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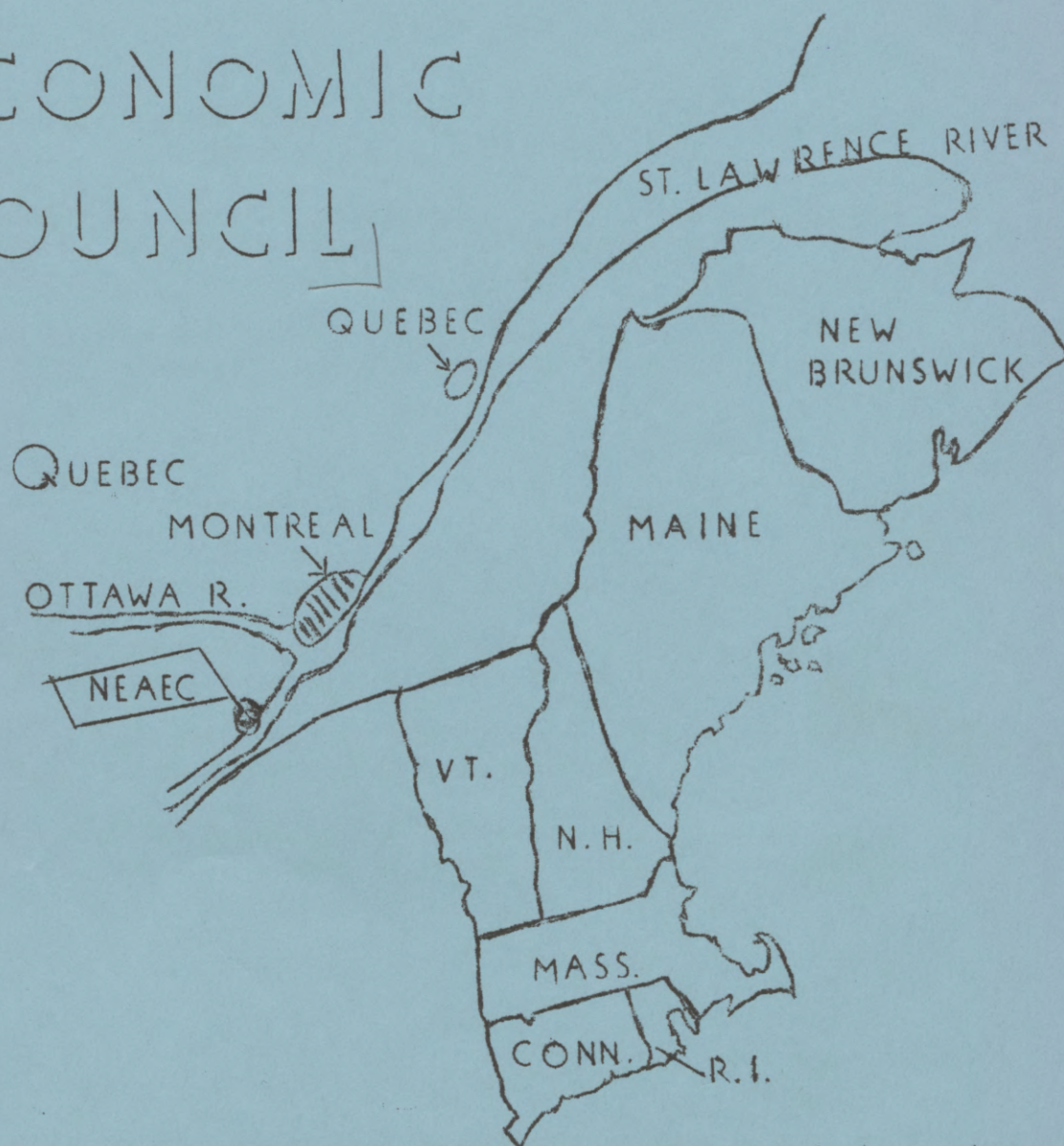
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MONOPOLISTIC COMPETITION IN THE FOOD INDUSTRY - EXTENSION ASPECTS

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I would like to discuss the topic, Extension Aspects of Monopolistic Competition in the Food Industry in two parts; (1) the function of the agricultural economist as it relates to the food industry and (2) the important structural characteristics and changes in the food industry and their significance to agricultural economists.

