	100
1965	82	96	92	88	91
1969	61	86	82	52	75

in total grocery stores compared to Ogden and Salt Lake. All four markets experienced a greater percentage decrease during the last five years of the study compared to the first five years.

Each retail grocery market was in a different stage of maturity in terms of stability in numbers of retail outlets. Stability in the number of retail outlets in a market indicated that this market had achieved an equilibrium. Therefore, markets which experienced substantial decreases in the number of retail outlets were less developed in this sense than were markets which experienced very little change in number of retail outlets. Thus, Logan and Provo-Orem were less mature or developed than Ogden or Salt Lake.

Location of Retail Grocery Stores

A major problem with this measure was that it was impossible to determine whether change in percent of stores within the major city was due to new store openings or old store closings. The decline of the percent of stores located in the Logan and Salt Lake market indicated that either a greater percentage of stores was closing within the city or new stores were being opened outside of the city. This problem was easily solved in the Logan market since visual observation of the market area indicated that many stores were closing within the city and very few new stores were being opened outside of Logan City. Also, it was known that the percent population residing within Logan City was fairly constant (Table 2). The Salt Lake situation was not as easily solved. The percentage of the market's population residing within the corporate limits of Salt Lake City had decreased about 8 percent in the decade of the sixties (Table 2). This fact explained some of the decrease in the percent of grocery stores within the city. An examination of the closings of grocery stores in the Salt Lake SMSA revealed that over two-thirds of these closings had occurred within the city limits (10, 11, 12). Thus it could be concluded that the major reason for the net percentage decrease in grocery stores located within the major cities of these markets was due to grocery store closings within the city limits. The closings of grocery stores within the major city, assuming that the major city was also the major market place, indicated that these stores were unable to successfully compete. It was possible, however, that these stores which were forced to close might have been able to compete successfully in the outlying areas of the market where the competition might not have been as rigorous. The bundle of goods and services which the store offered might have been in higher demand. (Bundle of goods and services might have been such things as quick check-out, long hours, etc.)

The Ogden SMSA, with an index of 102, had not changed significantly in comparison with the other markets (Table 4). The Provo-Orem SMSA, with an index of 152, had experienced a large influx in the percent of total grocery stores located within the City of Provo (Table 4). The Provo market had experienced many closings of grocery stores in the outlying areas of the SMSA (10, 11, 12). This market was different from the other markets because of the number of villages within the SMSA. For many years, these villages were self-sufficient economically. But, with the advent of consumer owned transportation and the increasingly important role that Provo performed as an industrial center of the area, this self-sufficient

Table 4. Percent of all grocery stores located in the major city of each selected Utah market, 1960-1969

Year	Market			
	Logan	Ogden	Salt Lake	Provo-Orem
	Percent	Percent	Percent	Percent
1960	50	78	59	25
1965	48	83	53	30
1969	44	80	50	38
	Index (1969=100)			
1960	100	100	100	100
1965	96	106	90	120
1969	88	102	85	152

condition had changed. Provo increased in importance as the shopping center for the entire county in the late sixties. This fact explained why the trend was toward a greater percentage of grocery stores in Provo city.

Retail Grocery Sales

The volume of grocery sales in a market is an indicator of the size of the market. Resulting trends in volume of sales within a market indicate rate and direction of change occurring in sales. Sales volume and sales trends were directly comparable between markets.

There are several factors within a market which determine the growth rate of sales. Growth of sales depends upon the rate of population growth, increases in the level of income, mean age of the population, the product mix offered to consumers, and the amount of food obtained from non-grocery store sources.

Table 5 presents sales volumes in dollar increases. In order to obtain real increases in food sales, the sales must be deflated according to the changes in the Retail Food Price Index (Table 6). The Retail Food Price Index, as adjusted for use in this study, was based on 1963 equaling 100 (6, p. 56).

