

The Persistent Competitive Advantage of Traditional Food Retailers in Asia: Wet Markets' Continued Dominance in Hong Kong

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The focus of this article is the persistent continued strength of "wet markets" in Hong Kong and the weakness of supermarkets in the fresh food area. This phenomenon is surprising because, based on the experiences in North America and Western Europe and given the well-developed economy of Hong Kong, one would have expected supermarkets to dominate fresh food retailing and wet markets to be in retreat. In this article, the authors explain the reasons for the continued dominance of wet markets. They argue that consumers' shopping and consumption culture, the effectiveness of wet markets in handling consumers' needs, and the appropriateness of the simple technology used by wet markets are at the basis of this dominance. An analysis of developments in the wet market system, in the supermarkets, and in consumers' behavior leads to a conclusion that there are no indications of possible changes in wet markets' superiority.

Food retail systems in many Asian countries are in a process of change. The central phenomenon is that of "modernization," that is, the replacement of traditional retail formats and methods with the supermarket (Teh Ban 1997; "Retailing in Asia" 1997). In some Asian countries, notably China and India, supermarkets have only recently appeared, but in the more developed ones, such as Singapore, Hong Kong, and Malaysia, they have been present for decades. In many Asian countries, large domestic supermarket companies compete against foreign entrants from Europe and North America (e.g., Makro, Metro, Carrefour, Wal-Mart, Price-Costco, Continent, Ahold) and against Asian supermarket chains from Japan, Australia, and Hong Kong.

A universal phenomenon in the developed Asian countries is that supermarkets have achieved lower market shares of food retail sales compared to supermarkets in North America and Europe (Euromonitor International 1997). The main reason is their weakness in the fresh food area. In the case of

Hong Kong, earlier studies have identified the continued strength of traditional retailers in fresh food lines as the main impediment to supermarkets' market share dominance there. For example, a 1986 survey conducted by Ho and Lau (1988) found that supermarkets had penetrated all market segments in Hong Kong. About 77 percent visited supermarkets at least once a week, and less than 1 percent of shoppers never shopped there. However, supermarkets captured only a 24 percent share of the food and grocery retail sales. Ho and Lau also found that supermarkets made major inroads in nonperishable food categories, but nearly 97 percent of the shoppers in their study purchased the fresh food lines from traditional retailers, mostly "wet markets."¹ Similar findings also were reported in other Asian countries. A 1986 survey in two cities in Malaysia, where the first supermarkets appeared in 1964, showed 97 percent of respondents to be at least "light users" of supermarkets. However, supermarkets were extremely weak in the fresh food area, whereas they had substantial shares in nonperishable food categories (Othman 1990). A variety of other sources attest to the strength of wet markets in other Asian countries: Singapore, Taiwan, and Thailand (AgExport 1996; "Expansion in Retailing" 1996; Goldstein 1990; Henke 1996; "Wet Markets" 1995).

The continued strength of wet markets in developed Asian economies where supermarkets have operated for several decades raises interesting questions about the future developments in food retailing in these countries and about the nature of food retail modernization.

Our objectives in this article are twofold: to understand the reasons why wet markets continue to dominate fresh food

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retailing in a situation where supermarkets are well entrenched and to position these food retail systems within the modernization framework. We study this question in the highly developed economy of Hong Kong, where given the high consumer income, strong economy, well-developed infrastructures, and length of time since supermarkets' introduction, the conditions for supermarkets to have made significant inroads in the fresh food area seem to be highly favorable.

The issue of wet markets' continued strength in the fresh food area and the weakness of supermarkets is of major interest to food retail modernization researchers and to public policy makers. It also is important to the domestic supermarket chains in the various Asian countries and to the growing number of international supermarket companies moving into Asia. These retailers need to shape their approach toward the fresh food lines and to formulate a strategy vis-à-vis the wet markets.

At present, the thinking of all the parties just listed is largely shaped by the history of food retail evolution in Western countries where, notwithstanding a few viable pockets of traditional retailers, supermarkets eventually replaced the traditional fresh food retail system. A finding that wet markets' dominance is not a temporary phenomenon but rather is based on real economic advantages will challenge popular beliefs regarding the inevitability of the replacement of traditional fresh food's retailing by supermarkets. Such a finding will have major implications for the future strategies of each of the players in the food retailing area.

We start with a background discussion of the food retail modernization literature. We then integrate relevant themes from this area into a conceptual framework designed to guide our analysis of wet markets and supermarkets. In the second part of the article, we focus on Hong Kong and conduct a systematic analysis of fresh food retailing by wet markets and supermarkets. The reasons for the persistent competitive advantage of wet markets are discussed, and we assess future developments. In the final section of the article, we discuss the implications of the analysis and suggest future research directions.

THE FOOD RETAIL MODERNIZATION LITERATURE

The issue we study is best understood in the context of the process of food retail modernization in less-developed countries (LDCs). In this section, we briefly review the main themes in this research area.

Food retail modernization involves the replacement of traditional retail formats by modern ones. The scores of studies conducted over the past five decades provide a clear picture of the traditional food retailing system. Stores typically are small, are family operated, and employ marginal labor. Retailers are passive and weak. They use simple retail

methods and technologies, and they lack financial, management, and marketing skills. Stores are cluttered, dirty, and unorganized (Food and Agriculture Organization [FAO] 1973a, 1973b; Findlay, Paddison, and Dawson 1990; Galbraith and Holton 1965; Goldman 1974; 1981; Kaynak and Cavusgil 1982; Samiee 1990, 1993; Savitt 1988, 1990; Slater and Riley 1969; Yavas, Kaynak, and Borak 1981). Many modernization researchers concluded that traditional retailing suffers from major economic disadvantages (e.g., high costs, shrinkage, inefficiencies, lack of scale economies), provide low output levels to consumers (e.g., low product quality, limited variety, frequent stock-outs, high prices, unpleasant shopping environment), and lack the abilities (e.g., financial, managerial, entrepreneurial) needed to change and develop (Galbraith and Holton 1965; Goldman 1981; Samiee 1993; Savitt 1988; Slater and Riley 1969). These weaknesses explain the unanimous agreement among researchers and public policy makers regarding the need to modernize traditional food retail systems. These modernization efforts spanned a large variety of countries: poor LDCs, Asian and South American emerging markets, and (more recently) countries in Eastern Europe, Russia, and China changing from command economies into free-market economies.

Modernization Strategies

Based on an analysis of the many examples of modernization efforts reported in the literature, we identify three food retail modernization strategies. Each is associated with a distinct ideology regarding the development process:

Replacement: This strategy involves a complete replacement of the traditional food retail formats by modern ones transferred from outside. Typically, the transferred format is one of the supermarket format's versions. The transfer may be undertaken by foreign retail companies or by local ones.