The first subject I would like to discuss is the role or the function of the agricultural economist as it relates to the food industry. I personally feel that this is one of the most important questions that has to be answered by agricultural economists today. I would like to preface my remarks by referring to John H. Davis of Harvard and his concept of agribusiness. He said, in effect, that modern agriculture is inseparable from the business firms which manufacture production supplies and which market farm products. It could not operate for one week if these services were cut off, and by the same token, the business firms which serve agriculture would exist without purpose except for farmers to buy their supplies or to sell commodities to them. Today agriculture and business are highly interrelated and give every promise of becoming even more so. This fact must be taken into account in developing farm policy. It seems to me that this fact must also be taken into account in developing research and educational programs in agricultural economics.

I would like to inject another aspect of the function of the agricultural economist into the picture. This is especially true of those agricultural economists who represent land-grant universities but I believe that this is applicable to any agricultural economist who works in an environment of a relatively free enterprise system. I firmly believe that the agricultural economist's greatest contribution has been in furthering economic progress which benefits all economic groups. In other words, the efforts of agricultural economists are manifested through increased welfare and prosperity to society as a whole in the long run, though his short run efforts are often directed towards special interest groups. Certainly the level that we have attained in the amount, kinds and quality of food consumed, and the relatively small proportion of income required to obtain it, lends great support to this proposition.

The following quotation is from the Agricultural Marketing Act of 1946. "The Congress hereby declares that a sound, efficient, and privately operated system for distributing and marketing agricultural products is essential to a prosperous agriculture and is indispensable to the maintenance of full employment and to the welfare, prosperity, and health of the nation. It is further declared to be the policy of Congress to promote a scientific approach to problems of marketing, transportation, and distribution of agricultural products similar to the scientific methods which have been utilized so successfully during the past 84 years in connection with the production of agricultural products so that such products capable of being produced in abundance may be marketed in an orderly manner and efficiently distributed."

I have discussed the foregoing in order to support the conclusion that the field of agricultural economics encompasses the economics of the production, processing and distribution of agricultural products. The scope of agricultural economics should not be restricted to the study and solution of problems in one or two phases of agriculture - but rather should be directed towards a more efficient

allocation of resources in agribusiness. Neglect of any of the three major divisions of agribusiness, namely, production, processing and distribution constitutes failure to fulfill our role as agricultural economists and our obligation to the society that provides the reasons and means for our very existence.

Since my task is to discuss Extension aspects of monopolistic competition in the food industry, the remainder of my remarks will pertain primarily to Extension programs in food distribution. However, there are certain implications for agricultural economists who are engaged in research and teaching. It is our belief at the University of Massachusetts that Extension is not a separate and distinct program but rather part of an over-all program with three major objectives; (1) training individuals through resident teaching, (2) adding to our knowledge through research and (3) aiding individuals and organizations in the field by taking to them the latest developments in research and technology. We believe that an Extension program should be based upon subject matter competence and not upon educational methods or a particular organizational structure.

If we accept the proposition that the agricultural economist has an important educational role with the food industry, what then is the specific nature of this role? Essentially, the function of the agricultural economist should be to apply his discipline to problems encountered by the food industry that he can help solve or at least improve through more objective decision making. The agricultural economist through his specialized knowledge is, I believe, uniquely qualified to assist firms in the solution of problems associated with the processing and distribution of food and related products. In addition, the agricultural economist can organize technical information supplied by agricultural physical scientists and help the firm or firms apply it profitably. For example, information on improved quality control of perishable foods is of little value to the marketing firm unless it can be profitably incorporated into the operating policies of the firm. This is where the agricultural economist can make a real contribution.

The agricultural economist who is a specialist in food economics can make the same contribution to the operation of the food industry business enterprise as the agricultural economist who is a specialist in farm management can make to the operation of the farm enterprise. In both cases the contribution of the agricultural physical scientist is utilized by the agricultural economist in assisting the business enterprise to plan, organize and control operations as efficiently and profitably as possible.

I would like to illustrate the role of the agricultural economist who specializes in food economics by discussing our program at the University of Massachusetts. Our approach is certainly not the only one nor is it necessarily the best, but it is unique and we think it is successful. First of all I would like to point out that the food industry as we define it in our work in Massachusetts consists of all the firms engaged in the processing and distribution of food products. Most of our efforts are directed towards work with processors, wholesalers and retailers since this constitutes the largest segment of the food industry in Massachusetts and since we must specialize to become adequately competent and effective.