The real sales volume in the Logan, Ogden and Provo-Orem markets indicated that something very unusual had occurred in these markets in terms of real increase in food sales volume. Assuming the sales estimates were fairly accurate, it appeared that consumers, during periods of rapidly inflating price levels, adjusted their combination

Table 5. Retail food sales in selected Utah markets, 1963-1968

Year	Markets: Logan ($000)	Ogden ($000)	Salt Lake ($000)	Provo-Orem ($000)	
1963	8,667	36,360	148,005	27,163	
1965	9,431	44,067	175,229	33,551	
1968	10,262	46,227	192,352	33,356	
	Index (1963=100)				Retail food price index
1963	100	100	100	100	100.0
1965	109	121	118	124	103.6
1968	118	127	130	123	113.5

Table 6. Deflated retail food sales in selected Utah markets, 1963-1968

Year	Market: Logan ($000)	Ogden ($000)	Salt Lake ($000)	Provo-Orem ($000)
1963	8,667	36,360	148,005	27,163
1965	9,152	42,536	169,140	32,385
1968	9,041	40,729	169,473	29,388

of food purchases in such a way as to reduce the real income spent on food, thus reducing real sales. In-depth study would be necessary in order to ascertain the income effect and the substitution effect related to the nature of consumer behavior during periods of high inflation.

Sales Per Grocery Store

Sales per grocery store were a measure of market structure which the NCFM did not examine. This measure is an indicator of the scale of operation within the market at a particular point in time. The level of per store sales for individual markets was compared to an average or norm of an aggregate of equivalent markets. The theory underlying this concept was that an average market would have a certain amount of sales by supermarkets and a certain amount of sales by other grocery stores. Thus the average market would be assumed to be at a given level of technological development. When a market was compared to this average or normal market, certain conclusions could be drawn concerning the technological advancement of that market.

This measure must be used with care, however, since its usefulness was determined by the characteristics of the normal market which was selected. This norm was comprised of equivalent market areas and the market area studied was similar to the normal market area. If there were significant differences between the markets, results of this measure would be inaccurate.

The NCFM did develop and define the case where a market had substantially less sales per store than the normal or average market.

The term applied to this condition was "overstored." "Overstored" is defined as when a market was not realizing all available scale economies that other equivalent markets were able to realize (8, p. 99).

The SMSA study markets--Ogden, Salt Lake and Provo-Orem--had substantially higher per store sales than did the Logan market (Table 7). The national per store sales were an average of all stores within the national market, not just the SMSA markets. If a figure was available for the average per store sales in all SMSA markets, it would probably have been higher than the average per store sales for the entire national market because of the higher levels of retail concentration and supermarket saturation prevalent in the SMSA markets.

Table 7. Average sales per grocery store in selected Utah markets, 1963-1968

	Markets				
Year	Logan	Ogden	Salt Lake	Provo-Orem	National
1963	$176,877	$430,941	$427,760	$234,164	$254,000
1965	249,525	524,607	523,072	302,361	290,000
1968	285,056	608,250	626,554	444,746	342,000
			Index (1963=100)		
1963	100	100	100	100	100
1965	141	122	122	129	114
1968	161	141	146	190	135

In comparison, the Logan market would be classified as "over-stored" if the other three SMSA markets were used as the norm. This indicated that grocery stores in Logan could have had an excess of small stores, or unused capacity in supermarkets, both conditions resulting in a form of excess capacity. This comparison, however, is for illustrative purposes and should not be used as a measure of structure in this case, because of the uncomparability of the Logan market to the Utah SMSA markets. The Logan and Provo-Orem markets were similar in market characteristics except for the much larger population of the Provo-Orem market which allowed grocery firms in Provo-Orem a larger potential in terms of possible scale of operation.

The Ogden and Salt Lake SMSA markets had experienced consistent increases in sales per grocery store during the 1963 to 1968 period. The grocery industry within these markets was at about the same degree of advancement, with the scale of operation increasing. The Logan and Provo-Orem markets had experienced a greater rate of increase in sales per grocery store in comparison with the Ogden and Salt Lake markets (Table 7). This higher rate of change for the Logan and Provo-Orem markets indicated that these markets were in earlier stages of implementing existing scale increasing technology which the Ogden and Salt Lake grocery industries had already implemented. The Provo-Orem SMSA, with index of change of 190 for 1968 compared to base year 1963, had the greatest rate of increase in sales per grocery store of the four Utah markets (Table 7).