Partial transfer: Modifications of elements in the traditional formats, not their replacement, are at the center of this strategy. These elements are transferred from abroad either by foreign retailers purchasing local companies or by traditional retailers bringing over selected elements from modern retail formats. In many cases, external elements such as self-service and store atmosphere that are easy to copy are adopted rather than modern operational methods and the modern retail philosophy. This leads to the appearance of hybrid (traditional-modern) formats.

Endogenous modifications: In this case, no transfer from abroad is involved. Local retailers respond to changes in local conditions by modifying and adapting their existing traditional formats.

The first strategy characterizes all the early food retailing modernization programs in LDCs during the 1950s to 1970s (Goldman 1974; Kaynak 1985; Slater and Riley 1969). The other two strategies characterize the more recent food retail modernization processes in Asian countries such as Japan (Goldman 1991) and China (Greaves and Baldwin 1994).

The Food Retail Modernization Process

The process may be planned, with a major involvement by governmental agencies, or it may be spontaneous, evolving as a result of the independent activities of domestic and foreign food retailers.

Modernization in a specific country may involve all three modernization strategies or any combination of them. It may encompass the whole food retail system or be confined to only certain regions, geographical areas (e.g., urban centers), or retailers serving specific consumer groups. In these cases, a "dual" food retail system may appear, consisting of modern and traditional sectors operating side by side.

Evaluating Progress

The key issue in evaluating modernization progress is that of criteria. Two approaches have dominated thinking (Dholakia and Sherry 1987; Goldman 1992; Savitt 1988; Wood and Vitell, 1986). The first, the *positivist* approach, views one system, often Western food retailing and Western retail formats, as the ideal model. Progress means getting closer to this ideal. This approach provided the ideological basis for the early LDC food retail modernization programs. Although it has been widely criticized, it still exerts a strong influence on present-day food retail modernization efforts.

The second approach, labeled *institutional-ecological*, recognizes that a retail system reflects the special circumstances in which it evolved and operates. Therefore, progress should be evaluated on the basis of internal criteria reflecting societal values and trade-offs that might be unique to the specific country and not universally relevant. The intellectual foundation of this approach goes back to the institutional and ecological research traditions that viewed meeting the needs of the different constituencies of a system as the sole criteria for assessing its success.

The positivist approach views modernization as determinist and unilinear, advancing universally through a set of stages toward some ideal state. By contrast, the institutional-ecological approach assumes modernization to be multilinear and probabilist and to involve a large diversity of formats. The retail system is expected to be characterized by combinations of modern, modified, and traditional elements. It accepts as legitimate the possibility that variabilities exist among countries in the modernization process.

The term *traditional* implies backwardness and inefficiencies for those adhering to the positivist approach. Consequently, for them the market share of modern retail formats is the relevant consumer side measure of success, whereas the similarities between the retail formats in the LDC to those found in the exemplar country are used as the criteria for success on the operation side. By contrast, followers of the institutional-ecological approach look at the actual outputs of the food retail system. They do not assume that modern formats are superior, and they accept the possibility that because some

traditional retail formats might provide better outputs and satisfy consumer needs better, there will be no justification to replace them.

Supermarkets' Failure in the LDCs

Failure rates of supermarkets transferred into the LDCs were especially high during the 1960s and 1970s. Four factors were identified as the reasons for failure: (1) consumers' abilities and preferences; (2) supply and distribution; (3) government policies; and (4) the retail system (Goldman 1981; Samiee 1990, 1993). Most studies of these modernization programs implicitly accepted the positivist-modernization approach, assuming supermarkets to be far superior to the existing traditional retail formats, and consequently regarded these formats as obstacles to progress (Galbraith and Holton 1965; Slater and Riley, 1969):

Consumers' abilities and preferences: Consumers' abilities (e.g., low income, limited mobility, small homes, lack of storage facilities), values (e.g., indifference to variety, quality, service, shopping environment, emphasis on price), and shopping habits (e.g., frequent store visits, purchasing small amounts) were found to explain consumers' reluctance to switch from their traditional stores to the supermarkets (Goldman 1974, 1981).

Supply and distribution: Supermarkets' ability to operate efficiently using their high-level technology and sophisticated methods depends on the existence of appropriate supply and distribution infrastructures. However, these are underdeveloped in the LDCs. The production system is fragmented, consisting of small and weak manufacturers using outmoded production methods, producing low-quality goods, and behaving opportunistically. Consequently, orders are not supplied on time or filled accurately, and modern retailers are not able to secure advantageous supply terms. The underdeveloped state of the distribution system and the lack of warehouses, transportation, and storage infrastructures further reduce supermarkets' effectiveness (Goldman, 1981; Samiee 1993).

Government policies: LDC governments are under conflicting pressures. They are interested in increasing efficiency, reducing costs, and increasing consumers' welfare, but they also fear the high unemployment rates that will follow the demise of the traditional retail system providing subsistence income to the unemployable. Consequently, while supporting supermarkets, governments also impose restrictions on their operation, strictly enforcing laws and regulations. In addition, they often support and subsidize traditional retailers (FAO 1973a, 1973b; Slater and Riley 1969).

The retail system: Traditional retailers are small and weak, but their large numbers provide them with substantial economic and political powers. They boycott supermarkets' suppliers and pressure governments to restrict supermarkets' operations (Findlay, Paddison, and Dawson 1990).

THEORETICAL FRAMEWORK

We integrate here the various themes of the food retail modernization literature into a framework designed to guide our analysis into the two issues that are the focus of this

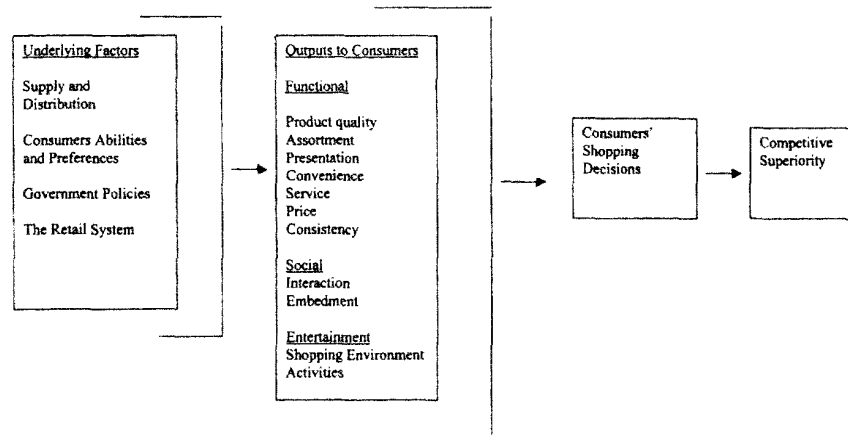


FIGURE 1 DETERMINANTS OF A RETAIL FORMAT'S COMPETITIVE SUPERIORITY

article: the reasons for the continued dominance of wet markets in Hong Kong and the positioning of this example within the overall scheme of food retail modernization options. Although the two issues are connected, our analysis of each is guided by a different framework.