In Massachusetts there are more than four people employed in food marketing for every one gainfully employed in farming. In addition, the food industry in Massachusetts has an annual sales of nearly \$5,000,000,000 which is far greater than the total gross income from farming in the state. In approaching the development of an Extension educational program with the food industry we first defined

our objective or purpose as that of utilizing the competence of the College of Agriculture staff and other professional staff, when necessary, to improve the efficiency of food distribution firms. Problems encountered by processors, wholesalers and retailers in Massachusetts in attaining efficient, profitable operations were primarily those of quality control, equipment, layout, work methods, plant or store location, merchandising, and management. Management as we define it consists of planning, organizing and controlling the operations of the firm and it involves the best use of facilities, materials, know-how and personnel.

Thus, competence in food technology, food engineering, food economics and the commodity disciplines were deemed necessary to deal with the problems encountered by the food industry. It was my privilege to be employed as the project leader of this team and my responsibilities are primarily those of making subject matter contributions and tying together the technical and management information into an effective educational program.

By studying and becoming intimately familiar with the structure of the industry and of the individual firms we have had considerable success in influencing management to incorporate technical and management information into the operations of food marketing firms. Needless to say, any amount of technical information is useless unless it can be incorporated as a part of company policy and unless personnel are trained and supervised so that they conform to the correct procedures. By and large we have worked on a problem solving approach with individual firms or groups of firms and in so doing have developed a program which we have then made available to the entire industry. Our emphasis has been on influencing those who are responsible for developing operational policy for the food distribution firms.

We have also instituted a series of professional type seminars on our campus for middle and top management people in the wholesale and retail food industry. The seminar sessions each cover one particular subject matter area and are quite intensive.

The substance of the program is based upon economic and scientific principles supplemented by research results from the Agricultural Marketing Service and other USDA agencies and the work done at the various universities. We have also instituted a series of experiments with various industry cooperators in order to test new methods and procedures.

Now I would like to discuss some of the characteristics of the food industry in Massachusetts and New England, some of the recent and impending changes, and the significance of these characteristics and changes to the agricultural economist.

My discussion will pertain primarily to the wholesale-retail segment of the food industry since it is the focal point of our food distribution system and because it represents the largest segment of the industry in terms of the number of firms and dollar volume. It also represents the distribution functions that have undergone the most significant changes that have influenced all levels of distribution and the entire economy.

My remarks will be based upon a study of historical and current statistical data plus my own observations during the time I have been responsible for organizing and conducting educational programs with the food industry in New England and the Midwest.

One of the most significant developments in the wholesale and retail food industry has been an accelerated rate of decline in the number of firms and a corre-

sponding increase in dollar and tonnage volume per unit since 1939. A recent economic inquiry into food marketing by the Federal Trade Commission reveals that about 140,000 retail grocery firms and 80,000 specialty food retailers closed their doors since 1939.

The advent of the supermarket in 1930 and the rapid expansion of this movement after World War II contributed materially to the rate of decline of the number of wholesale and retail firms. The mass merchandising techniques employed by the supermarkets was one of the main reasons for the large increase in dollar sales per store which increased by more than 400% since 1939. I am using the term "supermarket" to indicate a method of selling rather than a physical structure per se. A supermarket is a retail food firm that utilizes the self-service method in at least the grocery section of a fully departmentalized, complete line enterprise. A complete line of foodstuffs includes groceries, meats, produce and dairy products. A supermarket usually has other characteristics such as parking space and other customer services and employs cash and carry terms of sale. A supermarket would usually have gross dollar sales of at least \$10,000 per week.

Although the number of wholesale and retail food marketing firms has declined materially in the past 10-20 years, there does not appear to be a large degree of concentration of the food business in the hands of a few multi-unit firms. This is borne out by the fact that corporate food chains account for only about 38% of total retail food business in the United States and this percentage does not appear to be increasing very much. I am using the Census Bureau's definition of a chain store which is 11 or more stores under central ownership. The Federal Trade Commission Report also indicates that the 33 largest retail food chains in the United States account for slightly more than one-third of the total dollar retail food business.

The independent stores have maintained the bulk of retail food store sales. A very powerful influence in the retail food business is the integration that has occurred not only within the corporate chain but between the independent wholesaler and independent retail food store. Practically all of the large retail food chains perform their own wholesaling function with resultant benefits in buying and merchandising. The independents have countered with various types of affiliation with wholesalers. In fact, the term "independent" is a misnomer because there are few retail food stores that are truly independent.