Supermarket Saturation

The National Commission of Food Marketing used the level of supermarket saturation as one factor which determined possible methods of expansion facing individual grocery firms (9, p. 33). The Commission held the view that if supermarkets controlled 67 percent or more of total grocery sales in any market, the market was supermarket saturated (9, p. 33). Because of this saturation, grocery firms would be unable to expand by internal growth, i.e., building new retail stores, since there were already so many supermarkets in existence in the market. The NCFM defined a supermarket as a grocery store with total sales over $500,000 annually (9, p. 34). The Commission concluded that if firms found it impossible to expand by internal methods, the only alternative method of expansion would be by merger or acquisition, at least by the larger chain firms. This was viewed by the Commission as a less desirable method of expansion than internal growth (8, p. 106).

In 1968, the U. S. retail grocery industry was well over the saturation level established by the NCFM (Table 8). The superette store is generally referred to as the convenience store.

The rate of increase of total sales by supermarkets has been decreasing since 1954 (Table 8). This decrease indicated that there seemed to be a limit to the total percent of sales that supermarkets could possibly control. The decline in the rate of growth of sales by supermarkets was greatest between 1954 and 1958, thus indicating that fewer new supermarkets were being built in the later portion of this period. The national grocery industry was well over the NCFM

Table 8. Percent of total U. S. grocery sales accounted by supermarkets, 1948-1968

	Year				
	1948	1954	1958	1963	1968
	Percent	Percent	Percent	Percent	Percent
Share of sales	28	49	61	69	74
Percentage increase over 1948	--	75	120	147	164
Percentage increase from preceding period	--	75	24	13	11

saturation level in 1963 and increased 5 percentage points in the next six years.

In 1963, the Salt Lake market was the only market which had a saturation level near the national level (Table 9). The Logan and Provo-Orem markets were more than 15 percentage points lower than the national level of supermarket saturation in 1963. Yet in 1968, Logan, Ogden and Provo-Orem had saturation levels above the national level (Table 9). Thus the three markets increased in the level of supermarket saturation at a faster rate than the national market.

Retail Concentration in Local Food Markets

Concentration ratios measure market shares of individual firms within the relevant market, thereby revealing the largest firms, in terms of sales, within the relevant market. The major problem

Table 9. Percent of total grocery sales by supermarkets in selected Utah markets, 1963-1968

Year	Market				
	Logan	Ogden	Salt Lake	Provo-Orem	National
	Percent	Percent	Percent	Percent	Percent
1963	53	58	61	51	69
1965	57	62	65	52	--
1968	77	82	64	83	74

associated with the use of concentration measures was the determination of the relevant market. The NCFM defines a relevant market:

> . . . in selling grocery products at retail, the relevant economic market or area of effective competition usually is no larger than a metropolitan area, within which there may be supermarkets of smaller geographic scope. Each individual in a chain of supermarkets draws its customers from an area limited by access and a reasonable driving distance to the store. (9, p. 118)

Boundaries of the relevant market were determined by several factors. The number of close substitute stores nearby was one determinant of the size of the market. Location of the closest labor center and the transportation system, in terms of highways, street direction, and congestion were other determinants of size of the relevant market.

Retail concentration measures could be determined in two markets, the buying and selling markets within which the grocery retailer operates. The retail selling market serves consumers. The buying market is the market where retailers buy products from wholesalers. In this study, the selling market was of major concern. The NCFM reported that the level at which retailer selling concentration will have the greatest impact upon market performance is the local relevant market (metropolitan area) (9, p. 42). The NCFM realized, however, that national concentration may affect procurement by means of special price considerations from wholesalers and therefore may affect a firm's selling opportunities (9, p. 42).

High concentration levels, defined by the NCFM, existed when the market share of the largest four firms exceeded 50 percent (8, p. 93). The largest four firms in the Logan market, in 1963, had 53 percent of total sales (Table 10). The Salt Lake market had 49 percent of total sales controlled by the largest four firms (Table 10). Therefore, the Logan and Salt Lake markets, in 1963, would be classified as having high levels of concentration.

In 1963, the average market share of the largest four firms in each of the 218 SMSA markets was 50.1 percent (9, p. 45). In 1963, the average market share of the largest four firms in the study markets was 47 percent, three percentage points below the national SMSA average (Table 10). In 1965, this average was 47.5 percent of total sales by the largest four firms in the study markets (Table 10). The average share of the largest four firms in the study markets increased in 1968 to 61.2 percent.