Superiority of Retail Formats: Supermarkets versus Wet Markets

We assume that consumers will choose to shop in a retail format that will deliver superior outputs. A review of the retail modernization literature and the consumer patronage studies (Arnold, Oum, and Tigert 1983) shows these to consist of functional, social, and entertainment outputs. The relevant *functional* outputs include those associated with the product (e.g., quality, freshness, packaging, sources); assortment (e.g., breadth, depth); convenience (e.g., in-store accessibility, convenience); service (e.g., information, responsiveness, expertise, adaptability to needs); time savings (e.g., one-stop shopping, store accessibility); price (e.g., price levels, deals, return possibilities, payment terms); and overall consistency in service, availability, quality, and prices. The relevant *social* outputs include interaction possibilities (e.g., with other consumers, with sellers) and embedment of the retail institution within the community. The *entertainment* outputs relate to the shopping environment (e.g., colorful, exciting, variety of different outlet types) and nonshopping activities (e.g., promotions, events, eating facilities). To assess the reasons of one format's superiority over another—in our context, wet markets versus supermarkets—we should compare the performance of each of the two formats on these factors. However, this provides only a static view.

To evaluate whether the situation observed is temporary or likely to be sustained, and to assess possible developments, the underlying factors influencing the ability of each format to offer these outputs need to be identified and their impact

(positive or negative) evaluated. A review of these retail modernization studies shows four potential determinants: supply and distribution, consumers' abilities and preferences, government policies, and the retail system. Specifically, wet markets' superiority may be attributed to the weakness of supermarkets in handling the fresh food category caused by supply and distribution difficulties. It also may reflect wet markets' strengths. Wet markets are better positioned to cater to consumers' needs because they can provide consumers with higher levels of service, better quality products, and an environment conducive to social interaction. Given their simple methods and lower costs, they also can offer consumers cheaper prices. Another factor that can contribute to wet markets' strength and supermarkets' weakness is government attitudes and actions. The government may actively support the wet markets while constraining the operation of supermarkets. Finally, because of their numbers and political power, traditional retailers may get priority and better terms from suppliers, interfering with supermarkets' supply arrangements.

An analysis of the competitive standing of supermarkets versus wet markets requires a systematic evaluation of these elements. Figure 1 summarizes this framework.

The early food retail modernization studies were grounded in the positivist approach. They assumed supermarkets to provide superior outputs to consumers, and they did not contemplate a scenario in which consumers who regularly shop in the supermarket prefer to shop for some product category in traditional stores. Consequently, we view the institutional-ecological approach as more relevant in our context. We do not automatically assume that supermarkets are superior. If consumers continue to shop in wet markets, then wet markets must be providing some superior outputs. Once these are identified, the issue becomes that of explaining why traditional retailers are able to provide these superior outputs.

Because of supply-side advantages? Government support? Political clout of traditional retailers? Because they cater to consumers' needs more effectively?

The Food Retailing Modernization Process

Researchers following the positivist approach to food retail modernization did not believe in traditional retailers' ability to change and develop; consequently, they strongly advocated a replacement strategy. Partial transfer was tolerated only as a temporary but necessary compromise. The possibility of the third modernization strategy, endogenous modifications, was viewed as irrelevant. These views colored the earlier analyses of the retail modernization process; consequently, only a few cases of partial transfers and of endogenous modifications were documented in the literature. By contrast, followers of the institutional-ecological approach allow for a larger set of modernization possibilities.

One of our goals in this study is to position the Hong Kong example within the overall modernization framework and, therefore, to expand the range of documented cases of food retail modernization.

WET MARKETS AND SUPERMARKETS IN HONG KONG

Data and Methods

We used a variety of research techniques to study Hong Kong's fresh food retail system, and we collected both primary and secondary data. To analyze the consumers' side, we conducted two studies. The first was a survey of consumers' shopping behavior. A random sample of 382 households stratified by three Hong Kong areas (Hong Kong Island, Kowloon, and New Territories) and selected from the telephone directory was conducted in 1995. Trained interviewers administered the questionnaire on the telephone, in Cantonese, to the primary food shopper in each sampled household. The survey included detailed questions about the outlets where each item in a group of fresh food lines (meat, fish, fruits, and vegetables) and in a group of preserved and processed food lines was purchased, frequency of shopping for each food line at various types of outlets, travel times and modes of travel to each, origin of the shopping trip (home or work), perceptions of wet markets and supermarkets on price and freshness, and demographic and socioeconomic variables. The questionnaire was developed on the basis of inputs from a series of in-depth interviews with housewives who were the primary shoppers. We used these interviews to identify the central fresh, processed, and packaged food lines consumers purchased, to construct a detailed list of the various types of outlets consumers used for each line, and to learn the exact Chinese terms used by consumers to designate the different food items and outlet types. We learned, for example, that the notion of "fresh" is used exclusively to designate only

a food item sold in a form close to its original state in nature. Thus, "warm" meat is fresh, whereas chilled and frozen meats are not. To allow comparisons to earlier studies, the survey method closely followed that used in 1986 by Ho and Lau (1988). A subsequent analysis revealed that the distribution of the sample in the nineteen districts of Hong Kong closely matched the population distribution. Also, the average monthly household income of the sample (Hong Kong \$22,900 or U.S. \$2,960) matched that of the population. This shopping behavior study had two specific purposes. One was to update Ho and Lau's (1988) study to determine whether the recent increase in supermarkets' overall market share from 24 to 40 percent reported in a 1994 report on the supermarket industry (Ho 1994) has come through inroads into the fresh food category. Another was to determine whether some consumer groups do purchase all of their food needs (processed and fresh) in supermarkets and, if this is the case, to identify their profile.

Because the shopping study was concerned only with shopping behavior, a second study was undertaken a few months later focusing on consumers' perceptions of the advantages and disadvantages of wet markets and supermarkets, the importance of freshness in the cuisine, meal preparation, and the meaning of freshness. Given the complex issues involved, a qualitative study approach was undertaken. Unstructured interviews were conducted with seventy-five housewives who were the main food shoppers in the family. They were interviewed when they entered a wet market. To get as wide coverage as possible of the Hong Kong wet markets' shopping experience, we interviewed shoppers in seven wet markets in various parts of Hong Kong (four in public markets, two in housing estates, and one in market street). In each market, a quota based on income level, age, and work status was used to screen the interviewees. Our aim was to ensure variability on these factors. The group did not, however, include the extremes in the low-income (below Hong Kong \$10,000 per month per household) and the high-income groups (above Hong Kong \$70,000). The interviews lasted, on average, one hour. They were conducted in Cantonese by trained interviewers. The interviews took the form of open, unstructured, general discussions of a list of issues. The responses were recorded and then analyzed. Whereas the shopping behavior study involved a representative sample, this study was based on a convenience sample. Because of this and the small number of respondents involved, no attempt was made to quantify the responses. They were used only to provide an understanding of the relevant issues.