The Federal Trade Commission Report shows that retailer owned cooperative stores increased their sales far more than corporate chains or other independents during the last 10 years. The sales gains of retailers affiliated with voluntary groups have matched the gains of chain stores since 1948.

The significance of these facts is that the independent food store, through affiliation, has been able to adopt many of the advantages of the integrated food chain. The independent has largely nullified the buying advantage of the chain and the more progressive wholesalers are now providing affiliated stores with various types of technical assistance and cooperative merchandising and advertising arrangements. In addition, the independent store has the advantage of flexibility in adjusting to local conditions which many chain store organizations have attempted to gain by decentralizing and placing more authority at the local level.

Vertical integration in the food industry has been confined mostly to the performance of the wholesaling function by retail food chains and to the various types of arrangements between independent food stores and wholesale suppliers. These arrangements range from the actual ownership of wholesale facilities by the retailer-owned cooperative to the informal relationship between an independent store and an independent wholesaler.

There does not appear to be a rapid or significant tendency for corporate chain and others to manufacture their own food products. Only eight percent of the total dollar volume of food products purchased for re-sale by corporate chains in 1958 came from company-owned manufacturing and assembly plants. The products most frequently manufactured in company-owned plants are bread and other bakery items, coffee and dairy products.

The changing organizational structure of the industry and the supermarket method of selling which now accounts for almost two-thirds of total food store sales in the United States, has had a profound influence upon the nature and intensity of competition in the industry.

When the chain store movement was at its peak in the 1920's and early 1930's and during the development of the supermarket in the 1930's and immediately following World War II, the primary emphasis of the retail food industry was on price competition. A study of newspaper and other types of advertising during these periods gives testimony to this fact. Today there is much evidence to indicate that the retail price structure is somewhat stabilized and that price competition has been reduced to the use of a limited number of price leaders. Non-price competition now characterizes the retail food industry and is becoming increasingly important. This non-price competition is characterized by trading stamps and other types of promotional devices, large and sometimes elaborate physical facilities, expanded and diverse product lines, emphasis on the quality of nonstandardized items such as meat and fresh fruits and vegetables, store location, and services such as parking lots, carryout service, check cashing and buying and cooking information. Institutional advertising is replacing the traditional "price list" type of ads used by food stores.

This intense non-price competition is increasing largely because there are more supermarkets competing for customers' dollars than ever before. Super Market Institute, a trade association, reports that a typical new supermarket opened in 1958 faced direct competition from three other supermarkets. Ninety-three percent of the new supermarkets built in 1958 were in direct competition with anywhere from 1-10 other supermarkets in the same trading area. As the number of supermarkets in trading areas has increased, the number of families per supermarket has declined. This has resulted in intense non-price competition by supermarkets in order to maintain and increase sales per store. Unlike its predecessor, the supermarket's existence depends on a large sales volume.

The cost structure of the retail food industry is increasing. This is a result of the trend towards non-price competition which involves services that are costly. Another important reason for increasing costs is that food stores are increasing in physical size. The average size of supermarkets has almost doubled since 1949. In addition, more equipment is now needed to operate a retail food store and construction and labor costs have increased substantially. At the same time the rate of net profit in the retail food industry has remained relatively stable, between 1% and 2% of sales after taxes. Increasing costs along with the pressure to maintain profit ratios are being reflected in higher gross margins. Higher gross margins are being obtained by higher prices and a changing product mix. The sale of non-foods in retail food stores has increased at a faster rate than food sales in recent years and non-foods are estimated to account for about 5% of total dollar sales in supermarkets. Supermarkets and smaller food stores have taken on non-foods primarily to obtain the advantage of higher profits per unit that accompanies most non-food products. This has accelerated the breakdown of traditional lines of retailing and some retail enterprises are difficult to identify because they have taken on lines of merchandise that were formerly confined to other types of retail stores.

The increasing cost structure of the retail food industry along with a stable, relatively low rate of net profit, has helped create a terrific pressure to increase sales. By so doing total profits and returns on investment can be maintained or increased. The battle for increased sales and consequently, a greater share of the market, is being waged today with non-price competition as the main weapon. Each firm is attempting to differentiate its products and services.

The changing structure of the industry is having a definite influence on the actions of management of independent and corporate food distribution firms. Food store organizations are attempting to counteract rising costs by utilizing new methods and equipment to increase efficiency.