To illustrate the discussion relating to the relevant market problem, a comparison has been made in Table 10. The largest three, four and five grocery firms which operated in any or all four markets were determined and resulting concentration ratios were listed under column "All markets" in Table 10. (This was not an average of the

Table 10. Share of total food sales by the largest 3, 4, and 5 firms in the selected individual Utah markets, 1963-1968

Year	Markets				All markets[a]
	Logan	Ogden	Salt Lake	Provo-Orem	
	Percent	Percent	Percent	Percent	Percent
Largest three					
1963	47	35	43	36	40
1965	48	40	41	30	39
1968	64	48	39	62	37
Largest four					
1963	53	43	49	43	44
1965	56	49	47	38	46
1968	70	56	45	74	45
Largest five					
1963	61	49	54	49	47
1965	63	58	52	46	49
1968	75	63	49	87	48

[a]These concentration ratios were derived from total sales of all four markets.

four markets, but the actual share of the large firms' sales related to the total sales in all markets.) This comparison revealed that in most cases the concentration ratio for the aggregated market was less than any individual market (Table 10). This situation occurred because each of the large chains had varying market shares in each market. For example, Albertson's may have been the largest chain within the Salt Lake market, yet not have had any stores located in the other three markets. Thus Albertson's share of the total sales within the four markets would have been less than their share of the Salt Lake market's sales. If, however, the relevant market was defined as a shopping center within a metropolitan market, the concentration ratio for the top firms could possibly be higher, since several large supermarkets may have dominated the competitive situation, and thus the sales, of that shopping center. For example, Warshaw was located in the southern sector of Salt Lake City. This firm had four large supermarkets operating in this area. Warshaw may have had, by visual estimation, well over 60 percent of the grocery market in the southern sector. Thus it may have been possible for a retailer with a limited area of operation to control a large amount of sales in a limited market. Yet this firm may not actually control a significant share of relevant market area.

Conditions of Entry

Clodius and Mueller defined condition of entry as a strategic aspect of market structure (3, p. 516). Condition of entry is usually defined as the ease or difficulty facing potential entrants in the attempt to successfully compete within the market. The advantages which established sellers have over the potential entrants are also a definition of conditions of entry (3, p. 516).

In the grocery retailing industry, the conditions of entry had dramatically changed during the past several decades. These changes had tended to increase the barriers to entry into the grocery industry. In order to gain an understanding of these new barriers, the history of grocery retailing should be reviewed.

In the early 1900's, the grocery retailing industry was a model of the textbook definition of perfect competition. There were many buyers and sellers, few barriers to entry, etc. About the only limitation was that the most desirable locations were already being used. Since that period, the industry has been subjected to a continuous influx of innovation in market organization. In the early 1920's, the first chain stores appeared in substantial numbers. The chain store concept developed as managers attempted to obtain economies of scale in purchasing of larger quantities of wholesale products and more intensive use of management. Purchasing large amounts of supplies by chains enabled them to gain price concessions from the wholesalers. Some larger firms integrated into the wholesaling function in order to achieve maximum savings. As these chains gained in strength, independent retailers were forced to either utilize these innovations or close their doors. Many acquisitions by chains were made during this period when smaller independent retailers were forced to sell their operation or quit business. In 1930, the seven largest chains in the U. S. had, on the average, acquired 18 percent of their currently operating outlets (9, p. 98). Another advantage for the chains was sufficient capital to finance expansion.

The leverage applied by chains to suppliers was the focal point for the first government intervention into the grocery industry. This leverage was the major competitive advantage that the chains possessed. The early chains, at the store level, had done away with charge accounts and introduced the concept of self-service. The chain stores were characterized by having lower store door costs. Independents, however, were not to be "outdone" by these chains. Soon the concept of affiliation was developed by independents that realized that similar advantages to those enjoyed by the chains could be achieved by means of voluntary coalitions. Coalitions between groups of retailers and wholesalers enabled retailers to realize procurement and promotional economies.