To analyze the supermarkets' side, we conducted interviews with managers of the two central supermarket chains in Hong Kong (holding some 75 percent share among supermarkets), the managers of two of the other four smaller chains, and the owners of five independent supermarkets. In the case of the two large chains, we interviewed the managing directors, fresh food buyers, and operation managers. In addition,

visits to five of their stores and systematic interviews with store managers and the directors of the various fresh food departments were undertaken.

To analyze the wet markets, we collected background information about their structure, regulations, operation, and management. The directors of the two wet market systems were interviewed. Then, a systematic analysis of eight wet markets was conducted by student teams. Twelve retailers in each market (three in each of the main fresh food lines of meat, fish, fruits, and vegetables) were interviewed. The issues studied included supply arrangements, management systems, economics of the operation, relationships with customers and with other retailers, and the nature of competition. In addition, the directors of each of these eight markets was interviewed.

Information about the fresh foods' supply and distribution systems was collected in interviews with the supermarkets' executives and wet market retailers. In addition, we interviewed the administrators of the central vegetable and fruit wholesale markets, eight large wholesalers operating in these markets, four large importers of fresh vegetables and fruits, and three Hong Kong entrepreneurs operating vegetable production facilities in China.

Secondary data, mainly in the form of government statistics, data supplied by supermarket companies and wet market administrations, published studies, and trade sources, also were used.

Supermarkets in Hong Kong: Background

The number of supermarkets is around 600 (Ho 1994; "Retailing in Hong Kong" 1993). Two chains (Dairy Farm's Wellcome and Park and Shop) operate some 75 percent of the stores. The rest are divided among small chains, independents, and upscale supermarkets in department stores. In addition, nearly 500 modern convenience stores and a dozen wholesale membership club outlets operate in Hong Kong. Western international supermarket companies are barely active; Wal-Mart withdrew recently, and Carrefour has just entered Hong Kong.

The dominant supermarket format is the conventional one. The average store size in each of the two chains is around 7,500 square feet, each carrying 7,000 to 9,000 stock units. Both chains recently opened a few larger outlets in the 40,000- to 45,000-square-foot range, but their numbers are likely to remain small (Ling 1997). The supermarkets of the other chains and the independent supermarkets are smaller, around 500 square feet. The two major chains continuously modernize existing stores, but there are no plans to increase their size.

Supermarkets appeared in Hong Kong during the early 1960s (Fung et al. 1983; Kawahara and Speece 1994; Lau and Lee 1988; Mun 1974). By the mid-1980s, the supermarket industry had moved into the maturity stage; the rate of growth in number of outlets slowed to 1.9 percent (Ho 1994; Lau and Lee 1988), and new stores were being opened only in new

residential areas and new shopping complexes. An analysis conducted of supermarket address data showed supermarkets to be widely diffused and present in all nineteen Hong Kong districts (*Grocery Trade Magazine*, 1993). Also, findings from our consumer shopping behavior survey support this conclusion. They show that, on average, consumers are located within a walking distance of only six minutes from a supermarket and that 92 percent of all consumers are within a fifteen-minute walking distance. Furthermore, distance from supermarkets is not correlated with income or other wealth variables. In short, supermarkets are easily accessible to nearly all consumers in Hong Kong.

Supermarkets initially focused on the packaged and processed food lines, and in these areas they were able to outperform traditional outlets in variety, quality, and price. They were able, for example, to replace traditional rice stores during the 1970s and now dominate rice retailing. During the 1980s, supermarkets decided to emphasize fresh food, and today all supermarkets carry fresh food lines but offer relatively weak assortments. Variety is relatively low, and the emphasis is on Western rather than Chinese products. This weakness of supermarkets in fresh food also was reported in earlier studies (Ho and Lau 1988; Lau and Lee 1988).

Our consumer survey confirms the findings of earlier studies that nearly all consumers regularly shop in supermarkets. We find supermarkets to have made further inroads during the years since the 1986 survey of Ho and Lau (1988). Nearly 97 percent of shoppers reported visiting supermarkets at least once a week (vs. 77 percent in 1986), and supermarkets have made considerable advances in the staple and dry goods category where their share has risen from 68 percent in 1986 to 83 to 90 percent in 1995. However, supermarkets made little progress in the fresh food lines, where their share continues to be small. Consumers split their food purchases, buying staple and processed food lines in supermarkets and buying fresh food in wet markets. In addition, purchases of fresh bakery products and traditional Chinese items take place outside the supermarkets, mostly in specialized stores such as bakeries and Chinese groceries (see Table 1).

The vast majority of households shop at both modern and traditional outlets. The proportion of households shopping exclusively for all their food needs at either traditional outlets or supermarkets is very small—only 2.6 and 2.4 percent, respectively.

Because Hong Kong's consumers spend 53 percent of their total food expenditures (excluding meals away from home) on fresh food (Hong Kong Census and Statistics Department 1996), supermarkets' weakness in the fresh food category clearly remains the major limitation on their market share growth.

Wet Markets in Hong Kong: Background

A wet market consists of an agglomeration of small vendors, each specializing in one fresh food line (meat, fish, fruit,

TABLE 1
PURCHASE CONCENTRATION IN OUTLET TYPES FOR
SIXTEEN FOOD CATEGORIES (PERCENTAGES
OF HOUSEHOLDS PURCHASING THE
FOOD CATEGORIES)

Food Category	Traditional Outlets		Supermarkets
	Wet Markets	Other	
Vegetables	92.3		6.0
Fruits	70.2	18.0 ^a	11.3
Fish	96.0		2.7
Meat	94.0		4.4
Bread		72.1 ^b	25.1
Frozen	50.7		42.1
Rice	2.1	14.1 ^c	82.9
Noodles			90.6
Drinks			89.6
Oil			90.0
Canned foods			97.8
Chinese salty foods	50.6	23.8 ^c	18.0
Biscuits			94.3
Spices and sauces	5.7		83.3
Tea		41.9 ^d	42.7
Alcoholic drinks			81.0

a. Fruit shops.

b. Bakeries.

c. Chinese grocery stores.

d. Tea shops.

or vegetables) or in a subline (e.g., leaf vegetables, exotic fruits). Retailers complement each other, offering a full fresh food assortment. In addition, a number of adjoining stalls offer the same product lines, enabling price and quality comparisons.

The 250 wet markets in Hong Kong contain approximately 24,000 small (8- to 15-square-meter) stalls. The two main wet market systems are owned by government and managed according to a series of special laws and regulations. The public market system operated by the Urban and Regional Councils includes the markets located in the residential districts. These markets are large and often function in multi-level enclosed structures. They are close to bus and train stations, government offices, and other public facilities. This system also includes open street markets, located mostly in older neighborhoods. The second system operates in the public housing estates.² It consists of smaller enclosed markets managed by the Housing Authority. In addition, scores of wet markets that do not belong to these two systems exist in the various private housing estates. Fresh food also is sold by many hawkers, some illegal, that operate in the streets, near wet markets, and in residential neighborhoods (Smart 1989).