They are making greater use of research and employee training in an attempt to find better and lower cost ways of doing things and to attain follow-through by employees.

The period of rapid expansion of supermarkets from 1946 to about 1954 saw the emphasis placed on facilities and methods of selling. As a result a void arose between the customer and merchant. This void is in the process of being filled as indicated by the trend towards more service, consumer research, customer relations and a greater use of research and education. Greater attempts are also being made to obtain more competent personnel and to develop them in order to improve physical operations and service to the customer.

The industry is more cognizant of the fact that special competencies are required from without as well as within. Staff specialists are more numerous and are having a greater influence on food store operations than ever before. Management is aware of the need for trained technical and management personnel and experience is no longer the major criterion for hiring and promoting personnel.

In short, the food wholesale-retail industry seems to be maturing in its physical and mental development. What is the significance of these trends and characteristics to the agricultural economist who is responsible for educational programs with the food industry?

A favorable environment exists for agricultural economists to function with the food industry. Not only is there a great potential for increasing efficiency within the industry but management is now more receptive in seeking assistance to identify and solve problems. The opportunity exists to reduce costs and to improve the goods and services that are provided the consumer. I believe that it is very important to recognize both of these aspects in any concept of efficiency.

The food industry, now that it has a greater awareness of the need for management and technical assistance, is looking towards people outside of the industry to a greater extent. Agricultural economists, in cooperation with other subject matter disciplines, can help provide this assistance as it relates to the handling and selling of food and related products. We can provide several types of assistance such as, (1) site selection for food distribution facilities, (2) the nature of consumer demand for goods and services and its application to the food distribution firm, (3) the application of improved materials handling methods, merchandising methods, quality control and other technical information to store operations, (4) help develop and conduct personnel training programs to acquaint personnel with the economic and technical aspects of handling and selling food and related products and (5) assist management in policy formulation and in the development of an organization that will attain desired results.

Many methods can be used to provide food distribution firms with this type of information and I feel that the methods, although important, are only incidental to the quality of the subject matter that is provided. The demonstration method which consists of testing recommended improvements in one or more units of a particular firm has been effective in Extension work with the food trade. The actual demonstration is preceded by a thorough analysis of the physical and management aspects of a unit or identifiable part of a unit. The team of specialists is utilized in making the analysis. The results of the analysis are co-ordinated into a report by the agricultural economist. The report usually contains recommended changes in the physical facilities, operating procedures and management practices of the firm.

The fact that nearly 75% of retail food store sales are accounted for by corporate chains or by wholesale-retail affiliations is very important in conducting educational programs. By working with chain headquarters staffs and wholesale supplier staffs, our efforts can be made more effective and spread over a much broader base than if we had to work with individual units.

An example of the contribution that agricultural economists in conjunction with other disciplines can make to the food industry is illustrated by a recent program in Massachusetts. The Massachusetts State Legislature passed a law that requires all frozen food to be handled at specified low temperatures at the wholesale and retail levels. The industry called upon us at the University to provide assistance in the technical and management aspects of handling and selling. We studied the problems and then organized the technical information in such a way that it could be applied at the wholesale and retail level. We then revised management procedures in order that supervision could exercise more effective control at the retail level and assure that the correct procedures were employed. One large retail chain has already instituted the program with observable results, and the program should enable the entire wholesale and retail food industry to meet the requirements of the new legislation in addition to improving quality control of products and reducing costs of operation. I think that this is a good example of effectively combining several subject matter areas, including food technology, food engineering and agricultural economics to provide food distribution firms with technical and management assistance that will help them solve problems that they encounter in the distribution of food products.

Agricultural economists in at least 20 land-grant universities are making contributions to food distribution firms in their respective states.

I hope that I have stimulated some thinking as to the scope of agricultural economics and the function of agricultural economists. I believe that we, as agricultural economists, have an obligation to further economic progress for all groups by utilizing our competence in all phases of agribusiness. This may indeed require some reorientation of our entire resident teaching, research and extension program.

The food industry represents an important part of agribusiness and the entire economy. I have tried to point up some of the most significant developments in the industry and how they affect the agricultural economist. It is an industry characterized by change and a need for further study and improvement. I believe that the agricultural economist is well qualified to assume the leadership in providing the means for improvement. I am convinced that the work of agricultural economists in food distribution can bring greater recognition and credit to our profession if we will accept the task.