In early 1930, several independent grocers, fighting the chains opposition, implemented a radically new concept in grocery retailing. These independents, by combining such already tested techniques as self-service, created the supermarket. The supermarket represented a unique new type of retail facility. The physical structure was several times larger than conventional grocery stores. This larger store was designed to hold a larger inventory and an increased selection of product lines. The performance of early supermarkets made it clear that the supermarket was here to stay. Rapid early growth was stimulated by increases in ownership of automobiles and the development of refrigeration. The net effect of the supermarket on the grocery retailing industry was to significantly raise barriers to entry. By the late thirties, most of the chains were experimenting with their versions of the supermarket. The chains, with their superior financial and management resources, were hampered by their existing corporate structure. They had many small stores that had to be phased out before they could benefit from supermarket-sized operations.

While chains were attempting to change to supermarkets, many local independents were able to realize substantial profits from supermarket operations, which were re-invested in the operation. These profits fostered new local and regional chains which were completely supermarket oriented. This was the major turning point for the large national chains. The major chains were never to be quite as influential as they had been in the earlier years. In the Utah market, Safeway had become a major chain in the early forties. In the early fifties, they had a major building program in Utah, constructing supermarket-sized stores with potential sales of 1 million to 1.5 million dollars annual sales. Before Safeway had launched its building program, several local chains had developed. O. P. Skaggs, Allan's and Warshaw had entered the market. Soon after Safeway's building program was completed, the grocery industry experienced rapid growth. In the middle fifties, Albertson's became a major competitor in the market. Albertson's had an advantage over Safeway. This advantage consisted of newer and larger stores. It appeared to the interested observer that the top office of Safeway, Inc., had dismissed the Utah market from its interests. It was twenty years and several lost market shares later that Safeway, especially in Salt Lake City, embarked on a store renovation or building program.

Regressing to the period of introduction of chains into the grocery industry, the Utah market had several coalitions. The major early voluntary chain was Independent Grocers Alliance (IGA). This coalition was supplied by Utah Wholesale, Inc. The Grocer's Wholesale Company, now the Associated Grocers Association, was the next entrant into the voluntary chain movement. This organization was the largest cooperative chain in the Utah market.

With the advent of the supermarket concept into grocery retailing, the small corner stores adversely felt the pressure of competing with the "cheapies" as they were often referred to in the early days. Many of these small stores were operated as a family project. The investment in the store building represented a sunk cost which often limited easy exit from the grocery industry. This problem was very similar to the problem associated with many of today's farmers who are operating farms too small to be economically successful, but the farmer, limited in the flexibility of his investment and frequently his age, remains in the farming industry. There were many examples of the eventual demise of such retailers in the Utah market (Table 3).

Some of the more enterprising small grocers experimented with new methods of retailing. Several new innovations proved to be methods by which the small grocer could maintain economical operation. These grocers discovered that if they concentrated on handling only high mark-up, fast moving items, lengthened the hours of operation and stressed the idea of convenience to consumers, they could realize substantial profits. Thus the convenience store concept was born. This movement gained momentum in the late fifties. In 1957, there were only 500 stores which classed themselves as convenience stores in the United States. In 1968, this figure had risen to 9,600 stores with total sales of $1,635 million annually.

The mini-market concept had increased average sales per store in non-supermarket stores from between $125,000-150,000 to $200,000 per year.

In the selected study markets in Utah, there had been a dramatic increase in the size of one convenience store chain operation. This firm, the 7-Eleven, first began operation in the Salt Lake and Ogden markets in the middle sixties. Since that time, they had opened a total of 42 new stores. There were many other small stores operated as convenience stores in these markets, but the 7-Eleven Company was the only firm to operate a chain of these stores.

The total effect of convenience stores in terms of total market share was still small. In 1968, convenience stores controlled 2.1 percent of all retail grocery sales (6, p. 89). This 2.1 percent was over a 100 percent increase in market share from 1957.

The supermarket operators did not view this intrusion of convenience stores as competition for their supermarkets. They felt that there was a specific demand by consumers for this type of store.

The barriers to entry had increased substantially in the grocery retailing industry in the United States. Utah had also realized this increase in barriers to entry. The two major chains in the Utah market performed a majority of their own wholesaling functions. Another major competitor was Associated Grocers.

There were some grocery retailers which had proven that it was possible to enter the industry. These retailers had taken advantage of several features of the food retailing industry which tended to facilitate entry into this industry. These features were the comparatively small relevant market which was characteristic of the grocery retailing industry, and the opportunity for favorable arrangements with wholesalers, in such things as extensive financial assistance, management services and strong private labels (9, p. 158). The small relevant market offered advantages to entering grocery retailers in terms of a relative small area in which extensive promotional activities were required, and opportunities for the firm to get involved in civic activities and build a reputation within the market. Warshaw was the latest example that the retail grocery industry could be penetrated successfully.