The wet markets vary in size. The small ones contain some 30 stalls, and the large ones contain more than 400. Some 40 percent of the food retailers in a typical public wet market deal in vegetables and fruits, 29 percent in dried and preserved Chinese foods, 11 percent in fish and seafood, 8 percent in meat, 6 percent in barbecued and cooked foods, 4

percent in poultry, and 2 percent in other food items. The stalls are leased, often in public auctions, for three-year periods, with most contracts being automatically renewed (Government Printing Department 1995; Hong Kong Urban Services and Regional Councils 1996).

WET MARKETS' SUPERIORITY

Wet markets' dominance is based on their ability to respond more effectively than supermarkets to the particular fresh food needs of Hong Kong's consumers. In this section, we describe the reasons for wet markets' superiority and analyze the factors making this superiority possible. We first discuss the consumers' perspective, that is, how the wet markets better fit their consumption and shopping patterns and their evaluation of the wet markets' outputs. We then discuss supply, operation, and economic considerations that explain the wet markets' strength and supermarkets' weakness. The discussion is guided by the framework (see Figure 1) discussed earlier. Wet markets are contrasted with supermarkets on the relevant dimensions.

The Consumer Side

Consumption and Shopping Patterns

The qualitative consumer research reveals that consumers take meal preparation seriously. Meals consisted mostly of Chinese dishes prepared in a traditional manner. Each meal involves several dishes, each prepared from a large variety of fresh (not chilled or frozen) ingredients. Freshness is highly valued and is regarded as the single most important element influencing the taste and quality of the meal. Vegetables, meat, and fish are of special importance because they are used in a wide variety of dishes. Cooked dishes (e.g., barbecued meats, chicken, roasted duck), mostly purchased in wet market stalls or restaurants, often supplemented meals. These consumption patterns shaped attitudes toward the purchase of fresh food. Consumers viewed this as a highly important activity and were very concerned about the freshness and quality of the purchased ingredients.

The emphasis on fresh ingredients and daily cooking led to a high shopping frequency. Our shopping behavior survey revealed that consumers shopped in wet markets an average of 5.8 times per week and purchased small amounts on each of these shopping trips. The proximity of the wet markets (an average of 7.4 minutes walking time) made it easier to shop there almost daily.

Evaluation of Wet Markets

The qualitative study shows that consumers felt that wet markets offered more advantages than supermarkets in fresh food. They viewed wet markets and supermarkets as complementing one another and as being equally important. Wet markets were viewed as "fresh food supermarkets," providing

one-stop shopping for a large variety of fresh, Chinese, and cooked food items. On the other hand, supermarkets were perceived as providing the same advantage for packaged and processed foods. Wet market retailers were regarded as specialists offering deep selection in a narrow range of items and advice about origins, quality, and freshness. All respondents in the qualitative study stated that food products purchased in wet markets were "fresher and cheaper" than those purchased in supermarkets. Freshness was perceived by nearly all respondents as a major advantage of wet markets over supermarkets. In meat and poultry, fresh meant warm (from recently killed animals or chickens); in fish, it meant purchasing live fish. Chilled or frozen meats or fish were perceived as not fresh. Vegetables in wet markets also were viewed as "more fresh," and respondents emphasized that they could see that vegetables were delivered directly from the wholesale markets, often in the same baskets in which they were shipped from the fields. Also, the fact that retailers constantly trimmed, sprayed, cleaned, and sorted vegetables was mentioned as proof that products sold in wet markets were of better quality. Paradoxically, lack of storage space and lack of refrigeration facilities were interpreted by the respondents to mean that products had to be cleared daily, further enhancing their freshness perception. The wet markets were perceived by respondents as lower in price. This evaluation was enhanced by the many price deals aimed at clearing merchandise before closing or at moving large volumes of seasonal items. Many respondents stated that the simple facilities and fast product turnovers enabled wet market retailers to offer lower prices. Further enhancing this low-price perception of the wet markets was the fact that many of the vegetable and meat items carried by supermarkets were expensive Western imports (e.g., premium meat cuts from the United States and Australia, vegetables flown by air from Holland), whereas wet markets focused more on Chinese and Asian products. These evaluations, based on our qualitative study, also were supported by data from our shopping behavior survey. More than half of the respondents stated that products were "a lot more fresh" at wet markets, and another quarter felt that they were "a little more fresh." About 55 percent of consumers felt that produce prices were higher at supermarkets, whereas 38 percent felt that they were not much different.

Most of the qualitative study respondents viewed their ability to get the exact amounts, sizes, parts, and quality levels they needed for the various dishes as an important advantage of wet markets. Fresh items in supermarkets were mostly prepackaged, leaving consumers little choice on these aspects. In addition, respondents felt that they were able to exercise better control over their food budgets in the wet markets. It was customary to tell a wet market retailer the total amount allocated for a purchase of an item, and the retailer then traded off size, origin, and quality in an effort to fit the budget.

Only a few of the qualitative study respondents viewed the wet markets as places for meeting friends and exchanging

gossip. In addition, some of the respondents preferred the Chinese weight units used in wet markets and expressed uneasiness about the Western weight system used in supermarkets.

All participants in the qualitative study voiced the same criticism of the wet markets. They viewed them as dirty, slippery, crowded, smelly, unorganized, and noisy. They complained about the lack of air conditioning and the unhygienic conditions. Some mentioned dishonesty and rudeness of sellers as another problem. In addition, some respondents complained about inconvenient opening hours, as some markets closed earlier than supermarkets.

We conclude that the superiority of wet markets is based on functional advantages in variety, service, freshness, and price, not on traditional values or social interaction. Also, the advantages far outweighed the shopping atmosphere weaknesses of the wet markets.

The Supply Side

Background: Western Supermarkets and Fresh Foods

To provide background for our analysis of the Hong Kong situation, we briefly discuss supply and operations in Western supermarkets. Fresh food lines are less compatible with supermarket technology than are processed and packaged foods. Being nonstandardized and fragile with a short shelf life, they do not fit well with the self-service environment and emphasis on standardization. Fresh products require attention, service, and flexibility in handling beyond what is customary in processed and packaged foods. Weather and disease strongly affect availability, whereas harvesting, transportation, handling methods, and storage conditions influence product quality. Consequently, supply is characterized by sharp fluctuations in availability, quality, and price. These problems make it difficult for supermarkets to present consumers with a consistent, good-quality, reasonably priced fresh food offering.

As a result of these difficulties, the Western supermarkets first viewed fresh food as a problem category characterized by high costs, risks, and low profitability (Markin 1963; Zimmerman 1957). The maturity of the retail industry, the growing competition, and consumers' emphasis on health and freshness motivated supermarkets to take a new look at this category. Although the risks and costs are high, profit potential also is high if the difficulties could be overcome.

During the past decade, Western supermarkets made major investments in this category. They trained personnel and improved infrastructures, store facilities, and presentation. Supermarkets encouraged innovations in the production, harvesting, processing, and transportation methods. They bypassed wholesale markets and developed long-term relationships with producers and wholesalers (Brooks 1995; McLaughlin 1995). The category now accounts for a high

proportion of Western supermarkets' profits, and the quality of fresh food is a major contributor to a supermarket company's image as well as a central determinant of consumers' store patronage decisions (Brooks 1995).

Fresh Food's Supply and Distribution Arrangements in Hong Kong

In most fresh food lines, Hong Kong's supermarkets rely on the same supply arrangements used by the wet market retailers. Supermarkets were not able to bypass the traditional wholesalers and agents to deal directly with suppliers. This situation deprives supermarkets of the savings and economic advantages associated with direct purchases and also causes availability and quality problems. The channel leaders in fresh food in Hong Kong are the large Hong Kong agents and wholesalers. Many of them also supply China and neighboring countries ("Hong Kong Wholesalers" 1995; Piper 1997). They place much larger orders with suppliers than do supermarkets and, consequently, get preferred access to products and negotiate better payment and rebate terms than do supermarkets. Supermarkets' supply positions vary across product categories. It is strong in fruit but weak in lines of special importance to Hong Kong's consumers such as Chinese vegetables, pork, fish, and seafood. To take the example of Chinese vegetables, more than 80 percent are imported from southern China, grown there mostly by Hong Kong companies leasing land from the Chinese ("Hong Kong Wholesalers" 1995; Speece 1994). Grading and sorting are done in the fields. Although adequate for wet markets in which sellers perform these functions themselves, this is not compatible with supermarket standards. Because of the low volumes involved, none of the producing companies agreed to supply supermarkets directly, and none of the wholesalers was interested in taking on the preparation of the items to supermarkets' needs. Eventually, the VMO (the government's organization managing Hong Kong's wholesale markets) was willing to set up a grading and processing system, but costs were too high. The supermarket chains faced similar problems in other fresh food lines and were forced to invest heavily in large processing centers where fresh food is cleaned, graded, and packaged according to their specifications (Montlake 1997; Piper 1997; Wadsworth 1996).

The Operations Side

Wet markets serve consumers more effectively than do supermarkets. Wet market retailers are in direct contact with customers, respond fast to consumers' requirements (e.g., size, quantity, quality), and provide consumers with "real" freshness (live and warm) in fish and meat items. These contrast sharply with the limited personal contact with customers that characterizes fresh food selling in Hong Kong's supermarkets. In addition, nearly half of the vegetables and fruits sold in supermarkets are prepackaged, and most fish and meat items are sold frozen or chilled. Although supermarkets have

increased the number of people in the fresh food departments, established training programs, and increased the frequency of store deliveries to enhance freshness and use space more effectively (Montlake 1996), these efforts have done little to improve their position in these categories. More recently, supermarkets started to imitate the wet markets' atmosphere, presentation, and service in their new larger stores. Live fish swim in aquariums, and fresh foods are sold in full-service stall-like counters. However, supermarkets find it difficult to integrate these into their overall operations because most of these stalls are operated by licensees using the same supply arrangements and operation methods of wet market retailers (Wadsworth 1996).

The Economic Side

It proved impossible to get cost information from wet market retailers, and information provided by the supermarket chains must be kept confidential. However, the main cost differences between supermarkets and wet markets seem clear. Supermarket executives estimate wet market retailers to operate at less than half of the supermarkets' gross margins in comparable lines. Wet markets enjoy considerable cost advantages because of lower levels of loss from shrinkage and waste, lower labor expenses, higher turnover, and lower overhead. In addition, supermarkets incur additional costs associated with processing, sorting, packaging, refrigeration, specialized store facilities, distribution and processing center, and general overhead. The cost advantages of wet markets reflect their higher efficiencies; their use of a simple, low-cost retail technology; their reliance on the labor of family members; and the simple shopping environment.

The issue of rents is of special interest because they are a major cost factor in Hong Kong and because supermarket executives believe that wet markets' rents are subsidized. Wet market stalls are leased in open tenders, and rents are based on fair market prices as determined by government surveys. Rents vary across stall types (e.g., a fish stall pays four times as much as a fruit stall) and across different wet markets. Supermarket companies are subject to a similar bidding process when they rent government-owned space in the housing estates. A comparison of recent leases granted by the Housing Authority in the same new housing estates reveals the average rent paid per square meter by wet market retailers to be similar to that paid by supermarkets. Thus, no subsidies are involved. However, the fact that stalls pay rent only for the actual space used for selling and not for the public areas used for consumer movements, garbage removal, and merchandise unloading, as well as the fact that wet market retailers' rents cover maintenance and renovations whereas supermarkets' rents do not, means that wet market retailers do enjoy some rent-related advantages.

Wet markets' prices become the reference prices for consumers and, consequently, put an upper limit on the prices supermarkets can charge for fresh food items. Given

supermarkets' higher costs, this means that fresh food lines cannot make the same high contribution to profitability as they do in Western supermarkets. Indeed, executives in both large supermarket chains reported that the fresh food category contribution to profitability is far below that by Western standards and is similar to that of canned and processed foods. Because there is no indication of any change in cost structures, this fact is likely to negatively affect management's determination to further invest in the fresh food area.

It is important to emphasize that Hong Kong's wet markets' lower costs are not based on factors such as tax evasion and the use of marginal labor often associated in developing economies with the operation of the "informal" retailing sector (Arellano 1994; Dannhaeuser 1984; Harrison 1974; Mead 1996; Slater and Riley 1969), nor are they based on government subsidies. They largely reflect the economic advantages of operating a simple and effective technology characterized by basic facilities, low operating costs, close supervision by owners, cash payments, and high turnover per unit of space.

IS THE WET MARKET SUPERIORITY SUSTAINABLE?

To answer this question, we look at the expected developments in the wet market system and in the supermarkets as well as at the expected changes in consumers' behavior.

Developments in the Wet Market System

The performances of wet markets vary, and respondents in the qualitative study clearly differentiated between good and bad wet markets. Smaller markets and open street markets are declining as consumers shift to larger and enclosed markets. These dynamics also are reflected in the data about vacancies, a good indicator of the well-being of a retail system. They show the existence of few markets in which vacancy rates are high.

Public criticism about hygienic conditions has led the government to institute an aggressive modernization program. Several public wet markets already have been renovated. Illumination, escalators, ventilation, air conditioning, toilets, and signage were improved; markets were cleaned, tiles were installed; and the overall stall appearance was improved. The modernization program eventually will cover all public wet markets.