Effect of Horizontal Integration on the Local Market

The majority of indicators used in market structure research are quantitative. They measure number of stores, sales per store, saturation levels and levels of concentration. Mueller and Garoian (7) utilized such measures in their study of the national grocery retailing industry. The need and importance for certain quantitative measures are evident. But there seems to be a lack of qualitative indicators which measured activities within the local relevant market. In 1957, a Senate subcommittee on Anti-trust and Monopoly undertook a study of concentration (8, p. 140). The following was taken from observations of the subcommittee's chairman, Jesse J. Friedman, as cited in the NCFM final report:

> First and foremost, a report of this kind is by definition quantitative or statistical in character, and bare statistics necessarily cannot tell the whole story about the competitive structure of the entire industrial system or of an individual industry. The causes of the concentration shown by the figures are not revealed. The relative importance of new entries, internal growth, mergers, business mortality, and so forth, is not indicated. (8, p. 140)

For example, what were the ramifications when it was discovered that two of the largest three or four firms in the market in 1963 did not exist in 1965? Another related question concerns the actual ownership of the firms within the industry. Does it make any difference to the competitive nature of the market whether there was continuous adjustment in terms of firm ownership or a stable situation in terms of what firms were in the market ten years ago and what firms are there now? Also, what were the implications concerning the competitiveness of a market, when one market experiences all its growth by internal means and the concentration of that market increases to a relatively high level? Compare this situation to a market where there has been a large amount of merger activity yet the level of concentration has decreased in the market. These questions allude to the need for some qualitative measures of market structure on the local market.

The following analysis of horizontal integration and its effect on market structure utilized qualitative measures. This discussion attempted to examine some of the un-quantifiable aspects of market structure.

Theoretical framework

The term horizontal integration was often closely related to market concentration. Horizontal integration occurred when a "firm increases in size by selling an increased volume of its existing product lines." (7, p. 18) This can be accomplished by a firm increasing its number of stores or increasing the size of an existing store. Thus, horizontal integration was wholly a measure of absolute firm size and not a measure of the firm's share of the relevant market. Market concentration was the parameter which measured the market share of any firm.

An analysis of the degree of horizontal integration within market revealed the methods by which horizontal integration was accomplished by the individual firms of the market.

Methods of firm growth

The individual firm has two possibilities for growth or expansion. Firms may grow by internal means which entail expansion of existing facilities and/or building of outlets in new locations. Firms may also expand by external means, which include acquisition of other existing firms, merger with existing firms or consolidation with other firms. In the grocery retailing business, the large firms operated in a setting where competition was among a small group of competitors. In this market, where non-price considerations were important, it was difficult for any one firm to achieve rapid growth or substantially increase its market share by expanding existing operations (7, p. 18). The firms wishing to expand found that price-cutting techniques will not significantly affect sales and concluded that the most logical method of expansion was by acquisition or merger. Therefore, it is reasonable to assume that most firms desired to make entry into a new market or to expand operations in an existing market by means of some form of merger or expansion. Many of the large grocery firms had horizontally integrated by using both methods of expansion.

Mueller and Garoian (7, p. 49) list four major reasons related to the trend of increasing horizontal integration in the grocery retailing industry. These four reasons were economies of scale, geographic diversification, prestige and market power (7, p. 49). Some aspects of economies of horizontal integration were the economies associated with advertising, merchandising, specialized management and large scale procurement of supplies. Geographic diversification over a large area increases a firm's chances to survive adverse conditions such as a price war in one area of the firm's operating radius. Increasing in size and thus importance enhances a firm's prestige in the industry and was an important variable in a firm's decision to expand horizontally.

Increases in horizontal integration within firms frequently results in increases in the market power of the expanding firms. When a firm decided to expand its existing level of operation, it had two choices of expansion methods, external and internal growth. There are several advantages associated with each method of expansion.