The Housing Authority moved to privatize the management of the wet markets it controls. Private management companies, or single operators, lease complete markets and sublease stalls to individual operators. They already manage twelve wet markets, with marked improvements in the shopping environment (*Hong Kong Economic Journal* 1996; "Privatization of Housing" 1997). The Housing Authority plans to privatize many of the existing markets. The growing number of professional single operators, some already managing a number of wet markets, opens the way for the adoption of a

shopping center model. Joint marketing programs, promotions, special events, and advertisements designed to attract consumers to specific wet markets already are being undertaken (*Hong Kong Economic Journal* 1996). Centralization of the supply arrangements and involvement of the management companies in decisions regarding wet markets' design, the mix of stalls, opening hours, and other aspects of daily operations are likely to follow, increasing efficiency and enhancing wet markets' competitive position. Some of these management companies already are contemplating the operation of chains of wet markets.

Developments in the Supermarkets

Supermarkets are caught in a bind. So long as their volumes in the fresh food lines are low, they will not get favorable terms, nor will they be able to reshape supply arrangements in their favor. Without making such changes, their ability to secure high-quality and consistent supply and to enjoy economic advantages in buying is limited. At present, their market power in the fresh food area is lower than that of the large importers, and they often end up purchasing average-quality fresh food products at relatively high prices.

Another weakness is the assortment. Conventional supermarket formats lack the space needed to present a broad and deep fresh food assortment in an enticing manner. It is true that both major chains increased the area devoted to fresh food in selected stores and plan to upgrade this department in other stores. However, because space is expensive and expansion possibilities in existing locations are limited, this move is not likely to resolve the problem.

Realizing the irrelevancy of the Western modernization scenario for gaining dominance in fresh food, Hong Kong's supermarkets are at present experimenting with two approaches.

The key to the *focused* approach is conceding the most difficult product lines (e.g., fish and seafood; Chinese vegetables; Chinese preserved, dried, and salty foods) to wet markets while aiming at taking dominance away from wet markets in selected fresh product areas (e.g., fruit, chicken, Western vegetables, pork) where supermarkets feel that they can develop supply advantages. For example, large chicken and pork production and processing facilities started appearing in China, opening the way for supermarket management to deal directly with these producers. Similarly, supermarkets feel that they might have advantages in fruit and in Western vegetables imported from overseas because of close connections with suppliers there and because these are relatively expensive items with limited availability in wet markets.

The other approach is that of *imitation*. Supermarkets offer only the most popular, high-turnover items in each of the fresh food lines, and they present these in a wet market manner. Because virtually all Hong Kong consumers regularly shop in supermarkets (3.8 times per week on average), they hope to induce some consumers to split their purchases of

TABLE 2
PERCENTAGES OF SUBGROUPS PURCHASING
DIFFERENT FRESH FOODS IN WET MARKETS

Product	Age			Monthly Household Income ^a		
	50					
	Up to 29 Years	30-49 Years	50 and Above	Up to \$15,000	\$16,000- \$34,000	\$35,000 and Above
Fruits	93	87	90	92	91	81
Meat	96	95	96	99	100	81
Vegetables	90	94	96	100	86	88
Fish	97	99	100	100	98	92
Percentage of total sample	15	57	28	46	37	17

a. Hong Kong dollars.

fresh items between the wet markets and the supermarkets. The targeted consumers are those who feel less strongly about the wet markets' advantages or who are most inconvenienced by the wet markets' disadvantages. Hong Kong's supermarkets already have experimented with the incorporation of wet market elements into the supermarkets, but in the past they simply brought in a few licensees to operate fresh food stalls. The imitation concept being implemented at present in the new large supermarkets is different. It involves the introduction of a "mini" wet market into the supermarket and the creation of a "total" wet market experience—wet floors, live fish in aquariums, and butchers cutting meat to consumer specifications (Ling 1997; Wadsworth 1996).

It is difficult to predict which, if any, of the two strategies will be more successful. However, neither deals with the fundamental issues discussed here—supply, costs, and prices—that cause supermarkets' weakness in fresh food. Paradoxically, both strategies represent an implicit acknowledgment by the supermarket companies of the continued entrenched strength of the traditional wet market system.

Developments on the Consumer Side

Wet markets provide consumers with a one-stop superior alternative for fresh food purchases. But our qualitative consumer study revealed one major weakness: respondents were highly critical of the shopping atmosphere and hygienic conditions. Although improvements are being made, this issue remains a major problem, making wet markets potentially vulnerable to shifts in consumers' preferences.

The food retail experts we interviewed in Hong Kong, along with the supermarket executives, believe that in the near future a large number of consumers will trade off the wet markets' advantages for the superior shopping environment and cleanliness found in supermarkets (Piper 1997). Given this belief, we undertake a cross-sectional analysis of consumers' shopping behavior to identify possible movements

TABLE 3
AVERAGE NUMBERS OF WEEKLY TRIPS TO WET
MARKETS AND SUPERMARKETS BY
DIFFERENT SUBGROUPS

Outlet	Age			Monthly Household Income ^a		
	50					
	Up to 29 Years	30-49 Years	50 and Above	Up to \$15,000	\$16,000- \$34,000	\$35,000 and Above
Wet market	4.3	6.0	6.4	6.4	5.7	4.3
Supermarket	3.8	3.9	3.6	3.6	3.7	4.4

a. Hong Kong dollars.

favoring supermarkets. The segments of higher income and younger consumers are expected to be the first to change (Piper 1997). To check for this development, we analyzed the consumer shopping survey results and found that there are statistically significant, but extremely weak, effects of income and age on shopping patterns in supermarkets versus wet markets and on weekly trips to both (see Tables 2 and 3).

Given the inconclusiveness of these results, we adopted another way of detecting possible movement in the supermarkets' direction. We looked for the existence of consumers who purchased all of their food needs, including fresh items, in supermarkets. As before, we expected these wet market deserters to be younger and to have higher incomes. It turned out that only nine consumers in our sample (2.4 percent) followed this pattern. Because this group was too small for a meaningful analysis, we relaxed the criteria and looked for consumers who regularly shopped at supermarkets for some of their fresh food needs (i.e., at least one of the four fresh food lines). We then identified the profile of these consumers.

To conduct this analysis, we first constructed an index M_F that measures the extent of mixed shopping of fresh food lines at both supermarkets and wet markets:

M_F = number of fresh food product lines purchased by a household at supermarkets over the total number of fresh food product lines purchased.

A value of 0 for M_F would indicate a household that purchased the fresh food lines exclusively at traditional outlets, and a value of 1 would indicate a household that purchased these lines exclusively at supermarkets. Intermediate values would indicate a household with mixed shopping behavior, with some fresh food lines being purchased at supermarkets and others being purchased at traditional outlets.