Three major advantages were generally associated with expansion by merger. These advantages were financial considerations, economies of buying facilities, and tax incentives (7, p. 50). The financial advantage gained by merger type growth was the opportunity to obtain capital credit easier because lenders felt that there was less risk involved in a merger since it was possible to investigate the firms involved. The second consideration results from the buying firm obtaining credit from the firm being purchased or the firm accepting the purchasing firm's securities as payment (7, p. 50).

It was often more economical for a firm to buy an existing firm and its facilities than for the firm to build the same facilities themselves (7, p. 50). The acquiring firm may realize certain tax advantages. There were two such tax advantages: (a) corporate income tax was said to be harder on small firms than on larger firms; (2) the impact of estate taxes on the owners of the firm being sold, owners would rather, and were often forced, to sell the business in order to obtain cash with which to pay the estate taxes (7, p. 50).

The major advantages of growth by internal means were flexibility in terms of potential physical structure, flexibility in management organization and continuation of a good reputation associated with the firm's name and image. The first advantage was quite clear: if the firm built its own physical structures, it could build them exactly to the desired specifications. There would not be any unwanted buildings as there might be in the case of a merger. Second, the expanding firm could utilize its own management and corporate organization in operating the expansion project. Third, in a merger, an undesirable reputation may be inherited, whereas internal expansion results only in the firm's existing reputation being associated with the new operation.

The Logan case

The Logan market had experienced a substantial increase in market concentration during the study period. In 1963, the largest four retail food stores had 53 percent of total food sales; but in 1968, the largest four had 70 percent of total food sales (Table 10). Concentration by the largest four had increased by 17 percentage points. The number of supermarket grocery stores operating within the Logan market did not change during this period. One of the unusual aspects of this change was that, during the study period, two new grocery firms replaced two of the largest four firms which were operating in the 1963 market. The grocery retailing firms in Logan, because of the size of the Logan market, had only one outlet apiece. In this market, there was no merger activity or external growth by any of the grocery retailing firms. The firms which did expand did so by internal methods. The largest three grocery retailing firms in the Logan market gained in market power during the study period. In 1963, the largest three firms had 47 percent of total sales; the largest fourth and fifth firms controlled only 11 percent of total sales (Table 10).

Thus the Logan market, by growth defined as socially acceptable by the NCFM, had increased in concentration level to a point where the largest five firms in the market in 1968 had 75 percent of the total market (8, p. 94).

The Salt Lake and Ogden markets

The Salt Lake market has had several national chains, several regional chains and a mixture of local chains and independents operating in its grocery retailing industry.

The Salt Lake market had many grocery firms expand by external means. This type of expansion was more prevalent than was firm growth by internal means.

In 1962, the first major acquisition of the study period occurred. A major national chain purchased a large local chain in the Salt Lake market. By 1963, this firm controlled 10 percent of the total sales in the Salt Lake market. In 1965, this firm still controlled 10 percent of total grocery sales in the Salt Lake market. During this period, one other major chain was expanding rapidly by means of internal growth.

The next major expansion by external means occurred in 1966 when a small local firm purchased the national chain which had entered the market in 1962 by the same means. This firm, however, did not gain control of a substantial share of the market until 1968 when it had about 6 percent of the Salt Lake market.

During the period from 1963 to 1968, the Salt Lake market declined in concentration by 4 percentage points (Table 10). In 1968, there was a major chain in the Salt Lake market which controlled twice the sales of its closest competitor.

The latest major adjustment occurred in the market in late 1967. A local chain which had sold its assets in 1963 to the national chain opened under a new name, through internal expansion, a total of four supermarkets on the south side of the Salt Lake market.

Thus, in the decade of the sixties, the Salt Lake market had substantial firm adjustment by both methods of firm expansion. Yet during this period two of the largest five retailers were different firms in 1963 and 1965, indicating a certain degree of competition within the framework of the grocery retailing industry.

The Ogden market experienced the same type of activity during the study period and, therefore, the same general discussion would be true of the Ogden market.

The Provo-Orem market

The Provo-Orem market had a very different expansion history in comparison with the Ogden and Salt Lake markets. This market had been relatively stable in terms of the largest firms operating within the market.