We split the sample of 381 households into two extreme segments on the M_F index. The segments were defined as $M_F = 0$ when all fresh foods were purchased in wet market outlets and $M_F > 0$ when at least one fresh food line was purchased in

TABLE 4
DIFFERENCES BETWEEN HOUSEHOLDS THAT
SHOP FOR FRESH FOOD IN TRADITIONAL
AND MODERN OUTLETS

<i>Household Characteristic</i>	$M_F = 0$ ($n = 335$)	$M_F > 0$ ($n = 40$)	$p > T ^a$
Household size	4.4	3.8	.07
Number of adults	3.1	2.8	.09
Number of full-time workers	2.1	2.3	.62
Number of nonworking adults	1.0	0.5	.00
Apartment size (square feet)	533.0	703.4	.04
Living area per person (square feet)	141.0	267.1	.01
Monthly household income (Hong Kong dollars)	21,235	33,883	.01
Weekly food expenditure (Hong Kong dollars)	900	754	.04
Age of primary shopper (years)	43.7	40.3	.17
Total number of trips to food outlets per week	16.3	14.2	.12
Travel time to nearest supermarket (minutes)	6.0	5.3	.35
Travel time to nearest wet market (minutes)	7.3	7.9	.50
Perceived price ratio of supermarkets to wet markets ^b	1.1	1.1	.20
Perceived relative freshness of supermarkets (5-point scale) ^c	1.5	2.0	.01
Car ownership (percentage)	18.4	29.7	.10
Domestic helper (percentage)	10.9	21.6	.06

a. All values are for two-tailed tests. For the car and helper variables alone, the p values are from a χ^2 test.

b. Respondents were asked to indicate whether they thought prices of fruit and vegetables were more, less, or the same at wet markets and supermarkets as well as by what percentage one was more expensive than the other.

c. A five-point scale anchored by 1 (*fruit and vegetables at wet markets are a lot more fresh*) and 5 (*fruit and vegetables at supermarkets are a lot more fresh*) was used.

supermarkets. This split yielded 40 households with values of $M_F > 0$. Table 4 lists the differences between these two segments on a variety of relevant variables and identifies the statistical significance levels.

Several of the significant differences (at the .05 level) were related to income. Thus, the respondents who purchased some fresh food lines in supermarkets tended to reside in larger apartments, have more living area per person, and have significantly higher average monthly household incomes. In addition, they had higher proportions of car ownership and a higher tendency to employ domestic food helpers. Both groups were similar with respect to age, number of weekly trips to food outlets, travel time to supermarkets and to wet markets, and number of full-time family members working outside the home. Both groups, on average, perceived supermarkets to be lower than wet markets on freshness, but the relative freshness advantage of wet markets was higher for the

exclusive wet market shoppers. Thus, although there is some tendency for higher income consumers to shop for fresh food lines in supermarkets, few fresh food lines are involved.

Finally, a change in consumption habits away from a traditional Chinese cuisine toward Western norms emphasizing convenience; fast preparation of meals; and reliance on processed, frozen, and chilled ingredients also might cause a shift toward supermarkets. Data from the qualitative study indicate that traditional consumption systems were entrenched among all respondents. For example, even the women working outside their homes continued to be responsible for daily meal preparation and often shopped in the wet markets before or after work.

We conclude that although there is some movement on the consumer side, it is not likely to bring about major changes in the relative positions of wet markets and supermarkets.

CONCLUSIONS AND IMPLICATIONS

Food Retail Modernization in Hong Kong

The wet markets provide consumers with superior outputs. They outperform supermarkets in assortment, freshness, service to consumers, and prices. We evaluated the ability of the wet markets to sustain their superiority in the long term. We could not detect any developments in the supply system that might favor supermarkets and lead to major changes in the present situation. Both wet markets and supermarkets continue to develop and change. Wet markets modernize, improve their shopping environments, and privatize, while supermarkets experiment with different approaches to the incorporation of wet market elements in their operations. However, none of these developments is likely to lead to change in the present balance between these two retail formats.

Wet markets do suffer from a weakness because consumers perceive their shopping environment to be inferior to that of supermarkets. This makes wet markets vulnerable to the possibility of consumers trading off wet markets' advantages in freshness, quality, selection, and price for the superior environment of the supermarkets.

We checked for movement on the consumer side and found a tendency for higher income households to purchase some of their fresh foods in supermarkets. However, this tendency is very weak and is far from signifying a serious movement away from wet markets. Only a handful of households buy all of their fresh food needs exclusively in the supermarkets.

Food Retail Modernization Process

The example of wet markets in Hong Kong indicates that the institutional-ecological perspective regarding the food retail modernization process is superior to the positivist one. Modernization need not follow the Western model, which

assumes that all traditional food retail formats are inferior to the supermarket. This finding has major implications for public policy makers because it provides support for the emphasis on modernizing and improving domestic food retail formats and wet markets.

Hong Kong provides interesting examples of both the partial transfer modernization strategy and the endogenous modification modernization strategy. Both strategies are used by wet markets in their attempt to improve their competitive positions. Interestingly, the Hong Kong case also highlights an unexpected development: supermarkets adopting some of the characteristics of traditional retailers in an effort to strengthen their competitive positions. In our case, they imitate the wet markets' atmosphere, copy the wet markets' operation methods, and go so far as installing wet market stalls in their stores.

Food Retail Modernization in Asia

There already is a large body of descriptive evidence suggesting that supermarkets in other Asian countries face serious problems in handling fresh food lines and are unable to become the dominant player in this category. This is true for China, Indonesia, Japan, Malaysia, Singapore, Taiwan, and Thailand ("Access to Japan's" 1995; AgExport 1996; "Cash and Carry Retailer" 1995; "Expansion in Retailing" 1996; Heim and Gearing 1997; Henke 1996; Holtzman and Menegay 1995; Menegay, Guyton, and Estaque 1994; "New-Style Wet Markets" 1996; Othman 1990; Shanghai Finance and Trade Office 1995; "Warehouse Format" 1997; "Wet Markets" 1995; Zain and Rejab 1989). Our analysis suggests that the problem might not disappear, as supermarket executives and experts expect, with economic development and improvements in customers' incomes and standards of living. Wet markets seem entrenched and continue to display major strength. Consequently, supermarket companies should rethink their strategies and develop new ones to deal with this challenge.

In spite of their importance, wet markets have received no research attention from food retail modernization researchers. Researchers prefer to focus on supermarkets, viewing them as the exclusive modernization vehicle. The example of Hong Kong highlights not only wet markets' importance but also their effectiveness and continued strength in the specific environment of Hong Kong. This finding, as well as the indications of the difficulties that supermarkets face in other Asian countries in handling the fresh food category, should motivate food retail modernization researchers to systematically study the fresh food distribution system and the role of wet markets in other Asian countries. The question of why simple retail technologies might continue to be appropriate even in developed countries should be the focus of this research.

NOTES

1. The term *wet* reflects the continuous wetness of the floor as a result of the frequent spraying of produce and the cleaning of meat and fish stalls.
2. An *estate* is a group of several multilevel residential buildings under common management.

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