A major adjustment in the Provo-Orem market which had occurred over time was the change in the make-up of the largest three firms within the market. Between 1963 and 1965, the market share of the third largest firm was replaced by another firm. However, this market had not been entered by another larger retail grocery firm since 1960. This stable situation might be indicative of a lack of competitive behavior within the market; but by observing constant change of market shares of the largest firms within the market over time, the conclusion of a lack of competitive behavior of the market is not substantiated.

There were other factors which tended to enhance the stability of the major competitors of the Provo-Orem market. Some of these stabilizing factors were the decentralization of the population within the SMSA, the decentralization of the economic centers of the market, and the relative smallness of these decentralized centers.

Thus, because of a lack of sufficient population, large supermarket chain firms may not have felt that it would be profitable to invade the Provo-Orem market, since the full economies of scale of the large supermarket structures would not be realized. This was evidenced by the growth of several local chains in the largest firms operating in the Provo-Orem market. These firms operated relatively small supermarkets in most of the small communities in the SMSA. They have expanded mostly by merger and have utilized economies of purchasing large quantities of supplies as a method of meeting competition.

The largest firms in this market in 1963 were a large national chain and a large regional chain. By 1968, two local chains which both had doubled their market share since 1963 replaced these two large chains as the largest firms in the industry. This may indicate that the local chains were better able to adapt to changing market conditions than the larger chains.

SUMMARY AND CONCLUSIONS

Summary

The four markets selected for this study were the Logan market, the Ogden SMSA market, the Salt Lake SMSA market, and the Provo-Orem SMSA market. The time period was the decade of the 1960's.

The population in the study markets was increasing. The Logan market increased at an annual rate of 2.25 percent, Ogden at an annual rate of 1.68 percent, Salt Lake at an annual rate of 2.84 percent and the Provo-Orem market at an annual rate of 2.13 percent. The Logan and Ogden markets had little change in the percent of population living in the major city of the market; whereas Salt Lake and Provo-Orem had definite changes in the percent of population residing in the major city. Salt Lake market decreased in percent living in its major city and Provo-Orem increased in percent of population in its major city.

All of the study markets had a decrease in number of retail grocery stores during the study period; this decrease ranged from 14 percent to 39 percent. Provo-Orem had the greatest decrease in number of stores while Ogden had the least decrease. The Salt Lake and Ogden markets had a net decrease in number of stores located within the major city of the market while Ogden had little change in percent of retail grocery stores within the major city. Provo-Orem was the only market to have a substantial increase in the percent of stores in the major city.

The study markets had an increase in total dollar food sales during the study period, but a net decrease in real dollar sales. Sales per retail grocery store in each of the study markets increased during the study period, indicating that the scale of operation in the retail grocery industry in the markets was increasing. Provo-Orem had the largest increase in sales per store, while Ogden had the smallest increase. This increase ranged from 41 percent to 90 percent.

In the four study markets the level of supermarket saturation increased. The Provo-Orem market had the largest increase, 51 percent to 83 percent, in the level of supermarket saturation. The Salt Lake market had the smallest increase, 61 percent to 64 percent. The concentration of sales by the largest three, four and five firms increased in all markets except the Salt Lake market.

The barriers to entry into the food retailing industry in the study markets increased during the study period. Some of the barriers to entry which increased are capital requirements, specialized management, product branding and wholesaling facilities.

The effect of horizontal integration on the local market was analyzed in qualitative terms as well as quantitative terms. The ownership patterns of the major firms revealed that in all markets the composition of the largest four firms, from 1963 to 1968, changed substantially in that some large firms were replaced by other large firms. The attrition of some of the largest firms in the Salt Lake and Ogden market during the study period resulted in several new grocery retailing firms entering the market, primarily by means of internal expansion.

Conclusions

The results of this study provide some insight into certain aspects of market structure research:

1. The NCFM indicated that when the level of supermarket saturation exceeded 67 percent, additional firm growth would more likely be accomplished by external means than by internal means. In this study, three of the study markets experienced as much internal growth as external growth during a period of time when these markets were supermarket saturated. Thus, on the basis of this study, in order for the NCFM assumption to hold, the definition of a supermarket may need to be adjusted upward in terms of sales.

2. Qualitative measures need to be developed in market organization research. The use of quantitative measures provides little indication of ownership patterns, merger activity, and entry and exit activity. This study used several qualitative measures, which indicated that competitive forces within some of the study markets were active although some quantitative measures showed little change.

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